

Power Management

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Linear Regulators

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Regulator Product Table

Output Current Max. Rating Input Voltage	up to 0.1A	0.15A	0.2A	0.25A	0.3A	0.5A	0.55A	0.7A	1A	1.5A	2A	3A
42 to 50V	BD7xxL05G-C* ² ▶P.31 BD42540FJ-C* ^{2,3} BD42500G-C* ^{2,3} ▶P.42	BD9xxN1* ^{1,2} BD9xxN1W* ^{1,2} ▶P.30	BD7xxL2EFJ-C* ² BD7xxL2FP-C* ² BD7xxL2FP-C* ² BD4xxS2* ^{1,2} BD4xxS2W* ^{1,2} ▶P.30 BD820F5UEFJ-C* ^{2,3} ▶P.41 BD4269FJ-C* ^{2,3} ▶P.42	BD42530UEFJ-C* ² BD42530FP2-C* ² BD42530FPJ-C* ² ▶P.42	BD4269UEFJ-C* ^{2,3} ▶P.42	BD357xYFP-M* ² BD357xYHFP-M* ² BD7xxL5FP-C* ² ▶P.29 BD800M5W* ^{1,2} BD00EASW* ¹ BD4xxS5* ^{1,2} BD4xxS5W* ^{1,2} BD9xxM5EFJ-C* ² BD9xxM5WEFJ-C* ² ▶P.30 BD30xxHFP* ² ▶P.41 BD42754FPJ-C* ^{2,3} BD42754FP2-C* ^{2,3} BD3925FP-C* ² BD3925HFP-C* ² ▶P.42	BD4271EFJ-C* ^{2,3} BD4271HFP-C* ^{2,3} BD4271FP2-C* ^{2,3} ▶P.41	BD800M7WFP2-C* ² ▶P.30				
30 to 36V	BDxxFA1FP3 BD50FA1MG-M* ² BD00FA1WEFJ ▶P.33				BD3650FP-M* ² ▶P.31 BA3662CP-V5 ▶P.33	BA178Mxx (BA78Mxx)* ¹ ▶P.29			BA178xx (BA78xx)* ¹ ▶P.29 BAxxxCC0* ¹ BAxxxCC0W* ¹ BDxxFC0 BDxxFC0W* ¹ BDxxC0A* ^{1,2} BDxxC0AW* ^{1,2} ▶P.32		BAxx0D0 BAxx0D0W* ¹ BDxxFD0W* ¹ BD00FDAWHFP ▶P.31	
20V						BDL00A5NUF-C* ² BDL00A5EFJ-C* ² ▶P.33						
18V									BAxxBC0* ¹ BAxxBC0W* ¹ ▶P.33	BAxxJC5T BA00JC5WT ▶P.33		
15V					BDxxGA3V* ² BDxxGA3W* ¹ ▶P.35	BDxxGA5WEFJ BDxxGA5VEFJ-M* ² BDxxGA5VEFJ-LB* ⁴ ▶P.34			BA1117FP ▶P.29 BDxxGC0WEFJ BDxxGC0VEFJ-M* ² BDxxGC0VEFJ-LB* ⁴ ▶P.34			
10V					BDxxHA3WEFJ BDxxHA3VEFJ-M* ² ▶P.36 BDxxHA3VEFJ-LB* ⁴ ▶P.37	BDxxHA5WEFJ BDxxHA5VEFJ-M* ² ▶P.36			BDxxHC0WEFJ BDxxHC0VEFJ-M* ² BDxxHC0VEFJ-LB* ⁴ ▶P.36	BDxxHC5WEFJ BDxxHC5VEFJ-M* ² BDxxHC5VEFJ-LB* ⁴ ▶P.35		
6 to 7V			BUxxTD2W* ¹ BUxxTD3W* ¹ BUxxTA2W* ¹ ▶P.39 BUxxSD2MG-M* ² BUxxJA2MNVX-C* ² BUxxJA2VG-C* ² BUxxJA2DG-C* ² BUxxSA4WGWL ▶P.40		BU1xxJA3DG-C* ² ▶P.39	BDxxKA5 BDxxKA5W* ¹ BDxxIA5WEFJ BDxxIA5VEFJ-M* ² BD00IA5MHFV-M* ² BDxxIA5VEFJ-LB* ⁴ ▶P.36 BUxxSD5WG ▶P.39			BDxxIC0W* ¹ BDxxIC0V* ¹ BDxxIC0VEFJ-LB* ⁴ ▶P.37 BD00JCOMNXX-M ▶P.41			
less than 6V	BD7602GUL (1ch) ▶P.41	BD7602GUL (2ch) ▶P.41				BUxxSA5WGWZ BD3540NUV ▶P.41 BD37201NUX ▶P.42			BD3541NUV ▶P.41 BD3533F BD3539FVM BD3539NUX BD35390FJ BD35395FJ-M* ² ▶P.43		BD3552HFN ▶P.41	BD3508MUV ▶P.41

*1 Package Lineup *2 Automotive Grade *3 Multi Function Regulator (Ex. Voltage Detection) *4 Industrial Grade

Linear Regulators

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

78 series Regulators/Standard Regulator

35V Withstand Voltage 1A Fixed Output Three-Terminal Regulators (BA78xx series)										
Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Circuit Current (mA)	Thermal Shutdown Circuit	Area of Safety Operation Circuit	Over-Current Protection Circuit	Package/Part No.	
									TO220CP-3	TO252-3
BA17805 (BA7805)	7.5 to 25.0	5	±4	1.0	4.5	✓	✓	✓	BA17805CP	BA17805FP
BA17806 (BA7806)	8.5 to 21.0	6							BA17806CP	BA17806FP
BA17807 (BA7807)	9.5 to 22.0	7							BA17807CP	BA17807FP
BA17808 (BA7808)	10.5 to 23.0	8							BA17808CP	BA17808FP
BA17809 (BA7809)	11.5 to 26.0	9							BA17809CP	BA17809FP
BA17810 (BA7810)	12.5 to 25.0	10							BA17810CP	BA17810FP
BA17812 (BA7812)	15.0 to 27.0	12							BA17812CP	BA17812FP
BA17815 (BA7815)	17.5 to 30.0	15							BA17815CP	BA17815FP
BA17818 (BA7818)	21.0 to 33.0	18							BA17818CP	BA17818FP
BA17820 (BA7820)	23.0 to 33.0	20							BA17820CP	BA17820FP
BA17824 (BA7824)	27.0 to 33.0	24							BA17824CP	BA17824FP
35V Withstand Voltage 500mA Fixed Output Three-Terminal Regulators (BA78Mxx series)										
Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Circuit Current (mA)	Thermal Shutdown Circuit	Area of Safety Operation Circuit	Over-Current Protection Circuit	Package/Part No.	
									TO220CP-3	TO252-3
BA178M05 (BA78M05)	7.5 to 25.0	5	±4	0.5	4.5	✓	✓	✓	BA178M05CP	BA178M05FP
BA178M06 (BA78M06)	8.5 to 21.0	6							BA178M06CP	BA178M06FP
BA178M07 (BA78M07)	9.5 to 22.0	7							BA178M07CP	BA178M07FP
BA178M08 (BA78M08)	10.5 to 23.0	8							BA178M08CP	BA178M08FP
BA178M09 (BA78M09)	11.5 to 26.0	9							BA178M09CP	BA178M09FP
BA178M10 (BA78M10)	12.5 to 25.0	10							BA178M10CP	BA178M10FP
BA178M12 (BA78M12)	15.0 to 27.0	12							BA178M12CP	BA178M12FP
BA178M15 (BA78M15)	17.5 to 30.0	15							BA178M15CP	BA178M15FP
BA178M18 (BA78M18)	21.0 to 33.0	18							BA178M18CP	BA178M18FP
BA178M20 (BA78M20)	23.0 to 33.0	20							BA178M20CP	BA178M20FP
BA178M24 (BA78M24)	27.0 to 33.0	24							BA178M24CP	BA178M24FP
15V Withstand Voltage 1A Variable Output Three-Terminal Regulator										
Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Adjustment Pin Current (μA)	Reference Voltage (V)	Ripple Rejection (dB)	Load Regulation (mV)	Protection Circuit	Package
BA1117FP	10.0	Variable	±1	1.0	60	1.2 (I _o =1A)	75 (f=120Hz, V _r -V _o =3V, V _{ripple} =1V _{pp})	10	Over-Current/ Temperature	TO252-3

LDO Regulators

50V Withstand Voltage Low Quiescent Current 500mA Variable/Fixed Output LDO Regulators												
Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Saturation Voltage (V)	Circuit Current (μA)	Operating Temperature (°C)	Shutdown Switch	Protection Circuit	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD3570YFP-M	4.5 to 36.0	3.3	±2 (T _a =−40 to +125°C)	0.5	—	30	T _a =−40 to +125	—	Over-Current/ Temperature	TO252-3	FSs	YES
BD3570YHFP-M					HRP5					FSs	YES	
BD3571YFP-M	5.5 to 36.0	5.0			TO252-3					FSs	YES	
BD3571YHFP-M		HRP5			FSs					YES		
BD3572YFP-M	4.5 to 36.0	Variable 2.8 to 12.0			TO252-5					FSs	YES	
BD3572YHFP-M		HRP5			FSs					YES		
BD3573YFP-M		3.3			TO252-5					FSs	YES	
BD3573YHFP-M		HRP5			FSs					YES		
BD3574YFP-M	5.5 to 36.0	5.0			0.25 (I _o =200mA)			✓		TO252-5	FSs	YES
BD3574YHFP-M		HRP5								FSs	YES	
BD3575YFP-M	4.5 to 36.0	Variable 2.8 to 12.0								TO252-5	FSs	YES
BD3575YHFP-M		HRP5								FSs	YES	
50V Withstand Voltage Ultra Low Quiescent 500mA Fixed Output LDO Regulators												
Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Saturation Voltage (V)	Circuit Current (μA)	Operating Temperature (°C)	Shutdown Switch	Protection Circuit	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD733L5FP-C	4.17 to 45.0	3.3	±2 (T _a =−40 to +125°C)	0.5	0.4 (I _o =200mA)	6	T _a =−40 to +125	—	Over-Current/ Temperature	TO252-3	FSs	YES
BD750L5FP-C	5.6 to 45.0	5.0			0.25 (I _o =200mA)					TO252-3	FSs	YES

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*1 For more information about "ComfySIL™ Functional Safety", please refer to the reverse side of the cover.

LDO Regulators

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

50V Withstand Voltage Ultra Low Quiescent 200mA Fixed Output LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Saturation Voltage (V)	Circuit Current (μA)	Operating Temperature (°C)	Shutdown Switch	Protection Circuit	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD733U2EFJ-C	4.37 to 45.0	3.3	±2 (T _J =−40 to +125°C)	0.2	0.6 (I _O =200mA)	6	T _J =−40 to +125	—	Over-Current/ Temperature	HTSOP-J8	FSs	YES
BD733L2FP-C										TO252-3	FSs	YES
BD733L2FP3-C										SOT223-4	FSs	YES
BD750U2EFJ-C	5.8 to 45.0	5.0	±2 (T _J =−40 to +125°C)	0.2	0.4 (I _O =200mA)	6	T _J =−40 to +125	—	Over-Current/ Temperature	HTSOP-J8	FSs	YES
BD750L2FP-C										TO252-3	FSs	YES
BD750L2FP3-C										SOT223-4	FSs	YES

45V Withstand Voltage Low Quiescent Current 700mA Variable Output LDO Regulator

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Circuit Current (μA)	Operating Temperature (°C)	Shutdown Switch	Protection Circuit	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD800M7WFP2-C	3.0 to 42.0	Variable 1.2 to 16.0	±2.6 (T _J =−40 to +150°C)	0.7	0.6 (I _O =700mA)	17	T _J =−40 to +150	✓	Over-Current/ Temperature	TO263-5	FSs	YES

45V Withstand Voltage Low Quiescent Current 500mA Variable Output LDO Regulators

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Circuit Current (μA)	Operating Temperature (°C)	Shutdown Switch	Protection Circuit	Package/Part No.				ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
										TO252-5	TO252-J5	TO263-5	HRP5		
BD800M5W	3.0 to 42.0	Variable 1.2 to 16.0	±2 (T _J =−40 to +150°C)	0.5	0.5 (I _O =500mA)	17	T _J =−40 to +150	✓	Over-Current/ Temperature	—	BD800M5WFPJ-C	—	BD800M5WHP-C	FSs	YES
			±2.6 (T _J =−40 to +150°C)							—	—	BD800M5WFP2-C	—	FSs	YES
BD00EA5W	3.0 to 42.0	Variable 1.2 to 16.0	±1 (T _J =25°C)	0.5	0.45 (I _O =500mA)	17	T _J =−40 to +105	✓	Over-Current/ Temperature	BD00EA5WFP	—	—	BD00EA5WHFP	—	—
			±1.5 (T _J =25°C)							—	—	BD00EA5WFP2	—	—	—

45V Withstand Voltage Low Quiescent Current 500mA Fixed Output LDO Regulators

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Circuit Current (μA)	Operating Temperature (°C)	Shutdown Switch	Protection Circuit	Package/Part No.			ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
										TO263-3	HTSOP-J8	TO263-5		
New BD433S5	4.0 to 42.0	3.3	±2 (T _J =−40 to +150°C)	0.5	0.25 (I _O =300mA)	38	T _J =−40 to +150	—	Over-Current/ Temperature	BD433S5FP2-C	BD433S5EFJ-C	—	FSs	YES
New BD450S5	5.5 to 42.0	5.0			0.2 (I _O =300mA)					BD450S5FP2-C	BD450S5EFJ-C	—	FSs	YES
New BD433S5W	4.0 to 42.0	3.3			0.25 (I _O =300mA)					—	BD433S5WEFJ-C	BD433S5WFP2-C	FSs	YES
New BD450S5W	5.5 to 42.0	5.0			0.2 (I _O =300mA)					—	BD450S5WEFJ-C	BD450S5WFP2-C	FSs	YES

45V Withstand Voltage Low Quiescent Current 500mA Variable/Fixed Output LDO Regulators (QuiCur™ series*2)

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Circuit Current (μA)	Operating Temperature (°C)	Shutdown Switch	Protection Circuit	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
New BD900M5EFJ-C	3.0 to 42.0	Variable 1.0 to 16.0	±2 (T _J =−40 to +150°C)	0.5	0.36 (I _O =300mA)	9.5	T _J =−40 to +150	—	Over-Current/ Temperature	HTSSOP-J8	FSs	YES
New BD933M5EFJ-C		3.3								HTSSOP-J8	FSs	YES
New BD950M5EFJ-C		5.0								HTSSOP-J8	FSs	YES
New BD900M5WEFJ-C		Variable 1.0 to 16.0								HTSSOP-J8	FSs	YES
New BD933M5WEFJ-C		3.3								HTSSOP-J8	FSs	YES
New BD950M5WEFJ-C		5.0								HTSSOP-J8	FSs	YES

45V Withstand Voltage Low Quiescent Current 200mA Fixed Output LDO Regulators

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Circuit Current (μA)	Operating Temperature (°C)	Shutdown Switch	Protection Circuit	Package/Part No.		ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
										HTSOP-J8	SOT223-4		
New BD433S2	3.9 to 42.0	3.3	±2 (T _J =−40 to +150°C)	0.2	0.2 (I _O =100mA)	40	T _J =−40 to +150	—	Over-Current/ Temperature	BD433S2EFJ-C	BD433S2FP3-C	FSs	YES
New BD450S2	5.5 to 42.0	5.0			0.16 (I _O =100mA)					BD450S2EFJ-C	BD450S2FP3-C	FSs	YES
New BD433S2W	3.9 to 42.0	3.3			0.2 (I _O =100mA)					BD433S2WEFJ-C	BD433S2WFP3-C	FSs	YES
New BD450S2W	5.5 to 42.0	5.0			0.16 (I _O =100mA)					BD450S2WEFJ-C	BD450S2WFP3-C	FSs	YES

45V Withstand Voltage Low Quiescent Current 150mA Variable/Fixed Output LDO Regulators (Nano Cap™ series)

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Circuit Current (μA)	Operating Temperature (°C)	Shutdown Switch	Protection Circuit	Package/Part No.		ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
										HTSOP-J8	SSOP5		
BD900N1	3.0 to 42.0	Variable 1.0 to 18.0	±2 (T _J =−40 to +150°C)	0.15	0.5 (I _O =100mA)	28	T _J =−40 to +150	—	Over-Current/ Temperature	BD900N1EFJ-C	BD900N1G-C	FSs	YES
BD933N1		3.3			0.42 (I _O =100mA)					BD933N1EFJ-C	BD933N1G-C	FSs	YES
BD950N1		5.0			0.5 (I _O =100mA)					BD950N1EFJ-C	BD950N1G-C	FSs	YES
BD900N1W		Variable 1.0 to 18.0			0.5 (I _O =100mA)					BD900N1WEFJ-C	BD900N1WG-C	FSs	YES
BD933N1W		3.3			0.42 (I _O =100mA)					BD933N1WEFJ-C	BD933N1WG-C	FSs	YES
BD950N1W		5.0			0.42 (I _O =100mA)					BD950N1WEFJ-C	BD950N1WG-C	FSs	YES

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*1 For more information about "ComfySIL™ Functional Safety", please refer to the reverse side of the cover.

*2 QuiCur™ is a combination of technologies that provides high-speed load response.

Nano ROHM's innovative "Nano" power supply technologies achieve breakthrough energy savings and miniaturization.

Nano Cap™ series is a product equipped with Nano Cap™ extremely stable control technology. Nano Energy™, Nano Pulse Control™ and Nano Cap™ is a trademark or a registered trademark of ROHM Co., Ltd.

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

45V Withstand Voltage 50mA Ultra Low Quiescent Current Fixed Output LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Circuit Current (μA)	Operating Temperature (°C)	Shutdown Switch	Protection Circuit	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD725L05G-C	3.5 to 42.0	2.5	±2 (T _j =−40 to +150°C)	0.05	—	6	T _j =−40 to +150	—	Over-Current/ Temperature	SSOP5	FSs	YES
BD730L05G-C	3.5 to 42.0	3.0			0.3 (I _o =50mA)					SSOP5	FSs	YES
BD733L05G-C	3.8 to 42.0	3.3			0.35 (I _o =50mA)					SSOP5	FSs	YES
BD750L05G-C	5.6 to 42.0	5.0			0.35 (I _o =50mA)					SSOP5	FSs	YES

36V Withstand Voltage 300mA Fixed Output LDO Regulator

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Circuit Current (mA)	Operating Temperature (°C)	Protection Circuit	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD3650FP-M	5.6 to 30.0	5.0	±2 (T _a =−40 to +125°C)	0.3	0.2 (I _o =200mA)	0.5	T _a =−40 to +125	Over-Current/ Temperature	TO252-3	FSs	YES

35V Withstand Voltage 2A Variable/Fixed Output LDO Regulators

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Shutdown Switch	Protection Circuit	Package/Part No.			
											TO220FP-3	TO220FP-5	HRP5	TO263-5
BA15DD0	3.0 to 25.0	1.5	±1	2.0	0.9	0.45 (I _o =2A)	55	50 (I _o =0 to 2A)	—	Over-Voltage/ Over-Current/ Temperature	BA15DD0T	—	—	—
BA18DD0		1.8									BA18DD0T	—	—	—
BA25DD0		2.5									BA25DD0T	—	—	—
BA30DD0		3.0									BA30DD0T	—	—	—
BA33DD0		3.3									BA33DD0T	—	—	—
BA50DD0		5.0									BA50DD0T	—	—	—
BA90DD0		9.0									BA90DD0T	—	—	—
BAJ2DD0		12.0									BAJ2DD0T	—	—	—
BAJ6DD0		16.0									BAJ6DD0T	—	—	—
BA00DD0W		Variable 1.5 to 16.0									—	BA00DD0WCP-V5 (TO220CP-V5)	BA00DD0WHFP	—
BA15DD0W	1.5	—	BA15DD0WT	BA15DD0WHFP	—									
BA18DD0W	1.8	—	BA18DD0WT	BA18DD0WHFP	—									
BA25DD0W	2.5	—	—	BA25DD0WHFP	—									
BA30DD0W	3.0	—	BA30DD0WT	BA30DD0WHFP	—									
BA33DD0W	3.3	—	BA33DD0WT	BA33DD0WHFP	—									
BA50DD0W	5.0	—	BA50DD0WT	BA50DD0WHFP	—									
BA90DD0W	9.0	—	BA90DD0WT	BA90DD0WHFP	—									
BAJ2DD0W	12.0	—	BAJ2DD0WT	BAJ2DD0WHFP	—									
BAJ6DD0W	16.0	—	BAJ6DD0WT	BAJ6DD0WHFP	—									
BD00FD0W	4.0 to 32.0	Variable 1.5 to 16.0	±1.5			0.4 (I _o =1A)	—	V _o *2×0.7% (I _o =5mA to 1A)	✓	Over-Current/ Temperature	—	—	BD00FD0WHFP	BD00FD0WFP2
BD15FD0W		1.5				—		—			BD15FD0WHFP	BD15FD0WFP2		
BD18FD0W		1.8				—		—			BD18FD0WHFP	BD18FD0WFP2		
BD25FD0W		2.5				—		—			BD25FD0WHFP	BD25FD0WFP2		
BD30FD0W		3.0				—		—			BD30FD0WHFP	BD30FD0WFP2		
BD33FD0W	V _o +1.0V to 32.0	3.3	±1			0.4 (I _o =1A)	50	V _o *2×0.7% (I _o =5mA to 1A)			—	—	BD33FD0WHFP	BD33FD0WFP2
BD50FD0W		5.0									—	—	BD50FD0WHFP	BD50FD0WFP2
BD80FD0W		8.0									—	—	BD80FD0WHFP	BD80FD0WFP2
BD90FD0W		9.0									—	—	BD90FD0WHFP	BD90FD0WFP2
BDJ2FD0W		12.0									—	—	BDJ2FD0WHFP	BDJ2FD0WFP2
BDJ5FD0W	15.0	—	—	BDJ5FD0WHFP	BDJ5FD0WFP2									
BDJ6FD0W	16.0	—	—	BDJ6FD0WHFP	BDJ6FD0WFP2									
BD00FDAW	4.0 to 32.0	Variable 1.5 to 30.0	±1 (T _a =25°C)				55				—	—	BD00FDAWHFP	—

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*1 For more information about "ComfySIL™ Functional Safety", please refer to the reverse side of the cover.

*2 V_o is Output voltage/Unit: V

LDO Regulators

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

35V Withstand Voltage 1A Variable/Fixed Output LDO Regulator

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Shutdown Switch	Protection Circuit	Package/Part No.						
											TO220FP-3	TO220FP-5	TO252-3	TO252-5	HTSOP-J8		
BA03CC0	4.0 to 25.0	3.0	±2	1.0	2.5	0.3 (I _O =500mA)	55	50 (I _O =5mA to 1A)	—	Over-Voltage/ Over-Current/ Temperature	BA03CC0T	—	BA03CC0FP	—	—		
BA033CC0		3.3									BA033CC0T	—	BA033CC0FP	—	—		
BA05CC0		5.0									BA05CC0T	—	BA05CC0FP	—	—		
BA06CC0		6.0									—	—	BA06CC0FP	—	—		
BA07CC0		7.0									BA07CC0T	—	BA07CC0FP	—	—		
BA08CC0		8.0									BA08CC0T	—	BA08CC0FP	—	—		
BA09CC0		9.0									BA09CC0T	—	BA09CC0FP	—	—		
BAJ0CC0		10.0									BAJ0CC0T	—	BAJ0CC0FP	—	—		
BAJ2CC0		12.0									BAJ2CC0T	—	BAJ2CC0FP	—	—		
BAJ5CC0		15.0									BAJ5CC0T	—	BAJ5CC0FP	—	—		
BA00CC0W		Variable 3.0 to 15.0									—	BA00CC0WT/ BA00CC0WCP-V5 (TO220CP-V5)	—	BA00CC0WFP	—		
BA03CC0W		3.0									—	BA03CC0WT	—	—	—		
BA033CC0W		3.3									—	BA033CC0WT	—	BA033CC0WFP	—		
BA05CC0W	5.0	—	BA05CC0WT	—	BA05CC0WFP	—											
BA06CC0W	6.0	—	—	—	BA06CC0WFP	—											
BA07CC0W	7.0	—	BA07CC0WT	—	BA07CC0WFP	—											
BA08CC0W	8.0	—	BA08CC0WT	—	BA08CC0WFP	—											
BA09CC0W	9.0	—	BA09CC0WT	—	BA09CC0WFP	—											
BAJ0CC0W	10.0	—	BAJ0CC0WT	—	—	—											
BAJ2CC0W	12.0	—	BAJ2CC0WT	—	BAJ2CC0WFP	—											
BD33FC0	4.3 to 26.5	3.3	±1	0.5	—	0.3 (I _O =500mA)	50	V _O *2×0.01 (I _O =5mA to 1A)	—	Over-Current/ Temperature	—	—	BD33FC0FP	—	—		
BD50FC0	6.0 to 26.5	5.0									—	—	BD50FC0FP	—	—		
BD00FC0W	4.0 to 26.5	Variable 1.0 to 15.0									—	—	—	BD00FC0WFP	BD00FC0WEFJ		
BD30FC0W	4.0 to 26.5	3.0									—	—	—	BD30FC0WFP	BD30FC0WEFJ		
BD33FC0W	4.3 to 26.5	3.3									—	—	—	BD33FC0WFP	BD33FC0WEFJ		
BD50FC0W	6.0 to 26.5	5.0									—	—	—	BD50FC0WFP	BD50FC0WEFJ		
BD60FC0W	7.0 to 26.5	6.0									—	—	—	BD60FC0WFP	BD60FC0WEFJ		
BD70FC0W	8.0 to 26.5	7.0									—	—	—	BD70FC0WFP	BD70FC0WEFJ		
BD80FC0W	9.0 to 26.5	8.0									—	—	—	BD80FC0WFP	BD80FC0WEFJ		
BD90FC0W	10.0 to 26.5	9.0									—	—	—	BD90FC0WFP	BD90FC0WEFJ		
BDJ0FC0W	11.0 to 26.5	10.0									—	—	—	BDJ0FC0WFP	BDJ0FC0WEFJ		
BDJ2FC0W	13.0 to 26.5	12.0									—	—	—	BDJ2FC0WFP	BDJ2FC0WEFJ		
BDJ5FC0W	16.0 to 26.5	15.0									—	—	—	BDJ5FC0WFP	BDJ5FC0WEFJ		
Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Shutdown Switch	Protection Circuit	Package/Part No.					ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
											TO252-3	TO252-5	HRP5	TO263-3	TO263-5		
BD33C0A	4.3 to 26.5	3.3	±3 (T _A =−40 to +125°C)	1.0	0.5	0.3 (I _O =500mA)	55	V _O *2×0.01 (I _O =5mA to 1A)	—	Over-Current/ Temperature	BD33C0AFP-C	—	BD33C0AHPF-C	BD33C0AFP2-C	—	FSs	YES
BD50C0A	6.0 to 26.5	5.0									BD50C0AFP-C	—	BD50C0AHPF-C	BD50C0AFP2-C	—	FSs	YES
BD80C0A	9.0 to 26.5	8.0									BD80C0AFP-C	—	BD80C0AHPF-C	BD80C0AFP2-C	—	FSs	YES
BD90C0A	10.0 to 26.5	9.0									BD90C0AFP-C	—	BD90C0AHPF-C	BD90C0AFP2-C	—	FSs	YES
BD33C0AW	4.3 to 26.5	3.3	±3 (T _A =−40 to +125°C)	1.0	0.5	0.3 (I _O =500mA)	55	V _O *2×0.01 (I _O =5mA to 1A)	✓	Over-Current/ Temperature	—	BD33C0AWFP/ BD33C0AWFP-C	—/ BD33C0AHPF-C	—	—/ BD33C0AWFP2-C	—/FSs	—/YES
BD50C0AW	6.0 to 26.5	5.0									—	BD50C0AWFP/ BD50C0AWFP-C	—/ BD50C0AHPF-C	—	—/ BD50C0AWFP2-C	—/FSs	—/YES
BD80C0AW	9.0 to 26.5	8.0									—	BD80C0AWFP-C	BD80C0AHPF-C	—	BD80C0AWFP2-C	FSs	YES
BD90C0AW	10.0 to 26.5	9.0									—	BD90C0AWFP-C	BD90C0AHPF-C	—	BD90C0AWFP2-C	FSs	YES
Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Shutdown Switch	Protection Circuit	Package/Part No.					ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
											TO252-5	HRP5	TO263-5	TO220CP-V5			
BD00C0AW	4.0 to 26.5	Variable 3.0 to 15.0/ Variable 1.0 to 15.0	±1/±3 (T _A =−40 to +125°C)	1.0	0.5	0.3 (I _O =500mA)	55	V _O *2×0.01 (I _O =5mA to 1A)	✓	Over-Current/ Temperature	BD00C0AWFP/ BD00C0AWFP-C	—/ BD00C0AHPF-C	—/ BD00C0AWFP2-C	BD00C0AWCP-V5/ —	—/FSs	—/YES	

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*1 For more information about "ComfySIL™ Functional Safety", please refer to the reverse side of the cover.

*2 V_O is Output voltage/Unit: V

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

35V Withstand Voltage 300mA Variable Output LDO Regulator

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation	Protection Circuit	Package
BA3662CP-V5	4 to 25	Variable 3.0 to 15.0	±2	0.3	2.5	0.3 (I _O =0.2A)	55	40mV (I _O =5 to 200mA)	Over-Voltage/ Over-Current/ Temperature	TO220CP-V5

30V Withstand Voltage 100mA Variable/Fixed Output LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Load Regulation (%)	Protection Circuit	Input Capacitor (μF)	Output Capacitor (μF)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD33FA1FP3	V _O +3 to 25	3.3	±1	0.1	0.3	1 (I _O =100mA)	±1.5	Over-Current/ Temperature	1.0	1.0	SOT89-3K	—	—
BD50FA1FP3		5.0									SOT89-3K	—	—
BD54FA1FP3		5.4									SOT89-3K	—	—
BDJ2FA1FP3		12.0									SOT89-3K	—	—
BD50FA1MG-M		5.0	±1.5 (T _a =25°C), ±2 (T _a =-40°C to +105°C)	0.3	1.5 (I _O =100mA, T _a =-40°C to +105°C)	2.2			2.2	SSOP5	FSs	YES	
BD00FA1WEFJ		Variable 3.0 to 12.0	±1							2 (I _O =100mA)	HTSOP-J8	—	—

20V Withstand Voltage 500mA Variable Output LDO Regulator

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Circuit Current (μA)	I/O Voltage Difference (V)	Load Regulation (mV)	Protection Circuit	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
New BDL00A5NUF-C	2.9 to 18	1 to 17	±2	0.5	30	0.28 (I _O =500mA)	15 (5V, I _O =0.1mA to 500mA)	Over-Current/ Temperature	VSON10FV3030	FSs	YES
New BDL00A5EFJ-C		1 to 17	±2						HTSOP-J8	FSs	YES

18V Withstand Voltage 1.5A Variable/Fixed Output LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package
BA15JC5T	3.0 to 16.0	1.5	±1	1.5	0.5	0.3 (I _O =500mA)	55	5 (I _O =5mA to 1.5A)	0.33	22.0	—	Over-Current/ Temperature	TO220FP-3
BA18JC5T		1.8											TO220FP-3
BA25JC5T		2.5											TO220FP-3
BA30JC5T		3.0											TO220FP-3
BA33JC5T		3.3											TO220FP-3
BA50JC5T		5.0											TO220FP-3
BA60JC5T		6.0											TO220FP-3
BA80JC5T		8.0					53						TO220FP-3
BA90JC5T		9.0					52						TO220FP-3
BA00JC5WT		Variable 1.5 to 12.0					50				✓		TO220FP-5

18V Withstand Voltage 1A Variable/Fixed Output LDO Regulators

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package/Part No.										
													TO252-3	TO252-5	TO220FP-3	TO220FP-5							
BA15BC0	3.0 to 16.0	1.5	±2	1.0	0.5	0.3 (I _O ≤6.0)	55	35 (I _O =0 to 1A)	0.33	22.0	—	Over-Current/ Temperature	BA15BC0FP	—	BA15BC0T	—							
BA18BC0		1.8											BA18BC0FP	—	BA18BC0T	—							
BA25BC0		2.5											BA25BC0FP	—	BA25BC0T	—							
BA30BC0		3.0											BA30BC0FP	—	BA30BC0T	—							
BA33BC0		3.3											BA33BC0FP	—	BA33BC0T	—							
BA50BC0		5.0											BA50BC0FP	—	BA50BC0T	—							
BA60BC0		6.0											BA60BC0FP	—	BA60BC0T	—							
BA70BC0		7.0											BA70BC0FP	—	BA70BC0T	—							
BA80BC0		8.0											BA80BC0FP	—	BA80BC0T	—							
BA90BC0		9.0											BA90BC0FP	—	BA90BC0T	—							
BAJ0BC0		10.0											BAJ0BC0FP	—	BAJ0BC0T	—							
BA00BC0W		Variable 1.5 to 12.0			0.5								—	BA00BC0WFP/ BA00BC0WCP-V5 (TO220CP-V5)	—	BA00BC0WT							
BA15BC0W		1.5											—	BA15BC0WFP	—	BA15BC0WT							
BA18BC0W		1.8											—	BA18BC0WFP	—	BA18BC0WT							
BA25BC0W		2.5											—	BA25BC0WFP	—	BA25BC0WT							
BA30BC0W		3.0											—	BA30BC0WFP	—	BA30BC0WT							
BA33BC0W		3.3											—	BA33BC0WFP	—	BA33BC0WT							
BA50BC0W		5.0											—	BA50BC0WFP	—	BA50BC0WT							
BA60BC0W		6.0											—	BA60BC0WFP	—	BA60BC0WT							
BA70BC0W		7.0											—	BA70BC0WFP	—	BA70BC0WT							
BA80BC0W		8.0											—	BA80BC0WFP	—	BA80BC0WT							
BA90BC0W		9.0											—	BA90BC0WFP	—	BA90BC0WT							
BAJ0BC0W		10.0											—	BAJ0BC0WFP	—	BAJ0BC0WT							

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*1 For more information about "ComfySIL™ Functional Safety", please refer to the reverse side of the cover.

LDO Regulators

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

15V Withstand Voltage 1A Variable/Fixed Output LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD00GC0VEFJ/ New BD00GC0VEFJ-M	4.5 to 14.0	Variable 1.5 to 13.0	±1 (T _a =+25°C), ±3 (T _a =−40 to +105°C) <Automotive Grade>	1.0	0.6	0.6 (I _O =1A)	60 (f=100Hz, 50mV _{PP} , I _O =0A)	25 (I _O =0 to 1A)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8	—/FSs	—/YES
BD15GC0VEFJ/ New BD15GC0VEFJ-M		1.5											HTSOP-J8	—/FSs	—/YES
BD18GC0VEFJ/ New BD18GC0VEFJ-M		1.8											HTSOP-J8	—/FSs	—/YES
BD25GC0VEFJ/ New BD25GC0VEFJ-M		2.5											HTSOP-J8	—/FSs	—/YES
BD30GC0VEFJ/ New BD30GC0VEFJ-M		3.0											HTSOP-J8	—/FSs	—/YES
BD33GC0VEFJ/ New BD33GC0VEFJ-M		3.3											HTSOP-J8	—/FSs	—/YES
BD50GC0VEFJ/ New BD50GC0VEFJ-M		5.0											HTSOP-J8	—/FSs	—/YES
BD60GC0VEFJ/ New BD60GC0VEFJ-M		6.0											HTSOP-J8	—/FSs	—/YES
BD70GC0VEFJ/ New BD70GC0VEFJ-M		7.0											HTSOP-J8	—/FSs	—/YES
BD80GC0VEFJ/ New BD80GC0VEFJ-M		8.0											HTSOP-J8	—/FSs	—/YES
BD90GC0VEFJ/ New BD90GC0VEFJ-M		9.0											HTSOP-J8	—/FSs	—/YES
BDJ0GC0VEFJ/ New BDJ0GC0VEFJ-M		10.0											HTSOP-J8	—/FSs	—/YES
BDJ2GC0VEFJ/ New BDJ2GC0VEFJ-M		12.0											HTSOP-J8	—/FSs	—/YES

15V Withstand Voltage 1A Variable/Fixed Output LDO Regulators (Industrial Equipment)

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package
New BD00GC0VEFJ-LB	4.5 to 14.0	Variable 1.5 to 13.0	±1 (T _a =+25°C), ±3 (T _a =−40 to +105°C)	1.0	0.6	0.6 (I _O =1A)	60 (f=100Hz, 50mV _{PP} , I _O =0A)	25 (I _O =0 to 1A)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8
New BD15GC0VEFJ-LB		1.5											HTSOP-J8
New BD18GC0VEFJ-LB		1.8											HTSOP-J8
New BD25GC0VEFJ-LB		2.5											HTSOP-J8
New BD30GC0VEFJ-LB		3.0											HTSOP-J8
New BD33GC0VEFJ-LB		3.3											HTSOP-J8
New BD50GC0VEFJ-LB		5.0											HTSOP-J8
New BD60GC0VEFJ-LB		6.0											HTSOP-J8
New BD70GC0VEFJ-LB		7.0											HTSOP-J8
New BD80GC0VEFJ-LB		8.0											HTSOP-J8
New BD90GC0VEFJ-LB		9.0											HTSOP-J8
New BDJ0GC0VEFJ-LB		10.0											HTSOP-J8
New BDJ2GC0VEFJ-LB		12.0											HTSOP-J8

15V Withstand Voltage 500mA Variable/Fixed Output LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD00GA5VEFJ/ New BD00GA5VEFJ-M	4.5 to 14.0	Variable 1.5 to 13.0	±1 (T _a =+25°C), ±3 (T _a =−40 to +105°C) <Automotive Grade>	0.5	0.6	0.6 (I _O =500mA)	60 (f=100Hz, 50mV _{PP} , I _O =0A)	25 (I _O =0 to 500mA)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8	—/FSs	—/YES
BD15GA5VEFJ/ New BD15GA5VEFJ-M		1.5											HTSOP-J8	—/FSs	—/YES
BD18GA5VEFJ/ New BD18GA5VEFJ-M		1.8											HTSOP-J8	—/FSs	—/YES
BD25GA5VEFJ/ New BD25GA5VEFJ-M		2.5											HTSOP-J8	—/FSs	—/YES
BD30GA5VEFJ/ New BD30GA5VEFJ-M		3.0											HTSOP-J8	—/FSs	—/YES
BD33GA5VEFJ/ New BD33GA5VEFJ-M		3.3											HTSOP-J8	—/FSs	—/YES
BD50GA5VEFJ/ New BD50GA5VEFJ-M		5.0											HTSOP-J8	—/FSs	—/YES
BD60GA5VEFJ/ New BD60GA5VEFJ-M		6.0											HTSOP-J8	—/FSs	—/YES
BD70GA5VEFJ/ New BD70GA5VEFJ-M		7.0											HTSOP-J8	—/FSs	—/YES
BD80GA5VEFJ/ New BD80GA5VEFJ-M		8.0											HTSOP-J8	—/FSs	—/YES
BD90GA5VEFJ/ New BD90GA5VEFJ-M		9.0											HTSOP-J8	—/FSs	—/YES
BDJ0GA5VEFJ/ New BDJ0GA5VEFJ-M		10.0											HTSOP-J8	—/FSs	—/YES
BDJ2GA5VEFJ/ New BDJ2GA5VEFJ-M		12.0											HTSOP-J8	—/FSs	—/YES

15V Withstand Voltage 500mA Variable/Fixed Output LDO Regulators (Industrial Equipment)

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package
New BD00GA5VEFJ-LB	4.5 to 14.0	Variable 1.5 to 13.0	±1 (T _a =+25°C), ±3 (T _a =−40 to +105°C)	0.5	0.6	0.6 (I _O =500mA)	60 (f=100Hz, 50mV _{PP} , I _O =0A)	25 (I _O =0 to 500mA)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8
New BD15GA5VEFJ-LB		1.5											HTSOP-J8
New BD18GA5VEFJ-LB		1.8											HTSOP-J8
New BD25GA5VEFJ-LB		2.5											HTSOP-J8
New BD30GA5VEFJ-LB		3.0											HTSOP-J8
New BD33GA5VEFJ-LB		3.3											HTSOP-J8
New BD50GA5VEFJ-LB		5.0											HTSOP-J8
New BD60GA5VEFJ-LB		6.0											HTSOP-J8
New BD70GA5VEFJ-LB		7.0											HTSOP-J8
New BD80GA5VEFJ-LB		8.0											HTSOP-J8
New BD90GA5VEFJ-LB		9.0											HTSOP-J8
New BDJ0GA5VEFJ-LB		10.0											HTSOP-J8
New BDJ2GA5VEFJ-LB		12.0											HTSOP-J8

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Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

15V Withstand Voltage 300mA Variable/Fixed Output LDO Regulators

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package/Part No.		ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
													HTSOP-J8	VSON008X2030		
New BD00GA3V	4.5 to 14.0	Variable 1.5 to 13.0	±1 (T _a =+25°C), ±3 (T _a =-40 to +105°C)	0.3	0.6	0.6 (I _O =300mA)	60 (f=100Hz, 50mV _{PP} , I _O =0A)	25 (I _O =0 to 300mA)	1.0	1.0	✓	Over-Current/ Temperature	BD00GA3VEFJ-M	—	FSs	YES
New BD15GA3V		1.5											BD15GA3VEFJ-M	—	FSs	YES
New BD18GA3V		1.8											BD18GA3VEFJ-M	—	FSs	YES
New BD25GA3V		2.5											BD25GA3VEFJ-M	—	FSs	YES
New BD30GA3V		3.0											BD30GA3VEFJ-M	—	FSs	YES
New BD33GA3V		3.3											BD33GA3VEFJ-M	—	FSs	YES
New BD50GA3V		5.0											BD50GA3VEFJ-M	—	FSs	YES
New BD60GA3V		6.0											BD60GA3VEFJ-M	—	FSs	YES
New BD70GA3V		7.0											BD70GA3VEFJ-M	—	FSs	YES
New BD80GA3V		8.0											BD80GA3VEFJ-M	—	FSs	YES
New BD90GA3V		9.0											BD90GA3VEFJ-M	—	FSs	YES
New BDJ0GA3V		10.0											BDJ0GA3VEFJ-M	—	FSs	YES
New BDJ2GA3V		12.0											BDJ2GA3VEFJ-M	—	FSs	YES
BD00GA3W	4.5 to 14.0	Variable 1.5 to 13.0	±1	0.3	0.6	0.6 (I _O =300mA)	60 (f=100Hz, 50mV _{PP} , I _O =0A)	25 (I _O =0 to 300mA)	1.0	1.0	✓	Over-Current/ Temperature	BD00GA3WEFJ	BD00GA3WNUX	—	—
BD15GA3W		1.5											BD15GA3WEFJ	BD15GA3WNUX	—	—
BD18GA3W		1.8											BD18GA3WEFJ	BD18GA3WNUX	—	—
BD25GA3W		2.5											BD25GA3WEFJ	BD25GA3WNUX	—	—
BD30GA3W		3.0											BD30GA3WEFJ	BD30GA3WNUX	—	—
BD33GA3W		3.3											BD33GA3WEFJ	BD33GA3WNUX	—	—
BD50GA3W		5.0											BD50GA3WEFJ	BD50GA3WNUX	—	—
BD60GA3W		6.0											BD60GA3WEFJ	BD60GA3WNUX	—	—
BD70GA3W		7.0											BD70GA3WEFJ	BD70GA3WNUX	—	—
BD80GA3W		8.0											BD80GA3WEFJ	BD80GA3WNUX	—	—
BD90GA3W		9.0											BD90GA3WEFJ	BD90GA3WNUX	—	—
BDJ0GA3W		10.0											BDJ0GA3WEFJ	BDJ0GA3WNUX	—	—
BDJ2GA3W		12.0											BDJ2GA3WEFJ	BDJ2GA3WNUX	—	—

10V Withstand Voltage 1.5A Variable/Fixed Output LDO Regulators

Part No.		Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
Consumer/Automotive Grade																
BD00HC5WEFJ/ New BD00HC5VEFJ-M	4.5 to 8.0	Variable 1.5 to 7.0	±1 (T _a =25°C), ±3 (T _a =-40 to +105°C) <Automotive Grade>	1.5	0.6	0.6 (I _o =1.5A)	60 (f=100Hz, 50mV _{PP} , I _o =0A)	25 (I _o =0 to 1.5A)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8	—/FSs	—/YES	
BD15HC5WEFJ/ New BD15HC5VEFJ-M		1.5											HTSOP-J8	—/FSs	—/YES	
BD18HC5WEFJ/ New BD18HC5VEFJ-M		1.8											HTSOP-J8	—/FSs	—/YES	
BD25HC5WEFJ/ New BD25HC5VEFJ-M		2.5											HTSOP-J8	—/FSs	—/YES	
BD30HC5WEFJ/ New BD30HC5VEFJ-M		3.0											HTSOP-J8	—/FSs	—/YES	
BD33HC5WEFJ/ New BD33HC5VEFJ-M		3.3											HTSOP-J8	—/FSs	—/YES	
BD50HC5WEFJ/ New BD50HC5VEFJ-M		5.0											HTSOP-J8	—/FSs	—/YES	
BD60HC5WEFJ/ New BD60HC5VEFJ-M		6.0											HTSOP-J8	—/FSs	—/YES	
BD70HC5WEFJ/ New BD70HC5VEFJ-M		7.0											HTSOP-J8	—/FSs	—/YES	

10V Withstand Voltage 1.5A Variable/Fixed Output LDO Regulators (Industrial Equipment)

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package
New BD00HC5VEFJ-LB	4.5 to 8.0	Variable 1.5 to 7.0	±1 (T _a =+25°C), ±3 (T _a =-40 to +105°C)	1.5	0.6	0.6 (I _O =1.5A)	60 (f=100Hz, 50mV _{PP} , I _O =0A)	25 (I _O =0 to 1.5A)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8
New BD15HC5VEFJ-LB		1.5											HTSOP-J8
New BD18HC5VEFJ-LB		1.8											HTSOP-J8
New BD25HC5VEFJ-LB		2.5											HTSOP-J8
New BD30HC5VEFJ-LB		3.0											HTSOP-J8
New BD33HC5VEFJ-LB		3.3											HTSOP-J8
New BD50HC5VEFJ-LB		5.0											HTSOP-J8
New BD60HC5VEFJ-LB		6.0											HTSOP-J8
New BD70HC5VEFJ-LB		7.0											HTSOP-J8

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LDO Regulators

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

10V Withstand Voltage 1A Variable/Fixed Output LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
Consumer/Automotive Grade															
BD00HC0VEFJ/ New BD00HC0VEFJ-M	4.5 to 8.0	Variable 0.8 to 7.0 (Automotive Grade Variable 1.5 to 7.0)	±1 (T _a =+25°C), ±3 (T _a =-40 to +105°C) <Automotive Grade>	1.0	0.6	0.6 (I _O =1A)	60 (f=100Hz, 50mV _{PP} , I _O =0A)	25 (I _O =0 to 1A)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8	-/FSs	-/YES
BD15HC0VEFJ/ New BD15HC0VEFJ-M		1.5											HTSOP-J8	-/FSs	-/YES
BD18HC0VEFJ/ New BD18HC0VEFJ-M		1.8											HTSOP-J8	-/FSs	-/YES
BD25HC0VEFJ/ New BD25HC0VEFJ-M		2.5											HTSOP-J8	-/FSs	-/YES
BD30HC0VEFJ/ New BD30HC0VEFJ-M		3.0											HTSOP-J8	-/FSs	-/YES
BD33HC0VEFJ/ New BD33HC0VEFJ-M		3.3											HTSOP-J8	-/FSs	-/YES
BD50HC0VEFJ/ New BD50HC0VEFJ-M		5.0											HTSOP-J8	-/FSs	-/YES
BD60HC0VEFJ/ New BD60HC0VEFJ-M		6.0											HTSOP-J8	-/FSs	-/YES
BD70HC0VEFJ/ New BD70HC0VEFJ-M		7.0											HTSOP-J8	-/FSs	-/YES

10V Withstand Voltage 1A Variable/Fixed Output LDO Regulators (Industrial Equipment)

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package
Consumer/Automotive Grade													
New BD00HC0VEFJ-LB	4.5 to 8.0	Variable 1.5 to 7.0	±1 (T _a =+25°C), ±3 (T _a =-40 to +105°C)	1.0	0.6	0.6 (I _O =1A)	60 (f=100Hz, 50mV _{PP} , I _O =0A)	25 (I _O =0 to 1A)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8
New BD15HC0VEFJ-LB		1.5											HTSOP-J8
New BD18HC0VEFJ-LB		1.8											HTSOP-J8
New BD25HC0VEFJ-LB		2.5											HTSOP-J8
New BD30HC0VEFJ-LB		3.0											HTSOP-J8
New BD33HC0VEFJ-LB		3.3											HTSOP-J8
New BD50HC0VEFJ-LB		5.0											HTSOP-J8
New BD60HC0VEFJ-LB		6.0											HTSOP-J8
New BD70HC0VEFJ-LB		7.0											HTSOP-J8

10V Withstand Voltage 500mA Variable/Fixed Output LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
Consumer/Automotive Grade															
BD00HA5VEFJ/ New BD00HA5VEFJ-M	4.5 to 8.0	Variable 1.5 to 7.0	±1 (T _a =+25°C), ±3 (T _a =-40 to +105°C) <Automotive Grade>	0.5	0.6	0.6 (I _O =500mA)	60 (f=100Hz, 50mV _{PP} , I _O =0A)	25 (I _O =0 to 500mA)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8	-/FSs	-/YES
BD15HA5VEFJ/ New BD15HA5VEFJ-M		1.5											HTSOP-J8	-/FSs	-/YES
BD18HA5VEFJ/ New BD18HA5VEFJ-M		1.8											HTSOP-J8	-/FSs	-/YES
BD25HA5VEFJ/ New BD25HA5VEFJ-M		2.5											HTSOP-J8	-/FSs	-/YES
BD30HA5VEFJ/ New BD30HA5VEFJ-M		3.0											HTSOP-J8	-/FSs	-/YES
BD33HA5VEFJ/ New BD33HA5VEFJ-M		3.3											HTSOP-J8	-/FSs	-/YES
BD50HA5VEFJ/ New BD50HA5VEFJ-M		5.0											HTSOP-J8	-/FSs	-/YES
BD60HA5VEFJ/ New BD60HA5VEFJ-M		6.0											HTSOP-J8	-/FSs	-/YES
BD70HA5VEFJ/ New BD70HA5VEFJ-M		7.0											HTSOP-J8	-/FSs	-/YES

10V Withstand Voltage 300mA Variable/Fixed Output LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
Consumer/Automotive Grade															
BD00HA3VEFJ/ New BD00HA3VEFJ-M	4.5 to 8.0	Variable 1.5 to 7.0	±1 (T _a =+25°C), ±3 (T _a =-40 to +105°C) <Automotive Grade>	0.3	0.6	0.6 (I _O =300mA)	60 (f=100Hz, 50mV _{PP} , I _O =0A)	25 (I _O =0 to 300mA)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8	-/FSs	-/YES
BD15HA3VEFJ/ New BD15HA3VEFJ-M		1.5											HTSOP-J8	-/FSs	-/YES
BD18HA3VEFJ/ New BD18HA3VEFJ-M		1.8											HTSOP-J8	-/FSs	-/YES
BD25HA3VEFJ/ New BD25HA3VEFJ-M		2.5											HTSOP-J8	-/FSs	-/YES
BD30HA3VEFJ/ New BD30HA3VEFJ-M		3.0											HTSOP-J8	-/FSs	-/YES
BD33HA3VEFJ/ New BD33HA3VEFJ-M		3.3											HTSOP-J8	-/FSs	-/YES
BD50HA3VEFJ/ New BD50HA3VEFJ-M		5.0											HTSOP-J8	-/FSs	-/YES
BD60HA3VEFJ/ New BD60HA3VEFJ-M		6.0											HTSOP-J8	-/FSs	-/YES
BD70HA3VEFJ/ New BD70HA3VEFJ-M		7.0											HTSOP-J8	-/FSs	-/YES

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10V Withstand Voltage 300mA Variable/Fixed Output Industrial LDO Regulators (Industrial Equipment)

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection circuit	Package
New BD00HA3VEFJ-LB	4.5 to 8.0	Variable 1.5 to 7.0	±1 (T _a =+25°C), ±3 (T _a =-40 to +105°C)	0.3	0.6	0.6 (I _O =300mA)	60 (f=100Hz, 50mV _{rpp} , I _O =0A)	25 (I _O =0 to 300mA)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8
New BD15HA3VEFJ-LB		1.5											HTSOP-J8
New BD18HA3VEFJ-LB		1.8											HTSOP-J8
New BD25HA3VEFJ-LB		2.5											HTSOP-J8
New BD30HA3VEFJ-LB		3.0											HTSOP-J8
New BD33HA3VEFJ-LB		3.3											HTSOP-J8
New BD50HA3VEFJ-LB		5.0											HTSOP-J8
New BD60HA3VEFJ-LB		6.0											HTSOP-J8
New BD70HA3VEFJ-LB		7.0											HTSOP-J8

7V Withstand Voltage 1A Variable/Fixed Output LDO Regulators

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package/Part No.		ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
													HTSOP-J8	HVSOF6		
BD00IC0W	2.4 to 5.5	Variable 0.8 to 4.5	±1	1.0	0.3	0.4 (I _O =1A)	60 (f=100Hz, 50mV _{rpp} , I _O =0A)	25 (I _O =0 to 1A)	1.0	1.0	✓	Over-Current/ Temperature	BD00IC0WEFJ	BD00IC0WHFV	—	—
BD10IC0W		1.0											BD10IC0WEFJ	BD10IC0WHFV	—	—
BD12IC0W		1.2											BD12IC0WEFJ	BD12IC0WHFV	—	—
BD1CIC0W		1.25											—	BD1CIC0WHFV	—	—
BD15IC0W		1.5											BD15IC0WEFJ	BD15IC0WHFV	—	—
BD18IC0W		1.8											BD18IC0WEFJ	BD18IC0WHFV	—	—
BD25IC0W		2.5											BD25IC0WEFJ	BD25IC0WHFV	—	—
BD26IC0W		2.6											—	BD26IC0WHFV	—	—
BD30IC0W		3.0											BD30IC0WEFJ	BD30IC0WHFV	—	—
BD33IC0W		3.3											BD33IC0WEFJ	BD33IC0WHFV	—	—
New BD00IC0V	2.3 to 5.5	Variable 0.8 to 4.5	±1 (T _a =+25°C), ±3 (T _a =-40 to +105°C)	1.0	0.3	0.4 (I _O =1A)	60 (f=100Hz, 50mV _{rpp} , I _O =0A)	25 (I _O =0 to 1A)	1.0	1.0	✓	Over-Current/ Temperature	BD00IC0VEFJ-M	—	FSs	YES
New BD10IC0V		1.0											BD10IC0VEFJ-M	—	FSs	YES
New BD12IC0V		1.2											BD12IC0VEFJ-M	—	FSs	YES
New BD15IC0V		1.5											BD15IC0VEFJ-M	—	FSs	YES
New BD18IC0V		1.8											BD18IC0VEFJ-M	—	FSs	YES
New BD25IC0V		2.5											BD25IC0VEFJ-M	—	FSs	YES
New BD30IC0V		3.0											BD30IC0VEFJ-M	—	FSs	YES
New BD33IC0V		3.3											BD33IC0VEFJ-M	—	FSs	YES
													BD33IC0VEFJ-C	—	FSs	YES

7V Withstand Voltage 1A Variable/Fixed Output LDO Regulators (Industrial Equipment)

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection circuit	Package
New BD00IC0VEFJ-LB	2.3 to 5.5	Variable 0.8 to 4.5	±1 (T _a =+25°C), ±3 (T _a =-40 to +105°C)	1.0	0.3	0.4 (I _O =1A)	60 (f=100Hz, 50mV _{rpp} , I _O =0A)	25 (I _O =0 to 1A)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8
New BD10IC0VEFJ-LB	2.4 to 5.5	1.0											HTSOP-J8
New BD12IC0VEFJ-LB		1.2											HTSOP-J8
New BD15IC0VEFJ-LB		1.5											HTSOP-J8
New BD18IC0VEFJ-LB		1.8											HTSOP-J8
New BD25IC0VEFJ-LB		2.5											HTSOP-J8
New BD30IC0VEFJ-LB		3.0											HTSOP-J8
New BD33IC0VEFJ-LB		3.3											HTSOP-J8

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LDO Regulators

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

7V Withstand Voltage 500mA Variable/Fixed Output LDO Regulators (BDxxKA5 series)

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package/Part No.		
													TO252-3	TO252-5	SOP8
BD10KA5	2.3 to 5.5	1.0	±1	0.5	0.35	0.12 (I _O =200mA)	50	25 (I _O =0 to 500mA)	1.0	1.0	—	Over-Current/ Temperature	BD10KA5FP	—	—
BD12KA5		1.2											BD12KA5FP	—	—
BD15KA5		1.5											BD15KA5FP	—	—
BD18KA5		1.8											BD18KA5FP	—	—
BD25KA5		2.5											BD25KA5FP	—	—
BD30KA5		3.0											BD30KA5FP	—	—
BD33KA5		3.3											BD33KA5FP	—	—
BD00KA5W		Variable 1.0 to 4.0											—	BD00KA5WFP	BD00KA5WF
BD10KA5W		1.0									—		BD10KA5WFP	BD10KA5WF	
BD12KA5W		1.2									—		BD12KA5WFP	BD12KA5WF	
BD15KA5W		1.5									—		BD15KA5WFP	BD15KA5WF	
BD18KA5W		1.8									—		BD18KA5WFP	BD18KA5WF	
BD25KA5W		2.5									—		BD25KA5WFP	BD25KA5WF	
BD30KA5W		3.0									—		BD30KA5WFP	BD30KA5WF	
BD33KA5W		3.3									—		BD33KA5WFP	BD33KA5WF	

7V Withstand Voltage 500mA Variable/Fixed Output LDO Regulators

	Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
	BD00IA5WEFJ	2.4 to 5.5	Variable 0.8 to 4.5	±1	0.5	0.25	0.4 (I _O =500mA)	60 (f=100Hz, 50mV _{PP} , I _O =0A)	25 (I _O =0 to 500mA)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8	—	—
	BD10IA5WEFJ		1.0											HTSOP-J8	—	—
	BD12IA5WEFJ		1.2											HTSOP-J8	—	—
	BD15IA5WEFJ		1.5											HTSOP-J8	—	—
	BD18IA5WEFJ		1.8											HTSOP-J8	—	—
	BD25IA5WEFJ		2.5											HTSOP-J8	—	—
	BD30IA5WEFJ		3.0											HTSOP-J8	—	—
	BD33IA5WEFJ		3.3											HTSOP-J8	—	—
New	BD00IA5VEFJ-M/ BD00IA5MHFV-M		Variable 0.8 to 4.5	±1 (T _a =+25°C), ±3 (T _a =-40 to +105°C)										HTSOP-J8/ HVSOF6	FSs	YES
New	BD10IA5VEFJ-M		1.0											HTSOP-J8	FSs	YES
New	BD12IA5VEFJ-M		1.2											HTSOP-J8	FSs	YES
New	BD15IA5VEFJ-M		1.5											HTSOP-J8	FSs	YES
New	BD18IA5VEFJ-M		1.8											HTSOP-J8	FSs	YES
New	BD25IA5VEFJ-M		2.5											HTSOP-J8	FSs	YES
New	BD30IA5VEFJ-M		3.0											HTSOP-J8	FSs	YES
New	BD33IA5VEFJ-M		3.3											HTSOP-J8	FSs	YES

7V Withstand Voltage 500mA Variable/Fixed Output LDO Regulators (Industrial Equipment)

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (mA)	I/O Voltage Difference (V)	Ripple Rejection (dB)	Load Regulation (mV)	Input Capacitor (μF)	Output Capacitor (μF)	Shutdown Switch	Protection Circuit	Package
New BD00IA5VEFJ-LB	2.4 to 5.5	Variable 0.8 to 4.5	±1 (T _a =+25°C), ±3 (T _a =-40 to +105°C)	0.5	0.25	0.4 (I _O =500mA)	60 (f=100Hz, 50mV _{PP} , I _O =0A)	25 (I _O =0 to 500mA)	1.0	1.0	✓	Over-Current/ Temperature	HTSOP-J8
New BD10IA5VEFJ-LB		1.0											HTSOP-J8
New BD12IA5VEFJ-LB		1.2											HTSOP-J8
New BD15IA5VEFJ-LB		1.5											HTSOP-J8
New BD18IA5VEFJ-LB		1.8											HTSOP-J8
New BD25IA5VEFJ-LB		2.5											HTSOP-J8
New BD30IA5VEFJ-LB		3.0											HTSOP-J8
New BD33IA5VEFJ-LB		3.3											HTSOP-J8

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6.5V Withstand Voltage 500mA CMOS LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (μA)	I/O Voltage Difference (mV)	Ripple Rejection (dB)	Load Regulation (mV)	Protection Circuit	Package
BU18SD5WG	1.7 to 6.0	1.8	±2	0.5	33	150 (I _O =100mA)	68	0.5	Over-Current/ Temperature	SSOP5
BU33SD5WG		3.3				85 (I _O =100mA)				SSOP5

6.5V Withstand Voltage 300mA CMOS LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Vsat (Max) (mV)	Ripple Rejection (dB)	Load Regulation (Max) (mV)	Circuit Current (μA)	Input Capacitor (μF)	Output Capacitor (μF)	Shut Down Switch	Over-Current Protection	Temperature Protection	Discharge Function	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BU12JA3DG-C	1.7 to 6.0	1.2	±2 (T _J =−40 to +150°C)	0.3	500 (I _O =300mA)	60 (f _{RR} =1kHz, I _{OUT} =300mA)	15 (I _{OUT} =1mA to 300mA)	37	0.1	1.0	✓	✓	✓	✓	SSOP5	FSs	YES
BU15JA3DG-C		1.5			365 (I _O =300mA)										SSOP5	FSs	YES
BU18JA3DG-C		1.8			330 (I _O =300mA)										SSOP5	FSs	YES
BU25JA3DG-C		2.5			240 (I _O =300mA)										SSOP5	FSs	YES
BU30JA3DG-C		3.0			220 (I _O =300mA)										SSOP5	FSs	YES
BU33JA3DG-C		3.3			200 (I _O =300mA)										SSOP5	FSs	YES

6.5V Withstand Voltage 200mA CMOS LDO Regulators

Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision	Output Current (A)	Vsat (V)	Ripple Rejection (dB)	Load Regulation (mV)	Circuit Current (μA)	Output Short Current (mA)	Input Capacitor (μF)	Output Capacitor (μF)	Shut Down Switch	Over-Current Protection	Temperature Protection	Discharge Function	Package/Part No.	
																SSON004X1010	SSOP5
BU10TD2W/BU10TD3W	1.7 to 6.0	1.0	±25mV	0.2	—	70	10 (I _O =0.01 to 100mA)	35	70	0.47	0.47	✓	✓	✓	✓	BU10TD2WNVX	BU10TD3WG
BU1ATD2W/—		1.05														BU1ATD2WNVX	—
BU11TD2W/BU11TD3W		1.1														BU11TD2WNVX	BU11TD3WG
BU18TD2W/—		1.15														BU18TD2WNVX	—
BU12TD2W/BU12TD3W		1.2														BU12TD2WNVX	BU12TD3WG
BU1CTD2W/BU1CTD3W		1.25														BU1CTD2WNVX	BU1CTD3WG
BU13TD2W/BU13TD3W		1.3														BU13TD2WNVX	BU13TD3WG
BU15TD2W/BU15TD3W		1.5														BU15TD2WNVX	BU15TD3WG
BU18TD2W/BU18TD3W		1.8														BU18TD2WNVX	BU18TD3WG
BU1JTD2W/BU1JTD3W		1.85														BU1JTD2WNVX	BU1JTD3WG
BU19TD2W/BU19TD3W		1.9														BU19TD2WNVX	BU19TD3WG
BU20TD2W/BU20TD3W		2.0														BU20TD2WNVX	BU20TD3WG
BU2ATD2W/—		2.05														BU2ATD2WNVX	—
BU21TD2W/BU21TD3W		2.1														BU21TD2WNVX	BU21TD3WG
BU23TD2W/—		2.3														BU23TD2WNVX	—
BU25TD2W/BU25TD3W		2.5	±1%		280 (I _O =200mA)											BU25TD2WNVX	BU25TD3WG
BU26TD2W/BU26TD3W		2.6														BU26TD2WNVX	BU26TD3WG
BU27TD2W/BU27TD3W		2.7														BU27TD2WNVX	BU27TD3WG
BU2HTD2W/—		2.75														BU2HTD2WNVX	—
BU28TD2W/BU28TD3W		2.8														BU28TD2WNVX	BU28TD3WG
BU2JTD2W/BU2JTD3W		2.85														BU2JTD2WNVX	BU2JTD3WG
BU29TD2W/BU29TD3W		2.9														BU29TD2WNVX	BU29TD3WG
BU30TD2W/BU30TD3W		3.0														BU30TD2WNVX	BU30TD3WG
BU31TD2W/BU31TD3W		3.1														BU31TD2WNVX	BU31TD3WG
BU32TD2W/BU32TD3W		3.2														BU32TD2WNVX	BU32TD3WG
BU33TD2W/BU33TD3W		3.3														BU33TD2WNVX	BU33TD3WG
BU34TD2W/BU34TD3W		3.4														BU34TD2WNVX	BU34TD3WG
Type	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision	Output Current (A)	Vsat (V)	Ripple Rejection (dB)	Load Regulation (mV)	Circuit Current (μA)	Output Short Current (mA)	Input Capacitor (μF)	Output Capacitor (μF)	Shut Down Switch	Over-Current Protection	Temperature Protection	Discharge Function	Package/Part No.	
																SSON004X1216	HVSOF5
BU15TA2W	2.5 to 5.5	1.5	±25mV	0.2	—	65	10 (I _O =0.01 to 100mA)	40	70	1.0	1.0	✓	✓	✓	✓	BU15TA2WNVX	BU15TA2WHFV
BU18TA2W		1.8														BU18TA2WNVX	BU18TA2WHFV
BU25TA2W		2.5														BU25TA2WNVX	BU25TA2WHFV
BU26TA2W		2.6														BU26TA2WNVX	BU26TA2WHFV
BU27TA2W		2.7	±1%		360 (I _O =200mA)											BU27TA2WNVX	BU27TA2WHFV
BU28TA2W		2.8														BU28TA2WNVX	BU28TA2WHFV
BU2JTA2W		2.85														BU2JTA2WNVX	BU2JTA2WHFV
BU29TA2W		2.9														BU29TA2WNVX	BU29TA2WHFV
BU30TA2W		3.0														BU30TA2WNVX	BU30TA2WHFV
BU31TA2W		3.1														BU31TA2WNVX	BU31TA2WHFV
BU32TA2W		3.2														BU32TA2WNVX	BU32TA2WHFV
BU33TA2W		3.3														BU33TA2WNVX	BU33TA2WHFV
BU34TA2W		3.4														BU34TA2WNVX	BU34TA2WHFV

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LDO Regulators

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6.5V Withstand Voltage 200mA CMOS LDO Regulators

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Vsat (mV)	Ripple Rejection (dB)	Load Regulation (mV)	Circuit Current (μA)	Output Short Current (mA)	Input Capacitor (μF)	Output Capacitor (μF)	Shut Down Switch	Over-Current Protection	Temperature Protection	Discharge Function	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100														
BU12SD2MG-M	1.7 to 6.0	1.2	±2 (T _a =−40 to +105°C)	0.2	280 (I _{OUT} =100mA)	68 (f _{RR} =1kHz, I _{OUT} =10mA)	1 (I _{OUT} =1 to 200mA)	33	100	1.0	1.0				—	SSOP5	FSs	YES														
BU15SD2MG-M		1.5			180 (I _{OUT} =100mA)											SSOP5	FSs	YES														
BU18SD2MG-M		1.8			150 (I _{OUT} =100mA)											SSOP5	FSs	YES														
BU25SD2MG-M		2.5			100 (I _{OUT} =100mA)											SSOP5	FSs	YES														
BU28SD2MG-M		2.8			85 (I _{OUT} =100mA)											SSOP5	FSs	YES														
BU30SD2MG-M		3.0														SSOP5	FSs	YES														
BU33SD2MG-M		3.3														SSOP5	FSs	YES														
BU10JA2MNVX-C		1.0	±2	0.2	800 (I _{OUT} =200mA)	70 (f _{RR} =1kHz, I _{OUT} =10mA)	10 (I _{OUT} =0.01mA to 100mA)	35	70	0.47	0.47				✓	✓	✓	SSON004R1010	FSs	YES												
BU11JA2MNVX-C		1.1			SSON004R1010													FSs	YES													
BU12JA2MNVX-C		1.2			SSON004R1010													FSs	YES													
BU1CJA2MNVX-C		1.25			SSON004R1010													FSs	YES													
BU15JA2MNVX-C		1.5			SSON004R1010													FSs	YES													
BU18JA2MNVX-C		1.8			SSON004R1010													FSs	YES													
BU25JA2MNVX-C		2.5			SSON004R1010													FSs	YES													
BU28JA2MNVX-C		2.8			SSON004R1010													FSs	YES													
BU2JJA2MNVX-C		2.85			SSON004R1010													FSs	YES													
BU29JA2MNVX-C		2.9			SSON004R1010													FSs	YES													
BU30JA2MNVX-C		3.0			SSON004R1010													FSs	YES													
BU33JA2MNVX-C		3.3			SSON004R1010													FSs	YES													
BU34JA2MNVX-C		3.4			SSON004R1010													FSs	YES													
BU10JA2VG-C		1.0			±2													0.2	—	68 (f _{RR} =1kHz, I _{OUT} =10mA)	0.5 (I _{OUT} =1mA to 100mA)	33	100	1.0	1.0				—	SSOP5	FSs	YES
BU12JA2VG-C		1.2																												SSOP5	FSs	YES
BU1CJA2VG-C		1.25																												SSOP5	FSs	YES
BU15JA2VG-C		1.5																												SSOP5	FSs	YES
BU18JA2VG-C		1.8	160 (I _{OUT} =100mA)	SSOP5		FSs	YES																									
BU25JA2VG-C		2.5	100 (I _{OUT} =100mA)	SSOP5		FSs	YES																									
BU28JA2VG-C		2.8	85 (I _{OUT} =100mA)	SSOP5		FSs	YES																									
BU2JJA2VG-C		2.85		SSOP5		FSs	YES																									
BU30JA2VG-C		3.0		SSOP5		FSs	YES																									
BU33JA2VG-C		3.3		SSOP5		FSs	YES																									
BU10JA2DG-C		1.0	—	68 (f _{RR} =1kHz, I _{OUT} =10mA)		0.5 (I _{OUT} =1mA to 100mA)	33	100	1.0	1.0				✓	SSOP5	FSs	YES															
BU12JA2DG-C		1.2													SSOP5	FSs	YES															
BU1CJA2DG-C		1.25													SSOP5	FSs	YES															
BU15JA2DG-C		1.5													SSOP5	FSs	YES															
BU18JA2DG-C		1.8													160 (I _{OUT} =100mA)	SSOP5	FSs		YES													
BU25JA2DG-C		2.5													100 (I _{OUT} =100mA)	SSOP5	FSs		YES													
BU28JA2DG-C		2.8													85 (I _{OUT} =100mA)	SSOP5	FSs		YES													
BU2JJA2DG-C		2.85			SSOP5											FSs	YES															
BU30JA2DG-C		3.0			SSOP5											FSs	YES															
BU33JA2DG-C		3.3																														

6.5V Withstand Voltage 200mA CMOS LDO Regulators with Shutdown Switch WL-CSP type

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision	Output Current (A)	Vsat (mV)	Ripple Rejection (dB)	Load Regulation (mV)	Circuit Current (μA)	Output Short Current (mA)	Input Capacitor (μF)	Output Capacitor (μF)	Shut Down Switch	Over-Current Protection	Temperature Protection	Discharge Function	Package (mm)
BU18SA4WGWL	1.7 to 5.5	1.8	±50mV	0.2	150 (I _o =100mA)	70	2 (I _o =1 to 100mA)	40	100	1.0	1.0	✓	✓	✓	—	UCSP50L1 0.8×0.8, H=Max 0.55mm
BU25SA4WGWL		2.5	±2%		UCSP50L1 0.8×0.8, H=Max 0.55mm											
BU2FSA4WGWL		2.55			UCSP50L1 0.8×0.8, H=Max 0.55mm											
BU28SA4WGWL		2.8			UCSP50L1 0.8×0.8, H=Max 0.55mm											
BU30SA4WGWL		3.0			UCSP50L1 0.8×0.8, H=Max 0.55mm											
BU33SA4WGWL		3.3			UCSP50L1 0.8×0.8, H=Max 0.55mm											

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6V Withstand Voltage Ultra Low Voltage Output LDO Regulator

Part No.	Output Current (A)	Input Voltage (V)		Output Voltage (V)	Voltage Accuracy (%)	Power Good	Adjustable Soft Start	UVLO	OCP	TSD	Package
		V _{CC}	V _{IN}								
BD00JC0MNUX-M	1.0	3.0 to 5.5	0.95 to V _{CC} -1	Variable 0.65 to 2.70	±2	✓	✓	✓	Recovery	Recovery	VSON010X3030

5.5V Withstand Voltage 500mA CMOS LDO Regulators WL-CSP type

Part No.	Input Voltage (V)	Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	Bias Current (μA)	I/O Voltage Difference (mV)	Ripple Rejection (dB)	Load Regulation (mV)	Protection Circuit	Package
BU30SA5GWZ	1.8 to 5.0	3	±1	0.5	33	80 (I _O =100mA)	70dB (f=1kHz)	6 (I _{OUT} =0.01mA to 300mA)	Over-Current/ Temperature	UCSP30L1
BU33SA5GWZ		3.3								UCSP30L1

UVLO: Under Voltage Lock Out, OCP: Over-Current Protection, TSD: Thermal Shut Down

Ultra Low Dropout LDO Regulators

Ultra LDO type, Fast Transient Response LDO Regulators

Part No.	Output Current (A)	Input Voltage (V)		Output Voltage (V)	Voltage Accuracy (%)	Power Good	Adjustable Soft Start	UVLO	OCP	TSD	Package
		V _{CC}	V _{IN}								
BD3552HFN	2.0	4.3 to 5.5	0.95 to (V _{CC} -1)	0.65 to 2.70	±1	—	✓	✓	Recovery	Recovery	HSON8
BD3508MUV	3.0		0.75 to (V _{CC} -1)								VQFN020V4040
BD3540NUV	0.5	3.0 to 5.5	0.95 to (V _{CC} -1)	0.65 to 2.70	±1	✓	✓	✓	Recovery	Recovery	VSON010V3030
BD3541NUV	1.0										VSON010V3030

UVLO: Under Voltage Lock Out, OCP: Over-Current Protection, TSD: Thermal Shut Down

Multi-Output LDO Regulators

2ch Variable Step CMOS LDO Regulator

Part No.	Input Voltage (V)	V _{OUT}	Selectable Output Voltage (V)								Output Voltage Precision (%)	Output Current (A)	V _{SAT} (mV) (I _O =100mA)	Ripple Rejection (dB)	Load Regulation (%)	Circuit Current (μA)	Output Short Current (mA)	Input Capacitor (μF)	Output Capacitor (μF)	Shut Down Switch	Over-Current Protection	Temperature Protection	Low Voltage Protection	Package (mm)
			2.8	2.9	2.95	3.0	3.05	3.1	3.2	3.3	—													
BD7602GUL	2.7 to 5.5	1ch	3.0								2	0.1	—	45	0.7	10	—	1.0	4.7	✓	✓	✓	✓	VCSP50L1C 1.6x1.6, H=Max 0.57
		2ch	2.8	2.9	2.95	3.0	3.05	3.1	3.2	3.3		0.15												

LDO Regulators with Watchdog Timer and Voltage Detector

50V Withstand Voltage Low Quiescent Current 500mA LDO Regulators with Watchdog Timer and Voltage Detector

Part No.	Input Voltage (V)	LDO				Voltage Detector			Circuit Current (μA)	Operating Temperature (°C)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
		Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Detection Voltage (V)	Voltage Detection Precision (%)	Function					
BD3021HFP	5.6 to 36.0	5	±2 (T _a =-40 to +125°C)	0.5	0.3 (I _O =200mA)	4.5	±2	4.5V Voltage Detector+WDT (Active switch)	80	T _a =-40 to +125	HRP7	FSs	YES
BD3020HFP						Variable (at V _S open: 4.1V)		Adjustable Voltage Detector+WDT			HRP7	FSs	YES

45V Withstand Voltage Low Quiescent Current 550mA LDO Regulators with Watchdog Timer and Voltage Detector

Part No.	Input Voltage (V)	LDO				Voltage Detector			Circuit Current (μA)	Operating Temperature (°C)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
		Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Detection Voltage (V)	Voltage Detection Precision (%)	Function					
BD4271EFJ-C	5.5 to 45.0	5	±2 (T _J =-40 to +150°C)	0.55	0.2 (I _O =300mA)	4.65	±2.6	4.65V Voltage Detector+WDT	75	T _J =-40 to +150	HTSOP-J8	FSs	YES
BD4271HFP-C											HRP7	FSs	YES
BD4271FP2-C											TO263-7	FSs	YES

45V Withstand Voltage Low Quiescent Current 200mA LDO Regulator with Watchdog Timer and Voltage Detector

Part No.	Input Voltage (V)	LDO				Voltage Detector			Circuit Current (μA)	Operating Temperature (°C)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
		Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Detection Voltage (V)	Voltage Detection Precision (%)	Function					
BD820F5UEFJ-C	5.9 to 42.0	5	±2 (T _J =-40 to +150°C)	0.2	0.4 (I _O =200mA)	4.2	±2.62	4.2V Voltage Detector+WDT	5	T _J =-40 to +150	HTSOP-J8	FSs	YES

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*1 For more information about "ComfySIL™ Functional Safety", please refer to the reverse side of the cover.

LDO Regulators with Voltage Detector

Please ensure that minimum Input Voltage always exceeds the sum of Output Voltage and drop out voltage for the device.

45V Withstand Voltage Low Quiescent Current 500mA LDO Regulators with Reset													
Part No.	Input Voltage (V)	LDO				Voltage Detector		Shutdown Switch	Circuit Current (μA)	Operating Temperature (°C)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
		Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Detection Voltage (V)	Voltage Detection Precision (%)						
BD42754FPJ-C	5.5 to 45.0	5	±2 (T _J =−40 to +150°C, V _{CC} =6.0 to 28V, I _O =5 to 400mA)	0.5	0.25 (I _O =300mA)	4.62	±2.8	—	75	T _J =−40 to +150	TO252-J5	FSs	YES
BD42754FP2-C											TO263-5	FSs	YES
45V Withstand Voltage Low Quiescent Current 200mA/300mA LDO Regulators with 2ch RESET													
Part No.	Input Voltage (V)	LDO				Voltage Detector		Shutdown Switch	Circuit Current (μA)	Operating Temperature (°C)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
		Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Detection Voltage (V)	Voltage Detection Precision (%)						
BD4269FJ-C	5.5 to 45.0	5	±2 (T _J =−40 to +150°C, V _{CC} =6.0 to 16V, I _O =1 to 100mA)	0.2	0.25 (I _O =100mA)	Variable (with RADJ not used: 4.62V)	±2.6	—	70	T _J =−40 to +150	SOP-J8	FSs	YES
BD4269UEFJ-C				0.3							HTSOP-J8	FSs	YES

45V Withstand Voltage Low Quiescent Current 200mA/300mA LDO Regulators with 2ch RESET

Part No.	Input Voltage (V)	LDO				Voltage Detector		Shutdown Switch	Circuit Current (μA)	Operating Temperature (°C)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
		Output Voltage (V)	Output Voltage Precision (%)	Output Current (A)	I/O Voltage Difference (V)	Detection Voltage (V)	Voltage Detection Precision (%)						
BD4269FJ-C	5.5 to 45.0	5	±2 (T _J =−40 to +150°C, V _{CC} =6.0 to 16V, I _O =1 to 100mA)	0.2	0.25 (I _O =100mA)	Variable (with RADJ not used: 4.62V)	±2.6	—	70	T _J =−40 to +150	SOP-J8	FSs	YES
BD4269UEFJ-C				0.3							HTSOP-J8	FSs	YES

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Voltage Tracker

50V Withstand Voltage 500mA Voltage Tracker									
Part No.	Input Voltage (V)	Output Current (A)	Offset Voltage (mV)	I/O Voltage Difference (V)	Circuit Current (μA)	Operating Temperature (°C)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD3925FP-C	4.5 to 36.0	0.5	±10 (T _a =−40 to +125°C, V _{CC} =6 to 36V, I _O =5 to 200mA)	0.25 (I _O =200mA)	45	T _a =−40 to +125	TO252-5	FSs	YES
BD3925HFP-C							HRP5	FSs	YES
45V Withstand Voltage 250mA Voltage Tracker									
Part No.	Input Voltage (V)	Output Current (A)	Offset Voltage (mV)	I/O Voltage Difference (V)	Circuit Current (μA)	Operating Temperature (°C)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD42530UEFJ-C	5.6*2 to 42.0	0.25	±10 (T _J =−40 to +150°C, V _{CC} =6 to 32V, I _O =0.1 to 250mA)	0.28 (I _O =200mA)	40	T _J =−40 to +150	HTSOP-J8	FSs	YES
BD42530FP2-C							TO263-5	FSs	YES
BD42530FPJ-C							TO252-J5	FSs	YES
45V Withstand Voltage 70mA Voltage Tracker									
Part No.	Input Voltage (V)	Output Current (A)	Offset Voltage (mV)	I/O Voltage Difference (V)	Circuit Current (μA)	Operating Temperature (°C)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD42540FJ-C	5.4*2 to 42.0	0.07	±10 (T _J =−40 to +150°C, V _{CC} =5.5 to 26V, I _O =0.1 to 60mA)	0.2 (I _O =70mA)	40	T _J =−40 to +150	SOP-J8	FSs	YES
45V Withstand Voltage 50mA Voltage Tracker									
Part No.	Input Voltage (V)	Output Current (A)	Offset Voltage (mV)	I/O Voltage Difference (V)	Circuit Current (μA)	Operating Temperature (°C)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD42500G-C	5.3*2 to 42.0	0.05	±15 (T _J =−40 to +150°C, V _{CC} =6 to 40V, I _O =1 to 50mA)	0.12 (I _O =50mA)	40	T _J =−40 to +150	SSOP5	FSs	YES

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*1 For more information about "ComfySIL™ Functional Safety", please refer to the reverse side of the cover.
*2 5V setting

Power Supply IC for High Fidelity Audio

Power Supply IC for High Fidelity Audio										
Part No.	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Reference Voltage Accuracy (%)	Dropout Voltage (mV)	Noise Level (μVrms)	PSRR (dB)	Over-Current Protection	Thermal Protection	Package
MUS-IC BD37201NUX	0.5	2.7 to 5.5	Variable 1.0 to 4.5	±1	200	3.3	90 (f=1kHz) 55 (f=1MHz)	✓	✓	VSON008X2030

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It is the masterpiece of ROHM audio IC which pursues both the numerical values and sound quality performance required in an audio device.

Linear Regulators for DDR SDRAM

Please ensure that minimum input voltage always exceeds the sum of output voltage and drop out voltage for the device.

Termination Regulators for DDR SDRAM																							
Part No.	V _{CC} Input Voltage (V)	V _{TT,IN} Termination Input Voltage (V)	V _{DDQ} Reference Input Voltage (V)	V _{TT} Output Voltage (V)	V _{TT} Voltage Precision (mV)	V _{TT} Output Current (A)	V _{REF} Output Current (mA)	Features											Package				
								Enable	Soft Start	Power Good	UVLO	Output Ceramic Capacitors	Thermal Protection	DDR (VDDQ)									
														DDR1 (2.5V/2.6V)	DDR2 (1.8V)	DDR2L (1.5V)	LPDDR2 (1.2V)	DDR3 (1.5V)		DDR3L (1.35V)	DDR3U (1.25V)	LPDDR3 (1.2V)	DDR4 (1.2V)
BD3533F	2.7 to 5.5	1.0 to 5.5	1.00 to 2.75	0.75 to 1.25	±30	±1.0	±20	✓	✓	—	✓	—	Recovery	✓	✓	—	—	—	—	—	SOP8		
BD3539FVM	2.7 to 5.5	1.0 to 5.5	1.00 to 2.75	0.75 to 1.25	±15	±1.0	±25	✓	✓	—	✓	✓	Recovery	✓	✓	✓	—	✓	—	—	MSOP8		
BD3539NUX																					VSON008X2030		
BD35390FJ	2.7 to 5.5	1.0 to 5.5	1.00 to 2.75	0.75 to 1.25	±15	±1.0	—	✓	✓	✓	✓	✓	Recovery	✓	✓	✓	—	✓	—	—	SOP-J8		
Automotive Termination Regulator for DDR SDRAM																							
Part No.	V _{CC} Input Voltage (V)	V _{TT,IN} Termination Input Voltage (V)	V _{DDQ} Reference Input Voltage (V)	V _{TT} Output Voltage (V)	V _{TT} Voltage Precision (mV)	V _{TT} Output Current (A)	V _{REF} Output Current (mA)	Features											Package	Automotive Grade AEC-Q100			
								Enable	Soft Start	Power Good	UVLO	Output Ceramic Capacitors	Thermal Protection	DDR (VDDQ)									
														DDR1 (2.5V/2.6V)	DDR2 (1.8V)	DDR2L (1.5V)	LPDDR2 (1.2V)	DDR3 (1.5V)			DDR3L (1.35V)	DDR3U (1.25V)	LPDDR3 (1.2V)
BD35395FJ-M	2.7 to 5.5	1.0 to 5.5	1.00 to 2.75	0.500 to 1.375	±13.5	±1.0	—	✓	✓	✓	✓	✓	Recovery	✓	✓	✓	—	✓	✓	—	—	SOP-J8	YES

Switching Regulators

Integrated FET Switching Regulators (Buck Converters) P.44

External FET Switching Regulators (Buck Controllers) P.46

For Automotive Switching Regulators P.47

Integrated FET Switching Regulators (Boost and Buck-Boost Converters) P.46

External FET Switching Regulators (Boost and Buck-Boost Controllers) P.47

Switching Regulators

Integrated FET Switching Regulators (Buck Converters)

Withstand Voltage 7V or less 1A or less Single Output Buck Converters

Part No.	Input Voltage Maximum Rating (V)	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Circuit Current (μA)	Control Mode	Features						Package (mm)
								Power Good	Adjustable Soft Start	Synchronous Rectifier	Light-Load Efficiency	Over-Current Protection	Thermal Protection	
BD9122GUL	7	0.3	2.5 to 5.5	1 to 2	1	200	Current	—	—	✓	✓	Latch	Latch	VCSP50L2 2.5x1.1, H=0.55
Nano BD70522GUL*1	6	0.5	2.5 to 5.5	1.2 to 3.3*2	1	0.18	On-time	✓	—	✓	✓	Recovery	Recovery	VCSP50L1C 1.76x1.56, H=0.57
BD9161FVM	7	0.6	2.5 to 4.5	1.0 to 3.3	1	200	Current	—	—	✓	✓	Latch	Latch	MSOP8
BD9161FVM-LB	7	0.6	2.5 to 4.5	1.0 to 3.3	1	200	Current	—	—	✓	✓	Latch	Latch	MSOP8
BD9120HFN	7	0.8	2.7 to 4.5	1.0 to 1.5	1	200	Current	—	—	✓	✓	Latch	Latch	HSOP8
BD9102FVM	7	0.8	4.0 to 5.5	1.24	1	250	Current	—	—	✓	✓	Latch	Latch	MSOP8
BD8966FVM	7	0.8	4.0 to 5.5	1.0 to 2.5	1	—	Current	—	—	✓	—	Latch	Latch	MSOP8
BD9106FVM	7	0.8	4.0 to 5.5	1.0 to 2.5	1	250	Current	—	—	✓	✓	Latch	Latch	MSOP8
BD9106FVM-LB	7	0.8	4.0 to 5.5	1.0 to 2.5	1	250	Current	—	—	✓	✓	Latch	Latch	MSOP8
BD9109FVM	7	0.8	4.5 to 5.5	3.3	1	250	Current	—	—	✓	✓	Latch	Latch	MSOP8
BD9109FVM-LB	7	0.8	4.5 to 5.5	3.3	1	250	Current	—	—	✓	✓	Latch	Latch	MSOP8
BD9104FVM	7	0.8	4.5 to 5.5	3.3	1	250	Current	—	—	✓	✓	Latch	Latch	MSOP8
BD9A100MUV	7	1	2.7 to 5.5	0.8 to (V _{IN} ×0.7)	1	350	Current	✓	✓	✓	✓	Recovery	Recovery	VQFN016V3030
BD9A101MUV-LB	7	1	2.7 to 5.5	0.8 to (V _{IN} ×0.7)	1	350	Current	✓	✓	✓	✓	Recovery	Recovery	VQFN016V3030
BD9B100MUV	7	1	2.7 to 5.5	0.8 to (V _{IN} ×0.8)	2/1	35	On-time	✓	✓	✓	Deep	Recovery	Recovery	VQFN016V3030
BU90008GWZ	7	1	2.3 to 5.5	1	3.6	45	On-time	—	—	✓	✓	Recovery	Recovery	UCSP35L1 1.3x0.9, H=0.4
BU90003GWZ	7	1	2.3 to 5.5	1.2	4	45	On-time	—	—	✓	✓	Recovery	Recovery	UCSP35L1 1.3x0.9, H=0.4
BU90007GWZ	7	1	2.3 to 5.5	1.25	4	45	On-time	—	—	✓	✓	Recovery	Recovery	UCSP35L1 1.3x0.9, H=0.4
BU90009GWZ	7	1	2.3 to 5.5	1.3	4.2	45	On-time	—	—	✓	✓	Recovery	Recovery	UCSP35L1 1.3x0.9, H=0.4
BU90004GWZ	7	1	2.3 to 5.5	1.8	5.4	45	On-time	—	—	✓	✓	Recovery	Recovery	UCSP35L1 1.3x0.9, H=0.4
BU90104GWZ	7	1	2.3 to 5.5	1.8	5.4	45	On-time	—	—	✓	✓	Recovery	Recovery	UCSP35L1 1.3x0.9, H=0.4
BU90005GWZ	7	1	2.3 to 5.5	2.5	6	45	On-time	—	—	✓	✓	Recovery	Recovery	UCSP35L1 1.3x0.9, H=0.4
BU90006GWZ	7	1	2.3 to 5.5	3	6	55	On-time	—	—	✓	✓	Recovery	Recovery	UCSP35L1 1.3x0.9, H=0.4
BU90002GWZ	7	1	4.0 to 5.5	3.3	6	55	On-time	—	—	✓	✓	Recovery	Recovery	UCSP35L1 1.3x0.9, H=0.4

Withstand Voltage 7V or less 1.2 to 3A Single Output Buck Converters

Part No.	Input Voltage Maximum Rating (V)	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Circuit Current (μA)	Control Mode	Features						Package (mm)
								Power Good	Adjustable Soft Start	Synchronous Rectifier	Light-Load Efficiency	Over-Current Protection	Thermal Protection	
BD9107FVM	7	1.2	4.0 to 5.5	1.0 to 1.8	1	250	Current	—	—	✓	✓	Latch	Latch	MSOP8
BU90028NUX	7	1.5	2.3 to 5.5	1.18	1	53	On-time	—	—	✓	✓	Recovery	Recovery	VSON008X2030
BU90023NUX	7	1.5	2.3 to 5.5	1.23	1	53	On-time	—	—	✓	✓	Recovery	Recovery	VSON008X2030
New BD9B206NF-Z	6	2	2.7 to 5.5	0.6 to 4.0	2.2	4	On-time	✓	—	✓	✓	Recovery	Recovery	VFN006V1515A
BD9B200MUV	7	2	2.7 to 5.5	0.8 to (V _{IN} ×0.8)	2/1	40	On-time	✓	✓	✓	Deep	Recovery	Recovery	VQFN016V3030
BD9A201FP4-LBZ	7	2	2.7 to 5.5	0.8 to (V _{IN} ×0.7)	1	350	Current	✓	—	✓	—	Recovery	Recovery	TSOT23-8L
BD9110NV	7	2	4.5 to 5.5	1.0 to 2.5	1	250	Current	—	—	✓	✓	Latch	Latch	SON008V5060
BD9130NV	7	2	2.7 to 5.5	1.0 to 2.5*2	1	250	Current	—	—	✓	✓	Latch	Latch	SON008V5060
BD8961NV	7	2	4.5 to 5.5	3.3	1	—	Current	—	—	✓	—	Latch	Latch	SON008V5060
BD9111NV	7	2	4.5 to 5.5	3.3	1	250	Current	—	—	✓	✓	Latch	Latch	SON008V5060
BD8963EFJ	7	3	2.7 to 5.5	1.0 to 2.5*2	1	—	Current	—	—	✓	—	Latch	Latch	HTSOP-J8
BD9139MUV	7	3	2.7 to 5.5	0.8 to 3.3*2	1	200	Current	—	—	✓	✓	Latch	Latch	VQFN016V3030
BD9A300MUV	7	3	2.7 to 5.5	0.8 to (V _{IN} ×0.7)	1	350	Current	✓	✓	✓	✓	Recovery	Recovery	VQFN016V3030
BD9A301MUV-LB	7	3	2.7 to 5.5	0.8 to (V _{IN} ×0.7)	1	350	Current	✓	✓	✓	✓	Recovery	Recovery	VQFN016V3030
BD9B305QUZ	7	3	2.7 to 5.5	0.6 to (V _{IN} ×0.8)	1	15	On-time	✓	✓	✓	✓	Recovery	Recovery	VMMP08LZ2020 2.0x2.0, H=0.4
BD9B333GWZ	7	3	2.7 to 5.5	0.6 to (V _{IN} ×0.8)	1.3	50	On-time	✓	✓	✓	Deep	Recovery	Recovery	UCSP35L1 1.98x1.8, H=0.4
New BD9B306NF-Z	6	3	2.7 to 5.5	0.6 to 4.0	2.2	4	On-time	✓	—	✓	✓	Recovery	Recovery	VFN006V1515A
BD9B300MUV	7	3	2.7 to 5.5	0.8 to (V _{IN} ×0.8)	2/1	35	On-time	✓	✓	✓	Deep	Recovery	Recovery	VQFN016V3030
BD9B301MUV-LB	7	3	2.7 to 5.5	0.8 to (V _{IN} ×0.8)	2/1	45	On-time	✓	✓	✓	Deep	Recovery	Recovery	VQFN016V3030
BD9B304QWZ	7	3	2.7 to 5.5	0.8 to (V _{IN} ×0.8)	2/1	40	On-time	—	—	✓	Deep	Recovery	Recovery	UMMP08AZ020 2.0x2.0, H=0.4

*1 BD70522GUL has an ultra-high efficiency battery management solution evaluation board "REFLV BMS001-EVK-001". This board is equipped with NGK Insulators, Ltd.'s new thin, large-capacity lithium-ion secondary battery "EnerCera™". For details, please refer to the ROHM's website.

*2 Restrictions depend on input/output voltage conditions.



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Withstand Voltage 7V or less 4A or more Single Output Buck Converters

Part No.	Input Voltage Maximum Rating (V)	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Circuit Current (μA)	Control Mode	Features							Package
								Power Good	Adjustable Soft Start	Synchronous Rectifier	Light-Load Efficiency	Over-Current Protection	Thermal Protection	Over-Voltage Protection	
BD9137MUV	7	4	2.7 to 5.5	0.8 to 3.3*	1	250	Current	—	—	✓	✓	Recovery	Recovery	—	VQFN020V4040
BD91361MUV	7	4	2.7 to 5.5	0.8 to 3.3*	1	250	Current	—	—	✓	✓	Latch	Latch	—	VQFN020V4040
BD9A400MUV	7	4	2.7 to 5.5	0.8 to (V _{IN} ×0.7)	1	350	Current	✓	✓	✓	✓	Recovery	Recovery	—	VQFN016V3030
BD9B400MUV	7	4	2.7 to 5.5	0.8 to (V _{IN} ×0.8)	2/1	45	On-time	✓	✓	✓	✓	Deep	Recovery	Recovery	VQFN016V3030
New BD9B406NF-Z	6	4	2.7 to 5.5	0.6 to 4.0	2.2	4	On-time	✓	—	✓	✓	Recovery	Recovery	—	VFN006V1515A
BD91364BMUU	7	5	2.9 to 5.5	0.8 to (V _{IN} ×0.8)	1.7	150	On-time	✓	✓	✓	✓	Latch	Recovery	—	VQFN20U4040M
BD9B500MUV	7	5	2.7 to 5.5	0.8 to (V _{IN} ×0.8)	2/1	45	On-time	✓	✓	✓	✓	Deep	Recovery	Recovery	VQFN016V3030
BD9A600MUV	7	6	2.7 to 5.5	0.8 to (V _{IN} ×0.7)	1	400	Current	✓	✓	✓	✓	Recovery	Recovery	—	VQFN016V3030
BD9B600MUV	7	6	2.7 to 5.5	0.8 to (V _{IN} ×0.8)	2/1	45	On-time	✓	✓	✓	✓	Deep	Recovery	Recovery	VQFN016V3030

Withstand Voltage 20V or less 1A or less Single Output Buck Converters

Part No.	Input Voltage Maximum Rating (V)	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Circuit Current (μA)	Control Mode	Features							Package
								Power Good	Adjustable Soft Start	Synchronous Rectifier	Light-Load Efficiency	Over-Current Protection	Thermal Protection	Over-Voltage Protection	
BD8312HFN	15	0.8	3.5 to 14.0	1.2 to 12.0*	1.5	600	Voltage	—	—	✓	—	—	Recovery	—	HSO8
BD8313HFN	15	1	3.5 to 14.0	1.2 to 12.0*	1	600	Voltage	—	—	✓	—	—	Recovery	—	HSO8

Withstand Voltage 20V or less 2A to 3A Single Output Buck Converters

Part No.	Input Voltage Maximum Rating (V)	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Circuit Current (μA)	Control Mode	Features							Package (mm)
								Power Good	Adjustable Soft Start	Synchronous Rectifier	Light-Load Efficiency	Over-Current Protection	Thermal Protection	Over-Voltage Protection	
BD9141MUV	15	2	4.5 to 13.2	2.5 to 6.0*	0.5	300	Current	—	—	✓	✓	Latch	Latch	—	VQFN020V4040
BD95821MUV	15.2	2	7.5 to 15.0	0.8 to (V _{IN} ×0.5) (V _{IN} ×0.5)≤5.5	0.5 to 0.8	1,200	H ² Reg	✓	—	✓	—	Latch	Recovery	✓	VQFN016V3030
BD9325FJ	20	2	4.75 to 18.0	0.9 to (V _{IN} ×0.9)	0.38	2,100	Current	—	✓	—	—	Recovery	Recovery	—	SOP-J8
BD9325FJ-LB	20	2	4.75 to 18.0	0.9 to (V _{IN} ×0.9)	0.38	2,100	Current	—	✓	—	—	Recovery	Recovery	—	SOP-J8
BD9859EFJ	15	3	5 to 14	1.0 to (V _{IN} ×0.7)	0.75	2,800	Current	—	—	—	—	Recovery	Recovery	—	HTSOP-J8
BD95831MUV	15.2	3	7.5 to 15.0	0.8 to (V _{IN} ×0.5) (V _{IN} ×0.5)≤5.5	0.5 to 0.8	1,200	H ² Reg	✓	—	✓	—	Latch	Recovery	✓	VQFN016V3030
BD9D320EFJ	20	3	4.5 to 18.0	0.765 to 7.0 (V _{IN} ×0.07) to (V _{IN} ×0.65)	0.7	1,000	On-time	—	✓	✓	—	Recovery	Recovery	—	HTSOP-J8
BD9D300MUV	20	3	4.0 to 17.0	0.9 to 5.25	1.25	20	On-time	✓	✓	✓	✓	Recovery	Recovery	✓	VQFN016V3030
BD9C301FJ	20	3	4.5 to 18.0	(V _{IN} ×0.125) to (V _{IN} ×0.7)	0.5	1,500	Current	—	—	✓	—	Latch	Recovery	—	SOP-J8
BD9C301FJ-LB	20	3	4.5 to 18.0	(V _{IN} ×0.125) to (V _{IN} ×0.7)	0.5	1,500	Current	—	—	✓	—	Latch	Recovery	—	SOP-J8
BD9D321EFJ	20	3	4.5 to 18.0	0.765 to 7.0 (V _{IN} ×0.07) to (V _{IN} ×0.65)	0.7	700	On-time	—	✓	✓	✓	Recovery	Recovery	—	HTSOP-J8
BD9D322QWZ	20	3	4.5 to 18.0	0.765 to 7.0 (V _{IN} ×0.07) to (V _{IN} ×0.65)	0.7	700	On-time	—	✓	✓	✓	Recovery	Recovery	—	UMMP008Z2020 2.0×2.0, H=0.4
BD9D323QWZ	20	3	4.5 to 18.0	0.765 to 7.0 (V _{IN} ×0.07) to (V _{IN} ×0.65)	0.7	1,000	On-time	—	✓	✓	—	Recovery	Recovery	—	UMMP008Z2020 2.0×2.0, H=0.4
BD9326EFJ	20	3	4.75 to 18.0	0.9 to (V _{IN} ×0.9)	0.38	2,100	Current	—	✓	—	—	Recovery	Recovery	—	HTSOP-J8
BD9326EFJ-LB	20	3	4.75 to 18.0	0.9 to (V _{IN} ×0.9)	0.38	2,100	Current	—	✓	—	—	Recovery	Recovery	—	HTSOP-J8

Withstand Voltage 20V or less 4A or more Single Output Buck Converters

Part No.	Input Voltage Maximum Rating (V)	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Circuit Current (μA)	Control Mode	Features							Package
								Power Good	Adjustable Soft Start	Synchronous Rectifier	Light-Load Efficiency	Over-Current Protection	Thermal Protection	Over-Voltage Protection	
BD95841MUV	15.2	4	7.5 to 15.0	0.8 to (V _{IN} ×0.5) (V _{IN} ×0.5)≤5.5	0.5 to 0.8	1,200	H ² Reg	✓	—	✓	—	Latch	Recovery	✓	VQFN016V3030
BD9C401EFJ	20	4	4.5 to 18.0	(V _{IN} ×0.125) to (V _{IN} ×0.7) (V _{IN} ×0.125)≥0.8	0.5	1,500	Current	—	—	✓	—	Latch	Recovery	—	HTSOP-J8
BD9327EFJ	20	4	4.75 to 18.0	0.9 to (V _{IN} ×0.9)	0.38	2,100	Current	—	✓	—	—	Recovery	Recovery	—	HTSOP-J8
BD9327EFJ-LB	20	4	4.75 to 18.0	0.9 to (V _{IN} ×0.9)	0.38	2,100	Current	—	✓	—	—	Recovery	Recovery	—	HTSOP-J8
BD9C501EFJ	20	5	4.5 to 18.0	(V _{IN} ×0.075) to (V _{IN} ×0.7) (V _{IN} ×0.075)≥0.8	0.5	1,500	Current	—	—	✓	—	Latch	Recovery	—	HTSOP-J8
BD9C601EFJ	20	6	4.5 to 18.0	(V _{IN} ×0.075) to (V _{IN} ×0.7) (V _{IN} ×0.075)≥0.8	0.5	1,500	Current	—	—	✓	—	Latch	Recovery	—	HTSOP-J8
BD95861MUV	20	6	7.5 to 18.0	0.8 to (V _{IN} ×0.5) (V _{IN} ×0.5)≤5.5	0.35 to 0.80	1,200	H ² Reg	✓	—	✓	—	Latch	Recovery	✓	VQFN024V4040

Withstand Voltage 22V or more 1A or less Single Output Buck Converters

Part No.	Input Voltage Maximum Rating (V)	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Circuit Current (μA)	Control Mode	Features							Package
								Power Good	Adjustable Soft Start	Synchronous Rectifier	Light-Load Efficiency	Over-Current Protection	Thermal Protection	Over-Voltage Protection	
BD9G102G-LB	45	0.5	6 to 42	(V _{IN} ×0.08) to (V _{IN} ×0.8) (V _{IN} ×0.08)≥0.75	1	500	Current	—	—	—	—	Recovery	Recovery	✓	SSOP6
BD9G101G	45	0.5	6 to 42	(V _{IN} ×0.15) to (V _{IN} ×0.7) (V _{IN} ×0.15)≥1.0	1.5	700	Current	—	—	—	—	Recovery	Recovery	—	SSOP6
BD9227F	22	1	6 to 20	(V _{IN} ×0.252) to V _{IN} (V _{IN} ×0.252)≥1.0	1	400	Current	—	—	—	—	Recovery	Recovery	—	SOP8
BD9E105FP4-Z	30	1	4.5 to 28	V _{IN} ×0.1V or 0.7V to V _{IN} ×0.8V	0.5	55	Current	—	—	✓	✓	Recovery	Recovery	✓	TSOT23-6L
BD9E104FJ	30	1	7 to 26	(V _{IN} ×0.143) to (V _{IN} ×0.5) (V _{IN} ×0.143)≥1.0	0.57	250	Current	—	—	✓	✓	Recovery	Recovery	✓	SOP-J8
BD9E101FJ-LB	40	1	7 to 36	(V _{IN} ×0.0855) to (V _{IN} ×0.7) (V _{IN} ×0.0855)≥1.0	0.57	1,500	Current	—	—	✓	—	Recovery	Recovery	✓	SOP-J8
BD9E100FJ-LB	40	1	7 to 36	(V _{IN} ×0.15) to (V _{IN} ×0.7) (V _{IN} ×0.15)≥1.0	1	1,500	Current	—	—	✓	—	Recovery	Recovery	✓	SOP-J8
Nano BD9V101MUF-LB	70	1	16 to 60	0.8 to 5.5	1.9 to 2.3	2,500	Current	✓	—	✓	—	Recovery	Recovery	✓	VQFN24FV4040

*Restrictions depend on input/output voltage conditions.

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Integrated FET Switching Regulators (Buck Converters)

Withstand Voltage 22V or more 1.2A to 3A Single Output Buck Converters

Part No.	Input Voltage Maximum Rating (V)	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Circuit Current (μA)	Control Mode	Features							Package
								Power Good	Adjustable Soft Start	Synchronous Rectifier	Light-Load Efficiency	Over-Current Protection	Thermal Protection	Over-Voltage Protection	
BD9E151ANUX	30	1.2	6 to 28	1.0 to (V _{IN} ×0.7) or (V _{IN} −5.0)*2	0.6	800	Current	—	✓	—	—	Recovery	Recovery	✓	VSON008X2030
BD9701CP-V5	36	1.5	8 to 35	1.0 to (V _{IN} −3.0)	0.1	4,000	Voltage	—	—	—	—	Recovery	Recovery	—	TO220CP-V5
BD9701FP	36	1.5	8 to 35	1.0 to (V _{IN} −3.0)	0.1	4,000	Voltage	—	—	—	—	Recovery	Recovery	—	TO252-5
BD9703CP-V5	36	1.5	8 to 35	1.0 to (V _{IN} −3.0)	0.3	5,000	Voltage	—	—	—	—	Recovery	Recovery	—	TO220CP-V5
BD9703FP	36	1.5	8 to 35	1.0 to (V _{IN} −3.0)	0.3	5,000	Voltage	—	—	—	—	Recovery	Recovery	—	TO252-5
BD9870FPS	36	1.5	8 to 35	1.0 to 0.8×(V _{IN} −I _O ×RON)	0.9	5,000	Voltage	—	—	—	—	Recovery	Recovery	—	TO252S-5
BD9873CP-V5	36	1.5	8 to 35	1.0 to 0.8×(V _{IN} −I _O ×RON)	0.11	5,000	Voltage	—	—	—	—	Recovery	Recovery	—	TO220CP-V5
BD9G201UEFJ-LB	45	1.5	4.5 to 42.0	0.8 to V _{IN} *1	0.3	1,200	Current	—	—	—	—	Recovery	Recovery	—	HTSOP-J8ES
BD9E200FP4-Z	30	2	4.5 to 26.0	V _{IN} ×0.1 or 0.7V to V _{IN} ×0.8V	0.5	95	Current	—	—	✓	✓	Recovery	Recovery	✓	TSOT23-6L
BD9E201FP4-Z	30	2	4.5 to 28.0	V _{IN} ×0.1 or 0.7V to V _{IN} ×0.8V	0.35	510	Current	—	—	✓	—	Recovery	Recovery	✓	TSOT23-6L
BD9778HFP	36	2	7 to 35	(V _{IN} ×0.06) to V _{IN} (V _{IN} ×0.06)≥1.0	0.05 to 0.50	3,000	Voltage	—	—	—	—	Recovery	Recovery	—	HRP7
New BD9E301UEFJ-LB	40	2.5	7 to 36	(V _{IN} ×0.0855) to (V _{IN} ×0.7) (V _{IN} ×0.0855)≥1.0	0.57	1,500	Current	—	—	✓	—	Recovery	Recovery	✓	HTSOP-J8
New BD9E300UEFJ-LB	40	2.5	7 to 36	(V _{IN} ×0.15) to (V _{IN} ×0.7) (V _{IN} ×0.15)≥1.0	1	1,500	Current	—	—	✓	—	Recovery	Recovery	✓	HTSOP-J8
BD9E302EFJ	30	3	7 to 28	(V _{IN} ×0.11) to (V _{IN} ×0.7) (V _{IN} ×0.11)≥1.0	0.55	290	Current	—	—	✓	✓	Recovery	Recovery	✓	HTSOP-J8
BD9702CP-V5	36	3	8 to 35	1.0 to (V _{IN} −3.0)	0.11	4,000	Voltage	—	—	—	—	Recovery	Recovery	—	TO220CP-V5
BD9874CP-V5	36	3	8 to 35	1.0 to 0.8×(V _{IN} −I _O ×RON)	0.11	5,000	Voltage	—	—	—	—	Recovery	Recovery	—	TO220CP-V5
BD9E304FP4-LBZ	39	3	4.5 to 36	V _{IN} ×0.1V or 0.7V to V _{IN} ×0.8V	0.3	45	Current	—	✓	✓	✓	Recovery	Recovery	✓	TSOT23-8L
New BD9E303UEFJ-LB	40	3	7 to 36	(V _{IN} ×0.06) to (V _{IN} ×0.8) (V _{IN} ×0.06)≥1.0	0.3	2,200	Current	—	—	✓	—	Recovery	Recovery	✓	HTSOP-J8
BD9G341AEFJ	80	3	12 to 76	1.0 to (V _{IN} ×0.9)*1	0.05 to 0.75	1,500	Current	—	—	—	—	Recovery	Recovery	✓	HTSOP-J8
BD9G341AEFJ-LB	80	3	12 to 76	1.0 to (V _{IN} ×0.9)*1	0.05 to 0.75	1,500	Current	—	—	—	—	Recovery	Recovery	✓	HTSOP-J8

Withstand Voltage 22V or more 4A or more Single Output Buck Converters

Part No.	Input Voltage Maximum Rating (V)	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Circuit Current (μA)	Control Mode	Features							Package
								Power Good	Adjustable Soft Start	Synchronous Rectifier	Light-Load Efficiency	Over-Current Protection	Thermal Protection	Over-Voltage Protection	
BD95514MUV	30	4	4.5 to 28.0	0.7 to 5.0	0.2 to 1.0	1,300	H ² Reg	✓	✓	✓	✓	Latch	Recovery	✓	VQFN032V5050
Nano BD9F500QUZ	39	3 or 5	4.5 to 36.0	0.6 to 14.0	0.6, 1.0, 2.2	20	On-time	✓	✓	✓	✓	Recovery	Recovery	✓	VMMP16LZ3030
BD9G500UEFJ-LA	80	5	7 to 76	1.0 to (0.97×V _{IN})*1	0.1 to 0.65	750	Current	—	—	—	—	Recovery	Recovery	✓	HTSOP-J8
BD9F800MUX	30	8	4.5 to 28.0	0.765 to 13.5*1	0.3, 0.6	850	On-time	✓	—	✓	—	Recovery	Recovery	—	VQFN11X3535A

Dual Output Buck Converters

Part No.	Input Voltage Maximum Rating (V)	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Circuit Current (μA)	Control Mode	Features					Package
								Synchronous Rectifier	Light-Load Efficiency	Over-Current Protection	Thermal Protection	Over-Voltage Protection	
BD9152MUV	7	I _{O1} : 1.5 I _{O2} : 1.5	4.5 to 5.5	V _{O1} : 3.3 V _{O2} : 0.8 to 2.5	1	500	Current	✓	✓	Latch	Latch	—	VQFN020V4040
BD93291EFJ	30	I _{O1} : 2.5 I _{O2} : 1.5	8 to 26	V _{O1} : 5.0 V _{O2} : 0.8 to 4.0	1.5 to 2.5	600	H ² Reg	✓	✓	Recovery	Recovery	—	HTSOP-J8

*1 Restrictions depend on input/output voltage conditions.

*2 The lower voltage is output.

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Integrated FET Switching Regulators (Boost and Buck-Boost Converters)

Single Output Boost and Buck-Boost Converters

Part No.	Input Voltage Maximum Rating (V)	Switch Current Limit (mA)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Circuit Current (μA)	Control Mode	Features							Package
								Boost	Buck-Boost	SEPIC	Inverting	Synchronous Rectifier	Light-Load Efficiency	Over-Current Protection	
BU33DV5G	6	10	1.75 to 4.50	3.3	0.1	250	Current	✓	—	—	—	✓	—	Recovery	SSOP5
BU33DV7NUX	7	300	1.8 to 5.5	3.3	0.6	25	Current	✓	—	—	—	✓	✓	Recovery	VSON010V3030
BU34DV7NUX	7	300	1.8 to 5.5	3.4	0.6	25	Current	✓	—	—	—	✓	✓	Recovery	VSON010V3030
BU33UV7NUX	6.5	500	0.6 to 4.5	3.3	0.8	7	Current	✓	—	—	—	✓	✓	Recovery	VSON010X3020
BD8152FVM	7	1,400	2.5 to 5.5	V _{IN} to 14	0.6/1.2	1,200	Current	✓	✓	✓	—	—	—	Recovery	MSOP8
BD8158FVM	7	1,400	2.1 to 4.0	V _{IN} to 14	0.6/1.2	1,200	Current	✓	✓	✓	—	—	—	Recovery	MSOP8
BD83070GWL	6	2,000	2.0 to 5.5	2.5 or 3.3	1.5	2.8	Current	—	✓	—	—	✓	✓	Recovery	UCSP50L1C
BD8306MUV	7	2,000	1.8 to 5.5	1.8 to 5.2	0.3 to 2.0	500	Voltage	✓	✓	—	—	✓	—	Latch	VQFN016V3030
BD8311NUV	14	2,500	3.5 to 11.0	4 to 11	1.2	600	Voltage	✓	—	—	—	—	—	Latch	VSON010V3030
BD8314NUV	14	2,500	3 to 12	4 to 12	1.2	600	Voltage	✓	—	—	—	—	—	Latch	VSON010V3030

Dual Output Boost and Buck-Boost Converters

Part No.	Input Voltage Maximum Rating (V)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Circuit Current (μA)	Control Mode	Features							Package
							Boost	Buck-Boost	SEPIC	Inverting	Synchronous Rectifier	Light-Load Efficiency	Over-Current Protection	
BD8317GWL	7	2.5 to 5.5	V _{O1} : −9.0 to −1.0 V _{O2} : V _{IN} to 18	0.8	500	Current	✓	—	—	✓	—	—	Latch	UCSP50L1
BD8316GWL	7	2.5 to 5.5	V _{O1} : −9.0 to −1.0 V _{O2} : V _{IN} to 18	1.6	500	Current	✓	—	—	✓	—	—	Latch	UCSP50L1
BD83854GWL	7	2.5 to 4.5	±5.4	1.0/0.5	2,500	Current	✓	—	—	✓	✓	—	Latch	UCSP50L1C
BD83854MUV	7	2.5 to 4.5	±5.4	1.0/0.5	2,500	Current	✓	—	—	✓	✓	—	Latch	VQFN20PV3535

External FET Switching Regulators (Buck Controllers)

Single Output Buck Controllers

Part No.	Input Voltage Maximum Rating (V)	Input Voltage (V)	Supply Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Circuit Current (μA)	Control Mode	Features							Package
								Power Good	Externally Synchronizable	Adjustable Soft Start	Synchronous Rectifier	Light-Load Efficiency	Over-Current Protection	Thermal Protection	
BD9305AFVM	20	4.2 to 18.0	—	1.25 to V _{IN} *	0.1 to 0.8	1,500	Voltage	—	—	—	—	—	SCP Latch	Recovery	MSOP8
BD63536FJ	32	3 to 30	—	1.25 to V _{IN} *	0.01 to 0.2	2,000	Voltage	—	—	—	—	—	Recovery	Recovery	SOP-J8
BD9845FV	36	3.6 to 35.0	—	1.0 to V _{IN} *	0.1 to 1.5	2,400	Voltage	—	—	✓	—	—	Recovery	Recovery	SSOP-B14
BD9611MUV	60	10 to 56	—	(V _{IN} ×0.02) to (V _{IN} ×0.97) (V _{IN} ×0.02)≥0.8*	0.05 to 0.50	2,000	Voltage	—	✓	✓	✓	—	Recovery	Recovery	VQFN020V4040

*Restrictions depend on input/output voltage conditions.

Dual Output Buck Controllers

Part No.	Input Voltage Maximum Rating (V)	Input Voltage (V)	Supply Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Circuit Current (μA)	Control Mode	Features							Package
								Power Good	Externally Synchronizable	Adjustable Soft Start	Synchronous Rectifier	Light-Load Efficiency	Over-Current Protection	Thermal Protection	
BD95602MUV-LB	30	5.5 to 28.0	—	1.0 to 5.5	0.15 to 0.50	250	H ³ Reg	✓	—	✓	✓	✓	Latch	Recovery	VQFN032V5050
BD9848FV	36	3.6 to 35.0	—	1.0 to V _{IN} *	0.1 to 1.5	3,000	Voltage	—	—	✓	—	—	Recovery	Recovery	SSOP-B20

*Restrictions depend on input/output voltage conditions.

External FET Switching Regulators (Boost and Buck-Boost Controllers)

Single Output Boost and Buck-Boost Controllers

Part No.	Input Voltage Maximum Rating (V)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Circuit Current (μA)	Control Mode	Features								Package
							Boost	Buck-Boost	Inverting	Buck	Externally Synchronizable	Adjustable Soft Start	Synchronous Rectifier	Over-Current Protection	
BD8303MUV	15	2.7 to 14.0	1 to 12	0.2 to 1.0	650	Voltage	—	✓	—	—	—	✓	Latch	Recovery	VQFN16V3030
BD9306AFVM	20	4.2 to 18.0	V _{IN} to (V _{IN} /0.3)	0.1 to 0.8	1,500	Voltage	✓	—	—	—	—	—	Latch	Recovery	MSOP8
BD9615MUV-LB	62	3.5 to 60.0	V _{IN} to (V _{IN} /0.2)	0.1 to 2.5	2,000	Voltage	✓	—	—	—	✓	✓	Recovery	Recovery	MSOP8KV3030

Dual Output Boost and Buck-Boost Controllers

Part No.	Input Voltage Maximum Rating (V)	Input Voltage (V)	Output Voltage (V)	Switching Frequency (MHz)	Circuit Current (μA)	Control Mode	Features								Package	
							Boost	Buck-Boost	Inverting	Buck	Externally Synchronizable	Adjustable Soft Start	Synchronous Rectifier	Over-Current Protection		Thermal Protection
BD9851EFV	20	4 to 18	1 or more	0.01 to 0.3	2,500	Voltage	✓	—	✓	✓	—	✓	—	Latch	Recovery	HTSSOP-B20
BA9743AFV	36	3.6 to 35.0	2.505 or more	0.01 to 0.8	1,600	Voltage	✓	—	✓	✓	—	✓	—	Latch	Recovery	SSOP-B16
BA9744FV	36	2.5 to 35.0	1.222 or more	0.01 to 0.8	3,900	Voltage	✓	—	✓	✓	—	✓	—	Latch	Recovery	SSOP-B16
BA9741F	36	3.6 to 35.0	2.5 or more	0.01 to 0.8	1,600	Voltage	✓	—	✓	✓	—	✓	—	Latch	Recovery	SOP16
BA9741FS	36	3.6 to 35.0	2.5 or more	0.01 to 0.8	1,600	Voltage	✓	—	✓	✓	—	✓	—	Latch	Recovery	SSOP-A16

For Automotive Switching Regulators

Single Output Primary Integrated Switch Buck Converters

	Part No.	Output FET		Input Voltage Maximum Rating (V)	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Output Voltage Accuracy (%)	Circuit Current (μA)	Switching Frequency (MHz)	Control Mode	Features							Operating Temperature (°C)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
		Upper (Typ)	Bottom (Typ)									Power Good	Sync	Adjustable Soft Start	Synchronous Rectification	Light-Load Efficiency	Over-Voltage Protection	Spread Spectrum				
Nano	BD9V100MUF-C	600mΩ	400mΩ	70	1	16 to 60	Adj. (0.8 to 5.5)	±2.0	2,500	1.9 to 2.3	Current	✓	—	—	✓	—	✓	—	—40 to +125	VQFN24FV4040	FSs	YES
Nano	BD9P105EFV-C	210mΩ	140mΩ	42	1	3.5 to 40.0	Adj. (0.8 to 8.5)	±1.75	15	2.2	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	HTSSOP-B20	FSs	YES
Nano	BD9P105MUF-C	200mΩ	130mΩ	42	1	3.5 to 40.0	Adj. (0.8 to 8.5)	±1.75	15	2.2	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	VQFN20FV4040	FSs	YES
Nano	BD9P108MUF-C	200mΩ	130mΩ	42	1	3.5 to 40.0	Adj. (0.8 to 8.5)	±1.75	15	2.2	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	VQFN24FV4040	FSs	YES
Nano	BD9P135EFV-C	210mΩ	140mΩ	42	1	3.5 to 40.0	3.3	±1.75	15	2.2	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	HTSSOP-B20	FSs	YES
Nano	BD9P135MUF-C	200mΩ	130mΩ	42	1	3.5 to 40.0	3.3	±1.75	15	2.2	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	VQFN20FV4040	FSs	YES
Nano	BD9P155EFV-C	210mΩ	140mΩ	42	1	3.5 to 40.0	5	±1.75	15	2.2	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	HTSSOP-B20	FSs	YES
Nano	BD9P155MUF-C	200mΩ	130mΩ	42	1	3.5 to 40.0	5	±1.75	15	2.2	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	VQFN20FV4040	FSs	YES
	BD90610UEFJ-C	Pch 160mΩ	—	42	1.25	3.5 to 36.0	Adj. (0.8 to V _{IN})	±2.0	2,200	0.05 to 0.6	Current	—	✓	—	—	—	—	—	—40 to +125	HTSOP-J8	FSs	YES
New	BD9G201UEFJ-M	140mΩ	—	45	1.5	4.5 to 42.0	Adj. (0.8 to V _{IN})	±2.0	1,200	0.3	Current	—	✓	—	—	—	—	—	—40 to +105	HTSOP-J8ES	FSs	YES
Nano	BD8P250MUF-C	110mΩ	110mΩ	42	2	3.5 to 36.0	5.0	±2.0	8	2.2	Current	✓	—	—	✓	✓	✓	✓	—40 to +125	VQFN24FV4040	FSs	YES
Nano	BD9P205EFV-C	150mΩ	100mΩ	42	2	3.5 to 40.0	Adj. (0.8 to 8.5)	±1.75	15	2.2	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	HTSSOP-B20	FSs	YES
Nano	BD9P205MUF-C	140mΩ	90mΩ	42	2	3.5 to 40.0	Adj. (0.8 to 8.5)	±1.75	15	2.2	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	VQFN20FV4040	FSs	YES
Nano	BD9P208MUF-C	140mΩ	90mΩ	42	2	3.5 to 40.0	Adj. (0.8 to 8.5)	±1.75	15	2.2	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	VQFN24FV4040	FSs	YES
Nano	BD9P235EFV-C	150mΩ	100mΩ	42	2	3.5 to 40.0	3.3	±1.75	15	2.2	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	HTSSOP-B20	FSs	YES
Nano	BD9P235MUF-C	140mΩ	90mΩ	42	2	3.5 to 40.0	3.3	±1.75	15	2.2	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	VQFN20FV4040	FSs	YES
Nano	BD9P255EFV-C	150mΩ	100mΩ	42	2	3.5 to 40.0	5	±1.75	15	2.2	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	HTSSOP-B20	FSs	YES
Nano	BD9P255MUF-C	140mΩ	90mΩ	42	2	3.5 to 40.0	5	±1.75	15	2.2	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	VQFN20FV4040	FSs	YES
Nano	BD9P206EFV-C	150mΩ	100mΩ	42	2	3.5 to 40.0	0.8 to 8.5	±1.75	15	0.44	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	HTSSOP-B20	FSs	YES
Nano	BD9P236EFV-C	150mΩ	100mΩ	42	2	3.5 to 40.0	3.3	±1.75	15	0.44	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	HTSSOP-B20	FSs	YES
Nano	BD9P256EFV-C	150mΩ	100mΩ	42	2	3.5 to 40.0	5.0	±1.75	15	0.44	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	HTSSOP-B20	FSs	YES
Nano	BD9P233MUF-C	Pch 190mΩ	120mΩ	42	2	3 to 36	3.3	±2.0	26	0.2 to 2.4	Current	✓	✓	✓	✓	✓	✓	✓	—40 to +125	VQFN32FAV050	FSs	YES
	BD99010EFV-M	Pch 170mΩ	130mΩ	42	2	3.5 to 36.0	3.3	±2.0	22	0.2 to 0.5	Current	—	—	—	✓	✓	✓	—	—40 to +105	HTSSOP-B24	FSs	YES
	BD99011EFV-M	Pch 170mΩ	130mΩ	42	2	3.5 to 36.0	5.0	±2.0	22	0.2 to 0.5	Current	—	—	—	✓	✓	✓	—	—40 to +105	HTSSOP-B24	FSs	YES
	BD9060F-C	Pch 300mΩ	—	42	2	5 to 35	Adj. (0.8 to V _{IN})	±2.0	3,700	0.05 to 0.5	Voltage	—	✓	—	—	—	—	—	—40 to +125	SOP8	FSs	YES
	BD9060HFP-C	Pch 300mΩ	—	42	2	5 to 35	Adj. (0.8 to V _{IN})	±2.0	3,700	0.05 to 0.5	Voltage	—	✓	—	—	—	—	—	—40 to +125	HRP7	FSs	YES
	BD90620UEFJ-C	Pch 160mΩ	—	42	2.5	3.5 to 36.0	Adj. (0.8 to V _{IN})	±2.0	2,200	0.05 to 0.6	Current	—	✓	—	—	—	—	—	—40 to +125	HTSOP-J8	FSs	YES
	BD90620HFP-C	Pch 160mΩ	—	42	2.5	3.5 to 36.0	Adj. (0.8 to V _{IN})	±2.0	2,200	0.05 to 0.6	Current	—	✓	—	—	—	—	—	—40 to +125	HRP7	FSs	YES
Nano	BD9P305EFV-C	135mΩ	90mΩ	42	3	3.5 to 40.0	Adj. (0.8 to 8.5)	±1.75	15	0.44/2.2	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	HTSSOP-B20	FSs	YES
Nano	BD9P308MUF-C	125mΩ	80mΩ	42	3	3.5 to 40.0	Adj. (0.8 to 8.5)	±1.75	15	0.44/2.2	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	VQFN24FV4040	FSs	YES
	BD9G401UEFJ-M	140mΩ	—	45	3.5	4.5 to 42.0	Adj. (0.8 to V _{IN})	±2.0	1,200	0.3	Current	—	✓	—	—	—	—	—	—40 to +105	HTSOP-J8ES	FSs	YES
	BD90640UEFJ-C	Pch 160mΩ	—	42	4	3.5 to 36.0	Adj. (0.8 to V _{IN})	±2.0	2,200	0.05 to 0.6	Current	—	✓	—	—	—	—	—	—40 to +125	HTSOP-J8	FSs	YES
	BD90640HFP-C	Pch 160mΩ	—	42	4	3.5 to 36.0	Adj. (0.8 to V _{IN})	±2.0	2,200	0.05 to 0.6	Current	—	✓	—	—	—	—	—	—40 to +125	HRP7	FSs	YES
Nano	BD9P608MFF-C	38mΩ	20mΩ	42	6	3.5 to 40.0	Adj. (0.8 to 8.5)	±1.75	20	0.44/2.2	Current	✓	✓	—	✓	✓	✓	✓	—40 to +125	VFN20FV4535	FSs	YES

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For Automotive Switching Regulators

Single Output Secondary Integrated FET Switch Buck Converters

Part No.	Output FET		Input Voltage Maximum Rating (V)	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Output Voltage Accuracy (%)	Circuit Current (μA)	Switching Frequency (MHz)	Control Mode	QuiCur™ technology	Features							Operating Temperature (°C)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
	Upper (Typ)	Bottom (Typ)										Power Good	Sync	Adjustable Soft Start	Synchronous Rectification	Light-Load Efficiency	Over-Voltage Protection	Output Discharge				
BD9S000NUX-C	Pch (270mΩ)	Nch (180mΩ)	7	0.6	2.7 to 5.5	Adj. (0.8 to V _{IN})	±1.5	350	2.2	Current	—	✓	—	✓	✓	—	✓	✓	-40 to +125	VSON008X2020	FSs	YES
BD9SD11NUX-C	Pch (270mΩ)	Nch (180mΩ)	7	0.6	2.7 to 5.5	1.15	±1.5	400	2.2	Current	—	✓	—	✓	✓	—	✓	—	-40 to +125	VSON008X2020	FSs	YES
BD9S012NUX-C	Pch (270mΩ)	Nch (180mΩ)	7	0.6	2.7 to 5.5	1.1	±1.5	350	2.2	Current	—	✓	—	✓	✓	—	✓	✓	-40 to +125	VSON008X2020	FSs	YES
BD9S100NUX-C	Pch (270mΩ)	Nch (180mΩ)	7	1	2.7 to 5.5	Adj. (0.8 to V _{IN})	±1.5	350	2.2	Current	—	✓	—	✓	✓	—	✓	✓	-40 to +125	VSON008X2020	FSs	YES
BD9S110NUX-C	Pch (270mΩ)	Nch (180mΩ)	7	1	2.7 to 5.5	1.2	±1.5	400	2.2	Current	—	✓	—	✓	✓	—	✓	✓	-40 to +125	VSON008X2020	FSs	YES
BD9S111NUX-C	Pch (270mΩ)	Nch (180mΩ)	7	1	2.7 to 5.5	1.8	±1.5	400	2.2	Current	—	✓	—	✓	✓	—	✓	✓	-40 to +125	VSON008X2020	FSs	YES
BD9S109NUX-C	Pch (150mΩ)	Nch (95mΩ)	7	1	2.7 to 5.5	Adj. (0.8 to V _{IN})	±1.5	400	2.2	Current	—	✓	—	✓	✓	—	✓	✓	-40 to +125	VSON008X2020	FSs	YES
BD9S209NUX-C	Pch (150mΩ)	Nch (95mΩ)	7	2	2.7 to 5.5	Adj. (0.8 to V _{IN})	±1.5	400	2.2	Current	—	✓	—	✓	✓	—	✓	✓	-40 to +125	VSON008X2020	FSs	YES
BD9S201NUX-C	Pch (150mΩ)	Nch (95mΩ)	7	2	2.7 to 5.5	Adj. (0.8 to V _{IN})	±1.5	400	2.2	Current	—	✓	—	✓	✓	—	✓	✓	-40 to +125	VSON008X2020	FSs	YES
BD9S231NUX-C	Pch (150mΩ)	Nch (95mΩ)	7	2	2.7 to 5.5	Adj. (0.8 to V _{IN})	±1.5	400	2.2	Current	—	✓	—	✓	✓	—	✓	—	-40 to +125	VSON008X2020	FSs	YES
BD9S200MUF-C	Nch (35mΩ)	Nch (35mΩ)	7	2	2.7 to 5.5	Adj. (0.8 to V _{IN} ×0.8)	±1.5	650	2.2	Current	—	✓	✓	✓	✓	✓	✓	—	-40 to +125	VQFN16FV3030	FSs	YES
BD9S300MUF-C	Nch (35mΩ)	Nch (35mΩ)	7	3	2.7 to 5.5	Adj. (0.8 to V _{IN} ×0.8)	±1.5	650	2.2	Current	—	✓	✓	✓	✓	✓	✓	—	-40 to +125	VQFN16FV3030	FSs	YES
BD9S400MUF-C	Nch (35mΩ)	Nch (35mΩ)	7	4	2.7 to 5.5	Adj. (0.8 to V _{IN} ×0.8)	±1.5	650	2.2	Current	—	✓	✓	✓	✓	✓	✓	—	-40 to +125	VQFN16FV3030	FSs	YES
Nano BD9S402MUF-C	Pch (60mΩ)	Nch (35mΩ)	7	4	2.7 to 5.5	Adj. (0.6 to V _{IN} ×0.75)	±1.0	1,800	2.2	Current	✓	✓	—	✓	✓	—	✓	✓	-40 to +125	VQFN16FV3030	FSs	YES

Single Output Secondary Integrated FET Switch Buck-Boost Converters (Quick Buck Booster™)

Part No.	Output FET		Input Voltage Maximum Rating (V)	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Output Voltage Accuracy (%)	Circuit Current (μA)	Switching Frequency (MHz)	Control Mode	QuiCur™ technology	Features							Operating Temperature (°C)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
	Upper (Typ)	Bottom (Typ)										Power Good	Sync	Adjustable Soft Start	Synchronous Rectification	Light-Load Efficiency	Over-Voltage Protection	Spread Spectrum				
BD8P250MUF-C + BD90302NUF-C	Nch (110mΩ)	Nch (110mΩ)	42	0.8	2.7 to 36	5.0	±2.0	8	2.2	Current	✓	—	—	✓	✓	✓	✓	✓	-40 to +125	VQFN24FV4040	FSs	YES
	Pch (55mΩ)	Nch (65mΩ)	7					65												VSON10FV3030		

Dual Output Primary External FET Switch Buck Controllers

Part No.	Output FET		Input Voltage Maximum Rating (V)	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Output Voltage Accuracy (%)	Circuit Current (μA)	Switching Frequency (MHz)	Control Mode	QuiCur™ technology	Features							Operating Temperature (°C)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
	Upper (Typ)	Bottom (Typ)										Power Good	Sync	Adjustable Soft Start	Synchronous Rectification	Light-Load Efficiency	Over-Voltage Protection	Spread Spectrum				
BD9015KV-M	Ext. Nch	Ext. Nch	35	—	3.9 to 30.0	Adj. (0.8 to 10)	±1.5	4,000	0.25 to 0.55	Current	✓	✓	✓	✓	✓	—	✓*2	—	-40 to +105	VQFP48C	FSs	YES
BD9016KV-M	Ext. Nch	Ext. Nch	35	—	3.9 to 30.0	Adj. (0.8 to 10)	±1.5	4,000	0.25 to 0.55	Current	✓	✓	✓	✓	✓	—	✓*3	—	-40 to +105	VQFP48C	FSs	YES

Single Output Primary External FET Switch Buck-Boost Controller

Part No.	Output FET		Input Voltage Maximum Rating (V)	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Output Voltage Accuracy (%)	Circuit Current (μA)	Switching Frequency (MHz)	Control Mode	QuiCur™ technology	Features							Operating Temperature (°C)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
	Upper (Typ)	Bottom (Typ)										Power Good	Sync	Adjustable Soft Start	Synchronous Rectification	Light-Load Efficiency	Over-Voltage Protection	Spread Spectrum				
BD9035AEFV-C	Ext. Pch	Ext. Nch	40	—	3.8 to 30.0	Adj.	±1.5	7,000	0.1 to 0.6	Voltage	✓	✓	✓	✓	—	—	✓	—	-40 to +125	HTSSOP-B24	FSs	YES

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*2 When over voltage is detected, Bottom FET is OFF

*3 When over voltage is detected, Bottom FET is ON

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Power Management ICs for System (PMICs)

System Power Supply ICs for Car Audio	P.49	System Power Supply ICs for LCD Panels	P.49
Programmable Gamma-Voltage Generator/Gamma Buffer Amplifiers	P.50	System Power Supply ICs for DSC/DVCs	P.50
System Power Supply ICs for Automotive	P.50	System Power Supply ICs for Industrial Equipment/Consumer	P.51

Power Management ICs for System (PMICs)

System Power Supply ICs for Car Audio

System Power Supply ICs for Car Audio Systems

Part No.	Supply Voltage (V)	Function		Reference Voltage (V)	Output Current (A)	Protection Circuit		Input I/F	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
						Over-Current	Temperature				
BD49101AEFS-M*2/ BD49101ARFS-M*3	5.5 to 25.0	Buck DC-DC1	Controller	0.8	—	Current Limit with Short Current Protection Circuit	✓	I ² C	HTSSOP-A44 (EXP-PAD down HTSSOP-A44 package) HTSSOP-A44R (EXP-PAD up HTSSOP-A44R package)	FSs/FSs	YES
		Buck DC-DC2	Low Power Standby REG	0.8	1.0						
		REG1	Secondly	0.6	0.5						
		REG2	—	0.8	0.1						
		REG3	Secondly	0.8	0.3						
		REG4	Secondly, Voltage Calibration	0.8	1.5 (Variable)						
		REG5	—	0.8	0.1						
		High Side Switch	—	—	0.5						
		+B Detection Circuit	Over/Under Current Detection	—	—	—					

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*2 BD49101AEFS-M: EXP-PAD down HTSSOP-A44 package

*3 BD49101ARFS-M: EXP-PAD up HTSSOP-A44R package

System Power Supply ICs for LCD Panels

Multi-Channel System Power Supply ICs for Small- to Midium-Sized Panels

Part No.	Supply Voltage (V)	Operating Temperature (°C)	Operating Frequency (MHz)	Output for Source Voltage (V)	Output for Logic Voltage (V)	Output for Gate Voltage (V)	Start up Sequence Circuit	V COM (ch)	Package
BD8163EFV	2.1 to 6.0	−40 to +125	1.1	up to 18.0	2.5	Variable	✓	—	HTSSOP-B24
BD9862MUV	1.8 to 5.5	−40 to +85	0.7 to 1.4	up to 15.0	—	Variable	✓	—	VQFN024V4040

Multi-Channel System Power Supply ICs for Large Panels

Part No.	Supply Voltage (V)	Operating Temperature (°C)	Operating Frequency (MHz)	Output for Source Voltage (V)	Output for Logic Voltage 1	Output for Logic Voltage 2	Output for Gate Voltage	Start up Sequence Circuit	V COM (ch)	Package
BM81110MUW	8.6 to 14.7	−40 to +85	0.75/1.0	up to 19.8	Variable	Variable	Variable	✓	—	VQFN40W6060A

Automotive Panel Power Management ICs

Part No.	Supply Voltage (V)	Operating Temperature (°C)	Operating Frequency (MHz)	Output for Source Voltage1 (V)	Output for Source Voltage2 (V)	Output for Logic Voltage (V)	Output for Gate Voltage (V)	Start up Sequence Circuit	V COM (ch)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD81842MUV-M	2.0 to 5.5	−40 to +105	2.1	up to 18.0	—	—	Variable	✓	1	VQFN24SV4040	FSs	YES
BM81810MUV-M	2.6 to 5.5	−40 to +105	0.525/1.05/2.1	5.0 to 17.0 0.1V step	—	0.9 to 3.4 50mV step	8.0 to 35.0 0.2V step/ −14.0 to −4.0 0.1V step	✓	1	VQFN32SV5050	FSs	YES
BM81810MUF-M*2										VQFN32FBV050	FSs	
BD81870EFV-M	2.5 to 5.5	−40 to +105	2.1	up to 18.0	V _{DD} −13.0 to −1.0	—	—	✓	—	HTSSOP-B20	FSs	YES
New BD81870MUF-M										VQFN20FV3535	FSs	YES

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*2 Differences between BM81810MUF-M and BM81810MUV-M: BM81810MUF-M is a Wettable flank package.

Programmable Gamma-Voltage Generator/Gamma Buffer Amplifiers

High-precision Gamma Correction ICs with Built-in DAC											
Part No.	Supply Voltage (V)		Operating Temperature (°C)	Clock Frequency (MHz)	DAC (bit)	Serial I/F	Auto Data Read	V COM (ch)	Buffer for Gamma (ch)		Package
	Gamma Collection Input	Logic									
BD8149MUV	10 to 18	2.1 to 3.6	−25 to +85	0.4	10	I²C BUS	Built-in	—	12		VQFN032V5050

High-precision Gamma Correction IC with Built-in DAC for Automotive Panels												
Part No.	Supply Voltage (V)		Operating Temperature (°C)	Clock Frequency (MHz)	DAC (bit)	Serial I/F	Auto Data Read	V COM (ch)	Buffer for Gamma (ch)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
	Gamma Collection Input	Logic										
BD81849MUV-C	10 to 18	2.1 to 3.6	−40 to +105	0.4	10	I²C BUS	Built-in	—	12	VQFN32SV5050	FSs	YES

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System Power Supply ICs for DSC/DVCs

System Switching Regulator ICs for Digital Video Cameras/for DSLRs													
Part No.	ch	Operating Frequency (MHz)	Supply Voltage (V)	Reference Voltage (V)	Reference Voltage Precision (%)	Step up (ch)	Step Down (ch)	Buck-Boost (ch)	Inverting/Stepdown (ch)	Built-in FET (ch)	Synchronous Rectifier (ch)	Load Switch (ch)	Package (mm)
BD9865MWV	4	0.6 to 1.5	4 to 14	1.0	±1.0	—	2	1	1	4	3	—	UQFN040V5050
				0.8	±1.25								
BD9866GUL	4	0.6 to 1.5	4 to 14	0.6	±1.66	—	3	1	—	4	4	—	VCSP50L3 3.75x3.75, H=Max 0.55
				0.8	±1.25								

Strobe Charge Control ICs									
Part No.	Supply Voltage (V _{CC}) (V)	Peak Current (A)	Full Charge Detection Voltage (V)	100nsec pulse AC Full Charge Detection Voltage	Full Terminal Output	Power Transistor Saturation Voltage I _{SW} =1A (V)	IGBT OUT N (mA)	IGBT OUT P (mA)	Package
BD4234NUX	2.5 to 5.5	0.5 to 2.0	1±1.1%	1.0V -1.1% to +1.6%	Nch Open drain	0.4	30	140	VSON010X3020

System Power Supply ICs for Automotive

2ch System Power Supply IC for Automotive															
Part No.	Supply Voltage (V)	Operating Frequency (kHz)	Operating Temperature (°C)	Sequence	Output Voltage Precision (%)	Output		Function					Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
						ch	V _{OUT} /Max I _{OUT}	Over-Current Protection	TSD	Under/Over Voltage Detection	Reset	WDT			
BD39012EFV-C	4 to 36 (Rating 45V)	200 to 600	-40 to +125	External Control EN1: DC-DC EN2: LDO	±2	1ch (DC-DC)	Synchronous Buck DC-DC Converter (V _{OUT} variable, 1A)	✓	✓	✓	—	WINDOW WDT	HTSSOP-B24	FSs	YES
						2ch (LDO)	LDO (5V, 0.4A)				✓				
3ch System Power Supply IC for Automotive (ADAS)															
Part No.	Supply Voltage (V)	Switching Frequency (MHz)	Operating Temperature (°C)	Output Voltage Precision (%)	DC-DC Output				Function			Protection Circuit	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
					Item	DC-DC1 Buck	DC-DC2 Buck	DC-DC3 Buck	Reset	Power Good	External LDO CTRL				
BD86852MUF-C	4 to 18	2.2	-40 to +125	2	Output Voltage (V)	3.3 or 3.9	1.1 or 1.2	1.8	✓	✓	✓	OVP OCP UVLO TSD	VQFN24FV4040	FSs	YES
					Output Current (A)	2	1	1							
4ch System Power Supply IC for Automotive (ADAS)															
Part No.	Supply Voltage (V)	Switching Frequency (MHz)	Operating Temperature (°C)	Output Voltage Precision (%)	DC-DC Output						Protection Circuit	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100	
					Item	DC-DC1 Buck	DC-DC2 Buck	DC-DC3 Buck	DC-DC4 Boost	Reset					WDT
BD39031MUF-C	4 to 28	2.2	-40 to +125	±1.5 (DC-DC4 ±2.0)	Output Voltage (V)	3.3	1.2	0.8 to 2.5	5	✓	WINDOW WDT	OVP, OCP, SCP, TSD, T-Warning	VQFN40FV6060	FSs	YES
					Output Current (A)	Ext.FET	2.5	2.5	0.5						

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Automotive System Power Supply (Renesas [R-Car] SoC series)																		
Part No.	Supply Voltage (V)	Switching Frequency (MHz)	Output Voltage Precision (%)	Item	DC-DC Output				LDO	DC (SW)	Reset	WDT	Monitoring Function	Protection Circuit	Operating Temperature (°C)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
					DC-DC1 Boost	DC-DC2 Buck	DC-DC3 Buck	DC-DC4 Buck										
BD9573MUF-M	3 to 3.6	2.25	±1.8	Output Voltage (V)	5	1.8	1.35 or 1.5	1.03	2.5	VIN7	✓	WINDOW WDT	—	UVLO, SCP, OCP, OVP, UVP, TSD	-40 to +105	VQFN56FV8080	FSs	YES
				Output Current (A)	0.2	1	2	5.2	0.15	0.3								
BD9576MUF-C	3 to 3.6	2.25	±1.8	Output Voltage (V)	5	1.8	1.35 or 1.5	1.03	2.5	VIN7	✓	WINDOW WDT	OVD/UVDTW	UVLO, SCP, OCP, OVP, UVP, TSD	-40 to +125	VQFN56FV8080	FSm	YES
				Output Current (A)	0.2	1	2	5.2	0.15	0.3								

PMICs for Automotive Camera											
Part No.	Supply Voltage (V)	Switching Frequency (MHz)	Item	DC-DC Output			LDO	Operating Temperature (°C)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
				CH1	CH2	CH3	CH4				
BD868A0MUF-C	4 to 18	2.25	Output Voltage (V)	3.7V	1.1V	1.8V	3.3V	-40 to +125	VQFN20FV3535	FSp	YES
☆BD868B0MUF-C			Output Current (A)	2.0A	1.2A	1.0A	0.3A				
			Output Voltage (V)	3.7V	1.1V	1.8V	3.3V		VQFN20FV3535	FSp	YES
BD868C0MUF-C			Output Current (A)	2.0A	1.2A	0.4A	0.3A				
			Output Voltage (V)	3.3V	1.2V	1.8V	2.8V		VQFN20FV3535	FSp	YES
BD868C1MUF-C			Output Current (A)	2.0A	1.2A	1.0A	0.3A				
			Output Voltage (V)	3.8V	1.1V	1.8V	3.3V		VQFN20FV3535	FSs	YES
BD868D0MUF-C			Output Current (A)	2.0A	1.2A	1.0A	0.3A				
			Output Voltage (V)	3.3V	1.2V	1.8V	2.8V		VQFN20FV3535	FSp	YES
			Output Current (A)	2.0A	1.2A	1.0A	0.3A				

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☆: Under Development

System Power Supply ICs for Industrial Equipment/Consumer

Power Management IC (PMIC) for Intel® Atom™ E3800 series Platform																											
Part No.	Supply Voltage (V)	Item	DC-DC Output							SW	LDO output								I/F	Protection Circuit	Package (mm)						
			DC-DC1 VIP0A	DC-DC2 VIP0S	DC-DC3 VIP8A	DC-DC4 VDDQ	DC-DC5 VIP0S5	DC-DC6 VCC	DC-DC7 VNN		V1P8S	LDO1 VRTC	LDO2 V3P3A	LDO3 V3P3S	LDO4 VIP24A	LDO5 VSDIO	LDO6 VIP24S	LDO7 VTT				LDO8 VSFR					
BD9596BMWV	3.5 to 5.5	Output Voltage (V)	1.0	1.0	1.8	1.2 to 1.6	1.05	0.5 to 1.2	0.5 to 1.2	1.8	3.3	3.3	3.3	1.24	1.8 or 3.3	1.24	VDDQ/2	1.35	IMVP7	UVLO, TSD, SCP, OVP	UQFN88MV0100 10x10x1.0						
		Output Current (mA)	700	2,600	1,800	4,500	1,300	13,000	13,000	800	120	100	500	50	20	50	530	500									
Power Management ICs for NXP i.MX series Applications Processors																											
Part No.	Correspondance	Item	DC-DC Output								LDO Output								White LED Driver	Lithium Charging Control	Coulomb Counter	RTC	GPO (ch)	I ² C I/F	Package		
			BUCK1	BUCK2	BUCK3	BUCK4	BUCK5	BUCK6	BUCK7	BUCK8	LDO1	LDO2	LDO3	LDO4	LDO5	LDO6	LDO7	LDOSNVS								LDOLPSR	LDODVREF
BD71815AGW	i.MX 7Solo i.MX 7Dual	Output Voltage (V)	0.8 to 2.0	0.8 to 2.0	1.2 to 2.7	1.1 to 1.85	1.8 to 3.3	—	—	—	0.8 to 3.3	0.8 to 3.3	0.8 to 3.3	0.8 to 3.3	0.8 to 3.3	—	—	3	1.8	0.5x DVREFIN	✓	✓	✓	✓	1	✓	UCSP55M4C
		Output Current (mA)	800	1,000	500	1,000	1,000	—	—	—	100	100	50	400	250	—	—	25	100	10							
BD71837AMWV	System PMIC for i.MX 8M Family	Output Voltage (V)	0.7 to 1.3	0.7 to 1.3	0.7 to 1.3	0.7 to 1.3	3.0 to 3.3	1.65 to 1.95	0.8 to 1.4	3.0 to 3.3, 1.6 to 1.9	0.9, 0.8	1.8 to 3.3	0.9 to 1.8	1.8 to 3.3	0.9 to 1.8	1.8 to 3.3	—	—	—	—	—	—	—	—	—	✓	UQFN68CV8080
		Output Current (mA)	3,600	4,000	2,100	1,000	2,500	3,000	1,500	3,000	10	10	300	250	300	300	150	—	—	—	—	—	—	—	—	—	
BD71847AMWV	System PMIC for i.MX 8M Mini Family	Output Voltage (V)	0.7 to 1.3	0.7 to 1.3	—	—	0.7 to 1.35	2.6 to 3.3	1.65 to 1.95	0.8 to 1.4	3.0 to 3.3, 1.6 to 1.9	0.9, 0.8	1.8 to 3.3	0.9 to 1.8	1.8 to 3.3	0.9 to 1.8	—	—	—	—	—	—	—	—	—	✓	UQFN56BV7070
		Output Current (mA)	3,000	3,000	—	—	3,000	3,000	1,500	3,000	10	10	300	250	300	300	—	—	—	—	—	—	—	—	—	—	
BD71850MWV	System PMIC for i.MX 8M Nano Family	Output Voltage (V)	0.7 to 1.3	0.7 to 1.3	—	—	0.7 to 1.35	2.6 to 3.3	1.65 to 1.95	0.8 to 1.4	3.0 to 3.3, 1.6 to 1.9	0.9, 0.8	1.8 to 3.3	0.9 to 1.8	1.8 to 3.3	0.9 to 1.8	—	—	—	—	—	—	—	—	—	✓	UQFN56BV7070
		Output Current (mA)	3,000	3,000	—	—	3,000	3,000	1,500	3,000	10	10	300	250	300	300	—	—	—	—	—	—	—	—	—	—	

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Non-isolated type AC-DC Converters

Surface Mount SOP Package Built-in 650V FET											
Part No.	Output Voltage (V)	MOSFET V _{DS} (Max) (V)	Control Method	Switching Frequency (kHz)	Frequency Reduction Function	Max Duty (%)	ON Resistance (Ω)	OCP Current (A)	Dynamic Over-Current Protection (A)	Start-up Current (mA)	Package
BM2P109TF	10.0	650	PWM	100	—	75	9.5	0.45	1.4	3	SOP8
BM2P104QF							4.0	0.80	1.6		SOP8
BM2P129TF	12.0						9.5	0.45	1.4		SOP8
BM2P139TF	13.0										SOP8
BM2P135TF											SOP8
BM2P134QF							4.5	0.80	1.6		SOP8
BM2P159PF	14.2						4.0	0.30	0.95		SOP8
BM2P159T1F	15.0						9.5	0.45	1.4		SOP8
BM2P189TF	18.0										SOP8
BM2P209TF	20.0										SOP8
BM2P249TF	24.8										SOP8

Non-isolated type AC-DC Converters

Surface Mount SOP Package Built-in 800V FET											
Part No.	Output Voltage (V)	MOSFET V _{DS} (Max) (V)	Control Method	Switching Frequency (kHz)	Frequency Reduction Function	Max Duty (%)	ON Resistance (Ω)	OCP Current (A)	Dynamic Over-Current Protection (A)	Start-up Current (mA)	Package
BM2P107QKF	10.0	800	PWM	100	—	75	7.5	0.80	1.6	3	SOP8
BM2P137TKF	13.0							0.45	1.4		SOP8
BM2P137QKF								0.80	1.6		SOP8
High Heat Dissipation DIP Package Built-in 650V FET											
Part No.	Output Voltage (V)	MOSFET V _{DS} (Max) (V)	Control Method	Switching Frequency (kHz)	Frequency Reduction Function	Max Duty (%)	ON Resistance (Ω)	OCP Current (A)	Dynamic Over-Current Protection (A)	Start-up Current (mA)	Package
BM2PAA1Y-Z	2.0	650	PWM	65	✓	40	1.5	1.76	1.76	3	DIP7K
BM2PAB1Y-Z				25	—			1.76	1.76		DIP7K
BM2PDA1Y-Z				65	✓			0.88	0.93		DIP7K
BM2PDB1Y-Z				25	—			0.88	0.93		DIP7K
BM2P101W-Z	10.0			65	✓	1.46	2.55	DIP7K			
BM2P101X-Z				2.00	3.5	DIP7K					
BM2P104Q-Z				100	—	75	4.0	0.80	1.6		DIP7K
BM2P121W-Z	12.0			65	✓	40	1.5	1.46	2.55		DIP7K
BM2P121X-Z								2.00	3.5		DIP7K
BM2P121XH-Z*								2.00	3.5		DIP7K
BM2P131W-Z	1.46							2.55	DIP7K		
BM2P131X-Z	13.0			2.00	3.5	DIP7K					
BM2P134Q-Z	100			—	75	4.0	0.80	1.6	DIP7K		
BM2P141W-Z	14.0			65	✓	40	1.5	1.46	2.55		DIP7K
BM2P141X-Z								2.00	3.5		DIP7K
BM2P151W-Z	15.0							1.46	2.55		DIP7K
BM2P151X-Z								2.00	3.5		DIP7K
BM2P151S-Z				2.30	4.025	DIP7K					
BM2P161W-Z	16.8			1.46	4.015	DIP7K					
BM2P161X-Z				2.00	3.5	DIP7K					
BM2P181S-Z	17.75			25	—	40	1.5	2.60	3.90		DIP7K
BM2P181W-Z	18.0			65	✓	1.46		2.55	DIP7K		
BM2P181X-Z						2.00		3.5	DIP7K		
BM2P201W-Z						1.46		2.55	DIP7K		
BM2P201X-Z	20.0					2.00	3.5	DIP7K			
BM2P241W-Z	24.8			1.46	2.55	DIP7K					
BM2P241X-Z				2.00	3.5	DIP7K					
BM2P249Q-Z				100	—	9.5	0.80	2.2	DIP7K		
High Heat Dissipation DIP Package Built-in 800V FET											
Part No.	Output Voltage (V)	MOSFET V _{DS} (Max) (V)	Control Method	Switching Frequency (kHz)	Frequency Reduction Function	Max Duty (%)	ON Resistance (Ω)	OCP Current (A)	Dynamic Over-Current Protection (A)	Start-up Current (mA)	Package
BM2P107QK-Z	10.0	800	PWM	100	—	75	7.5	0.80	1.6	3	DIP7K
BM2P137QK-Z	13.0										DIP7K

*TSD temperature change version of the BM2P121X-Z.

Isolated and Non-isolated Type AC-DC Converter

Surface Mount SOP Package Built-in 730V FET																		
Part No.	Supply Voltage (V)	MOSFET V _{DS} (Max) (V)	Control Method	Switching Frequency (kHz)	Frequency Reduction Function	Max Duty (%)	ON Resistance (Ω)	Peak Current (A)	Dynamic Over-Current Protection (V)	OCP Current (V)	Current Sense Resistor	Start-up Current (mA)	Brown Out	Brown Out OVP Protection	V _{CC} OVP	Package		
BM2P0363F	8.9 to 26.0	730	PWM	25	—	75	3.0	4.0	1.05	0.4	Extrenal	3.0	—		Auto Restart	SOP8		
BM2P064EF				65	✓								0.7			0.3	SOP8	
BM2P104EF				100													SOP8	
BM2P134EF				130													SOP8	
BM2P060LF-Z	11 to 60			65	✓	0.7	21.0	✓	✓	15	✓	—		SOP20A				
BM2P061LF-Z						1.0	12.0						SOP20A					
BM2P060MF-Z						0.7	21.0						SOP20A					
BM2P061MF-Z						1.0	12.0						SOP20A					
BM2P063MF-Z						3.0	4.0						SOP20A					
Surface Mount SOP Package Built-in 800V FET																		
Part No.	Supply Voltage (V)			MOSFET V _{DS} (Max) (V)	Control Method	Switching Frequency (kHz)	Frequency Reduction Function	Max Duty (%)	ON Resistance (Ω)	Peak Current (A)	Dynamic Over-Current Protection (V)	OCP Current (V)	Current Sense Resistor	Start-up Current (mA)	Brown Out	Brown Out OVP Protection	V _{CC} OVP	Package
BM2P0363KF	8.9 to 26.0	800	PWM	25	—	75	3.0	—	0.7	0.4	Extrenal	3.0	—	—	Auto Restart	SOP8		
BM2P074KF	10.2 to 26.0			65	✓		6.7	2.0								—	SOP8	
High Heat Dissipation DIP Package Built-in 650V FET																		
Part No.	Supply Voltage (V)	MOSFET V _{DS} (Max) (V)	Control Method	Switching Frequency (kHz)	Frequency Reduction Function	Max Duty (%)	ON Resistance (Ω)	Peak Current (A)	Dynamic Over-Current Protection (V)	OCP Current (V)	Current Sense Resistor	Start-up Current (mA)	Brown Out	Brown Out OVP Protection	V _{CC} OVP	Package		
BM2P0391	8.9 to 26.0	650	PWM	100	✓	75	2.4	5.2	—	0.4	Extrenal	6	✓ (adjustable)	—	Auto Restart	DIP7K		

High Heat Dissipation DIP Package Built-in 730V FET

Part No.	Supply Voltage (V)	MOSFET V _{DS} (Max) (V)	Control Method	Switching Frequency (kHz)	Frequency Reduction Function	Max Duty (%)	ON Resistance (Ω)	Peak Current (A)	Dynamic Over-Current Protection (V)	OCF Current (V)	Current Sense Resistor	Start-up Current (mA)	Brown Out	Brown Out OVP Protection	V _{CC} OVP	Package
New BM2P06A1J-Z	8.9 to 26.0	730	PWM	65	✓	80	1.0	12.0	1.23	0.78	Extrenal	3.0	✓ (adjustable)	—	Auto Restart	DIP7K
New BM2P06B1J-Z							3.0	4.0						Auto Restart		DIP7K
New BM2P06A3J-Z							0.955	12.0						—		DIP7K
New BM2P06B3J-Z							1.0	—						Auto Restart		DIP7K
BM2P061E-Z	10.9 to 30.0	730	PWM	65	✓	75	0.955	12.0	—	0.4	Extrenal	5.5	—	—	Latch	DIP7K
BM2P061H-Z							1.0	—						—		DIP7K
BM2P0151-Z							3.0	4.0						—		DIP7K
BM2P0161-Z							0.955	12.0						Auto Restart		DIP7K
BM2P0361-Z	8.9 to 26.0	730	PWM	65	✓	75	1.0	—	—	0.4	Extrenal	3.0	—	—	Latch	DIP7K
BM2P0362-Z							3.0	4.0						—		DIP7K
BM2P064E-Z							0.955	12.0						—		DIP7K
BM2P101E-Z							1.0	—						Auto Restart		DIP7K
BM2P101H-Z	10.9 to 30.0	730	PWM	65	✓	75	0.955	12.0	1.0	0.3	Extrenal	5.5	—	—	Latch	DIP7K
BM2P10A1J-Z							1.0	—						—		DIP7K
BM2P10B1J-Z							3.0	4.0						Auto Restart		DIP7K
BM2P10A3J-Z							0.955	12.0						—		DIP7K
BM2P10B3J-Z	8.9 to 26.0	730	PWM	100	✓	80	1.0	—	1.23	0.78	Extrenal	3.0	✓ (adjustable)	—	Auto Restart	DIP7K
BM2P104E-Z							3.0	4.0						—		DIP7K
BM2P131E-Z							0.955	12.0						Auto Restart		DIP7K
BM2P131H-Z							1.0	—						—		DIP7K
BM2P134E-Z	10.9 to 30.0	730	PWM	130	✓	75	0.955	12.0	1.0	0.3	Extrenal	5.5	—	—	Latch	DIP7K
BM2P13A1J-Z							1.0	—						—		DIP7K
BM2P13B1J-Z							3.0	4.0						Auto Restart		DIP7K
BM2P13A3J-Z							0.955	12.0						—		DIP7K
BM2P13B3J-Z	8.9 to 26.0	730	PWM	130	✓	80	1.0	—	1.23	0.78	Extrenal	3.0	✓ (adjustable)	—	Auto Restart	DIP7K
BM2P134E-Z							3.0	4.0						—		DIP7K
BM2P13A1J-Z							0.955	12.0						Auto Restart		DIP7K
BM2P13B1J-Z							1.0	—						—		DIP7K

High Heat Dissipation DIP Package Built-in 800V FET

Part No.	Supply Voltage (V)	MOSFET V _{DS} (Max) (V)	Control Method	Switching Frequency (kHz)	Frequency Reduction Function	Max Duty (%)	ON Resistance (Ω)	Peak Current (A)	Dynamic Over-Current Protection (V)	OCF Current (V)	Current Sense Resistor	Start-up Current (mA)	Brown Out	Brown Out OVP Protection	V _{CC} OVP	Package
BM2P0161K-Z	8.9 to 26.0	800	PWM	65	✓	75	1.6	9.0	—	0.4V	Extrenal	3.0	—	—	Auto Restart	DIP7K
BM2P0361K-Z							3.5	4.8						—		DIP7K
BM2P061EK-LBZ							1.6	20.0						Auto Restart		DIP7K
BM2P061FK-LBZ							3.5	4.8						—		DIP7K
BM2P061HK-LBZ	10.9 to 30.0	800	PWM	65	✓	75	1.6	9.0	1V	0.3V	Extrenal	5.5	✓ (adjustable)	—	Auto Restart	DIP7K
BM2P063EK-LBZ							3.5	4.8						—		DIP7K
BM2P101FK-LBZ							1.6	9.0						Auto Restart		DIP7K
BM2P101HK-LBZ							3.5	4.8						—		DIP7K
BM2P103EK-LBZ	10.9 to 26.0	800	PWM	100	✓	75	1.6	9.0	1V	0.3V	Extrenal	5.5	✓ (adjustable)	—	Auto Restart	DIP7K
BM2P131FK-LBZ							3.5	4.8						—		DIP7K
BM2P131HK-LBZ							1.6	9.0						Auto Restart		DIP7K
BM2P133EK-LBZ							3.5	4.8						—		DIP7K
BM2P26CK-Z	11.9 to 25.5	800	PWM	100	✓	75	6.0	3.0	Current Limiter x2A	0.13A	Built-in	5.0	✓ (fixed)	—	Latch	DIP7K

High Power TO220 Package Built-in 650V FET

Part No.	Supply Voltage (V)	MOSFET V _{DS} (Max) (V)	Control Method	Switching Frequency (kHz)	Frequency Reduction Function	Max Duty (%)	ON Resistance (Ω)	Peak Current (A)	Dynamic Over-Current Protection (V)	OCF Current (V)	Current Sense Resistor	Start-up Current (mA)	Brown Out	Brown Out OVP Protection	V _{CC} OVP	Package
BM2P0163T-Z	8.9 to 26.0	650	PWM	65	✓	75	1.4	10.4	—	0.4	Extrenal	5.0	—	—	Auto Restart	TO220-7M

Isolated Type AC-DC Converter ICs

Built-in FET AC-DC Converter ICs

Surface Mount SOP Package Built-in 650V FET

Part No.	Supply Voltage (V)	MOSFET V _{DS} (Max) (V)	Control Method	Switching Frequency (kHz)	Frequency Reduction Function	Max Duty (%)	ON Resistance (Ω)	Peak Current (A)	Dynamic Over-Current Protection (A)	Over-current Limiter (V)	Current Sense Resistor	Start-up Current (mA)	Brown Out	Brown Out OVP Protection	V _{CC} OVP	Burst Frequency Adjustment	Package				
BM2P051F	8.9 to 26.0	650	PWM	65	✓	75	4.0	2.6	—	0.4	Extrenal	3.0	✓ (adjustable)	Auto Restart	Latch	—	SOP8				
BM2P052F														Auto Restart	Auto Restart	—	SOP8				
BM2P053F														Latch	—	SOP8					
BM2P054F														Auto Restart	Auto Restart	—	SOP8				
BM2P091F							8.5	1.3					✓ (adjustable)	Auto Restart	Latch	—	SOP8				
BM2P092F														Auto Restart	Auto Restart	—	SOP8				
BM2P093F														—	Latch	—	SOP8				
BM2P094F														Auto Restart	Auto Restart	—	SOP8				
BM2P095F							—	—					—	—	Latch	✓	SOP8				
BM2PA96F														Auto Restart	Auto Restart	✓	SOP8				

High Heat Dissipation DIP Package Built-in 650V FET

Part No.	Supply Voltage (V)	MOSFET V _{DS} (Max) (V)	Control Method	Switching Frequency (kHz)	Frequency Reduction Function	Max Duty (%)	ON Resistance (Ω)	Peak Current (A)	Dynamic Over-Current Protection (A)	Over-current Limiter (V)	Current Sense Resistor	Start-up Current (mA)	Brown Out	Brown Out OVP Protection	V _{CC} OVP	Package
BM2P011	8.9 to 26.0	650	PWM	65	✓	75	1.4	10.4	—	0.4	Extrenal	3	✓ (adjustable)	Auto Restart	Latch	DIP7K
BM2P012															Auto Restart	DIP7K
BM2P013															Latch	DIP7K
BM2P014															Auto Restart	DIP7K
BM2P031						2.4	5.2	✓ (adjustable)					Auto Restart	Latch	DIP7K	
BM2P032														Auto Restart	DIP7K	
BM2P033														Latch	DIP7K	
BM2P034														Auto Restart	DIP7K	
BM2P051						4.0	2.6	✓ (adjustable)					Auto Restart	Latch	DIP7K	
BM2P052														Auto Restart	DIP7K	
BM2P053														Latch	DIP7K	
BM2P054														Auto Restart	DIP7K	
BM2P091						8.5	1.3	✓ (adjustable)					Auto Restart	Latch	DIP7K	
BM2P092														Auto Restart	DIP7K	
BM2P093														Latch	DIP7K	
BM2P094														Auto Restart	DIP7K	

Quasi-resonant AC-DC Converters Built-in SiC MOSFET/GaN HEMT

High Power TO220 Package Built-in 1,700V SiC MOSFET (Industrial Equipment)

Part No.	Supply Voltage (V)	SiC MOSFET V _{DS} (Max) (V)	Control Method	Maximum Frequency (kHz)	ON Resistance (Ω)	Dynamic Over-Current Protection (A)	OCP Exchange Function	V _{CC} OVP	BR UVLO	FB OLP Protection	ZT OVP Protection	Package
BM2SCQ121T-LBZ	15 to 27.5	1,700	QR	120	1.12	—	✓	Latch	—	Auto Restart	Latch	TO220-6M
BM2SCQ122T-LBZ										Latch		TO220-6M
BM2SCQ123T-LBZ										Auto Restart		TO220-6M
BM2SCQ124T-LBZ										Latch		TO220-6M

High Power TO263 Package Built-in 1,700V SiC MOSFET (Industrial Equipment)

Part No.	Supply Voltage (V)	SiC MOSFET V _{DS} (Max) (V)	Control Method	Maximum Frequency (kHz)	ON Resistance (Ω)	Dynamic Over-Current Protection (A)	OCP Exchange Function	V _{CC} OVP	BR UVLO	FB OLP Protection	ZT OVP Protection	Package
BM2SC121FP2-LBZ	15 to 27.5	1,700	QR	120	1.12	—	✓	Latch	—	Auto Restart	Latch	TO263-7L
BM2SC122FP2-LBZ										Latch		TO263-7L
BM2SC123FP2-LBZ										Auto Restart		TO263-7L
BM2SC124FP2-LBZ										Latch		TO263-7L
New BM2SC125FP2-LBZ								✓	✓	Auto Restart	Auto Restart	TO263-7L

EcoGaN™ Power Stage ICs

Part No.	Drain Pin Voltage (Max) (V)	Input Voltage Range (V)	Supply Pin Voltage (V)	Supply Pin Operating Current (Typ) (μA)	Supply Pin Quiescent Current (Typ) (μA)	ON Resistance (Typ) (mΩ)	Turn ON Delay Time (Typ) (ns)	Turn OFF Delay Time (Typ) (ns)	Operating Temperature (°C)	Package
Nano BM3G015MUV-LB	650	-0.6 to +30	6.25 to 30	450	150	150	11	15	-40 to +105	VQFN046V8080
Nano BM3G007MUV-LB				650	180	70	12			VQFN046V8080

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Isolated Type FET external AC-DC Controller ICs

PWM Control type

Part No.	Supply Voltage (V)	Control Method	Switching Frequency (kHz)	START-UP Circuit	Frequency Reduction Mode	Max Duty (%)	AC Voltage Correction	V _{CC} Recharge	Start-up Current (mA)	BR UVLO	V _{CC} OVP	FBOLP	Package
BM1P061FJ	8.9 to 26.0	PWM	65	✓	✓	75	✓	✓	3.0	✓	Auto Restart	Auto Restart	SOP-J8
BM1P062FJ								Latch			SOP-J8		
BM1P065FJ								Auto Restart			SOP-J8		
BM1P066FJ								Latch			SOP-J8		
BM1P067FJ			100					—		Auto Restart	SOP-J8		
BM1P068FJ								Latch		SOP-J8			
BM1P101FJ								✓		Auto Restart	SOP-J8		
BM1P102FJ								Latch		SOP-J8			
BM1P105FJ			—					Auto Restart		SOP-J8			
BM1P107FJ	—	SOP-J8											
BM1P10CFJ	9.3 to 55.0						✓	5.5	✓	—	Latch	SOP-J7S	
BD7672BG	8.5 to 25.0		65	—	—		—	—	—	—	Latch	Auto Restart	SSOP6
BD7673AG											Latch	SSOP6	
BD7679G											Auto Restart	Auto Restart	SSOP6

Quasi-resonant type (Industrial Equipment)

Part No.	Supply Voltage (V)	Control Method	START-UP Circuit	Start-up Current (mA)	Maximum Frequency (kHz)	Frequency Reduction Mode	AC Voltage Correction	FB OLP Protection	V _{CC} OVP	ZT OVP	Package
New BM1Q002AFJ-LB	8.9 to 26	QR	✓	3.0	120	✓	✓	Auto Restart	Latch	Latch	SOP-J7S
New BM1Q021AFJ-LB								Auto Restart	Auto Restart	Auto Restart	SOP-J7S

Quasi-resonant type

Part No.	Supply Voltage (V)	Control Method	START-UP Circuit	Start-up Current (mA)	Maximum Frequency (kHz)	Frequency Reduction Mode	AC Voltage Correction	FB OLP Protection	V _{CC} OVP	ZT OVP	Package
BM1Q002FJ	8.9 to 26.0	QR	✓	3.0	120	✓	✓	Auto Restart	Latch	Latch	SOP-J8
BM1Q011FJ									Auto Restart	—	SOP-J7S
BM1Q021FJ									Auto Restart	Auto Restart	SOP-J8
BM1Q104FJ	14.0 to 30.0				—		—		—	Latch	SOP-J8

Quasi-resonant type For SiC Drive (Industrial Equipment)

Part No.	Supply Voltage (V)	Control Method	START-UP Circuit	Start-up Current (mA)	Maximum Frequency (kHz)	Frequency Reduction Mode	AC Voltage Correction	FB OLP Protection	V _{CC} OVP	ZT OVP	Package
BD7682FJ-LB	15.0 to 27.5	QR	—	—	120	✓	✓	Auto Restart	Latch	Latch	SOP-J8
BD7683FJ-LB								Latch			SOP-J8
BD7684FJ-LB								Auto Restart			SOP-J8
BD7685FJ-LB								Latch			SOP-J8

Quasi-resonant type+PFC Built-in type

Part No.	Supply Voltage (V)	Control Method	START-UP Circuit	Start-up Current (mA)	QR Maximum Frequency (kHz)	PFC Maximum Frequency (kHz)	QR Frequency Reduction	PFC Frequency Reduction	PFC Output Voltage Switching	BR UVLO	V _{CC} OVP	ZT OVP	Package
BM1C101F	8.9 to 26.0	PFC+QR	✓	6.5	120	400	✓	✓	✓	✓	Auto Restart	Latch	SOP18
BM1C102F									—				SOP18

BCM Type PFC Controller ICs

Singles PFC											
Part No.	Supply Voltage (V)	Control Method	START-UP Circuit	Zero Detection Method	OVP Detection	PFC Maximum Frequency (kHz)	Over Shoot Reduction Function	Brown Out	V _{CC} Discharge	Package	
BD7690FJ	10.0 to 26.0	BCM PFC	—	Auxiliary Winding	Single	220	—	—	—	SOP-J8	
BD7691FJ				Resistance	Double					450	SOP-J8
BD7692FJ						SOP-J8					
BD7693FJ	10.0 to 38.0			Auxiliary Winding	Single	—	✓	✓	SOP-J8		
BD7694FJ									✓	SOP-J8	
New BD7695FJ	12.0 to 38.0						—		—	—	SOP-J8
New BD7696FJ											✓

AC Voltage Zero Cross Detection ICs

AC Voltage Zero Cross Detection ICs											
Part No.	Supply Voltage (V)	Maximum AC Input Voltage (V)	DC Voltage Monitor Function	Zero Cross Delay Time (μs)	Output Waveform	Stand by Current (μA)	Quiescent Current (μ)	Output Type	Protection Circuit	Operating Temperature (°C)	Package
BM1Z012FJ	10 to 28	600	—	Variable	Pulse	50	160	Nch Open Drain	TSD/UVLO	−40 to +105	SOP-J7S
BM1Z001FJ				300 to 500							SOP-J7S
BM1Z002FJ				Variable	Edge						SOP-J7S
BM1Z003FJ			✓								300 to 500
BM1Z101FJ			Variable	Edge	SOP-J11						
BM1Z102FJ					SOP-J11						
BM1Z103FJ					SOP-J11						

Secondary Side Synchronous Rectification ICs

Secondary Side Synchronous Rectification ICs									
Part No.	Supply Voltage (V)	Control Method	Shunt Regulator Accuracy (%)	Drain Terminal Maximum Voltage (V)	Compulsion OFF Time (μs)	V _{CC} OVP	Auto Sleep Function	CCM Mode	Package
BM1R00146F	2.7 to 32.0	SR	±0.5	120	1.3	Auto Restart	✓	✓	SOP8
BM1R00147F					2.0				SOP8
BM1R00148F					3.0				SOP8
BM1R00149F					3.6				SOP8
BM1R00178F					3.0		SOP8		
BD87007FJ			±1.0		3.85		—		SOP-J8
BD85506F	5.0 to 32.0	SR for LLC			—		SOP14		

Isolated DC-DC Converter ICs

Isolated DC-DC Converter ICs (Optocoupler-less) (Industrial Equipment)													
Part No.	Output Power	SW Terminal Withstand Voltage (V)	Over-Current Detection Current (A)	Input Voltage (V)	Switching Frequency (kHz)	Control Method	Features						Package
							Enable	Soft Start	Light-Load Efficiency	UVLO	Over-Current Protection	Thermal Protection	
BD7F100EFJ-LB	1W at V _{IN} 5.0V 5W at V _{IN} 24V	60	1.25	3.0 to 40.0	400	Adaptive on-time	✓	✓	✓	✓	Recovery	Recovery	HTSOP-J8
BD7F100HFN-LB													HSOP8
BD7F200UEFJ-LB	5W at V _{IN} 12V 10W at V _{IN} 24V	60	2.75	8.0 to 40.0									HTSOP-J8
BD7F200HFN-LB													HSOP8
BD7J101EFJ-LB	2.5W at V _{IN} 24V 5W at V _{IN} 48V	120	0.9	8.0 to 80.0									HTSOP-J8
BD7J101HFN-LB													HSOP8
BD7J201EFJ-LB	5W at V _{IN} 24V 10W at V _{IN} 48V	120	1.8	8.0 to 80.0									HTSOP-J8
☆BD7J201HFN-LB													HSOP8
BD7J200EFJ-LB	5W at V _{IN} 24V 10W at V _{IN} 48V	120	1.75	8.0 to 80.0									HTSOP-J8
BD7J200HFN-LB													HSOP8

☆: Under Development

Automotive Isolated DC-DC Converter ICs

Automotive Isolated DC-DC Converter ICs (Optocoupler-less)														
Part No.	Output Power	SW Terminal Withstand Voltage (V)	Over-Current Detection Current (A)	Input Voltage (V)	Switching Frequency (kHz)	Control Method	Features						Package	ComfySIL™ Functional Safety*1
							Enable	Soft Start	Light-Load Efficiency	UVLO	Over-Current Protection	Thermal Protection		
New BD7F005EFJ-C	2W at V _{IN} 8V	62	1.38	3.4 to 42.0	363	Adaptive on-time	✓	✓	✓	✓	Recovery	Recovery	HTSOP-J8	FSs
BD7F105EFJ-C	4W at V _{IN} 8V		2.6										HTSOP-J8	FSs
BD7F205EFJ-C	6W at V _{IN} 8V		3.8										HTSOP-J8	FSs

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*1 For more information about "ComfySIL™ Functional Safety", please refer to the reverse side of the cover.

Gate Drivers

Isolated Gate Drivers

Automotive Isolated Gate Drivers

Part No.	Input-side Supply Voltage (V)	Output-side Positive Supply Voltage (V)	Output-side Negative Supply Voltage (V)	Isolation Voltage (Vrms)	I/O Delay Time (ns)	Minimum Input Pulse Width (ns)	Output Current (A)	Operating Temperature (°C)	Function	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BM6101FV-C	4.5 to 5.5	14 to 24	-12 to 0	2,500	350	180	±3	-40 to +125	Active miller clamping/Fault signal output/UVLO/SCP/DESAT/Soft turn-off function for SCP	SSOP-B20W	FSs	YES
BM6102FV-C	4.5 to 5.5	14 to 20	—	2,500	200	100	±3	-40 to +125	Active miller clamping/Fault signal output/UVLO/SCP/DESAT/Soft turn-off function for SCP	SSOP-B20W	FSs	YES
BM6104FV-C	4.5 to 5.5	10 to 24	-12 to 0	2,500	150	90	±3	-40 to +125	Active miller clamping/Fault signal output/UVLO/SCP/DESAT/Soft turn-off function for SCP	SSOP-B20W	FSs	YES
BM6109FV-C	4.5 to 5.5	14 to 18	—	2,500	700	600	±4.5	-40 to +125	Active miller clamping/Fault signal output/UVLO/SCP/Soft turn-off function for SCP	SSOP-B28W	FSs	YES
New BM6112HFV-C	4.5 to 5.5	14 to 20	-12 to 0	3,750	150	90	±20	-40 to +125	Active miller clamping/Fault signal output/UVLO/SCP/DESAT/Soft turn-off function for SCP	SSOP-B28WR6	FSs	YES
BM6112FV-C	4.5 to 5.5	14 to 20	-12 to 0	3,750	150	90	±20	-40 to +125	Active miller clamping/Fault signal output/UVLO/SCP/DESAT/Soft turn-off function for SCP	SSOP-B28W	FSs	YES
BM61M22BFJ-C	4.5 to 5.5	9 to 24	—	2,500	60	60	±2	-40 to +125	UVLO	SOP-JW8	FSs	YES
BM61M41RFV-C	4.5 to 5.5	9 to 24	—	3,750	65	60	±4	-40 to +125	Active miller clamping/UVLO	SSOP-B10W	FSs	YES
BM61S40RFV-C	4.5 to 5.5	16 to 20	—	3,750	65	60	±4	-40 to +125	Active miller clamping/UVLO/OVP	SSOP-B10W	FSs	YES
BM61S41RFV-C	4.5 to 5.5	16 to 24	—	3,750	65	60	±4	-40 to +125	Active miller clamping/UVLO	SSOP-B10W	FSs	YES

Isolated Gate Driver (For Industrial Equipment)

Part No.	Input-side Supply Voltage (V)	Output-side Positive Supply Voltage (V)	Output-side Negative Supply Voltage (V)	Isolation Voltage (Vrms)	I/O Delay Time (ns)	Minimum Input Pulse Width (ns)	Output Current (A)	Operating Temperature (°C)	Function	Package
BM6108FV-LB	4.5 to 5.5	10 to 24	-12 to 0	2,500	150	90	±3	-40 to +105	Active miller clamping/Fault signal output/UVLO/SCP/DESAT/Soft turn-off function for SCP	SSOP-B20W

Automotive Isolated Gate Drivers with Flyback Controller

Part No.	Input-side Supply Voltage (V)	Output-side Positive Supply Voltage (V)	Output-side Negative Supply Voltage (V)	Isolation Voltage (Vrms)	I/O Delay Time (ns)	Minimum Input Pulse Width (ns)	Output Current (A)	Operating Temperature (°C)	Function	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BM60052AFV-C	4 to 32	10 to 20	-12 to 0	2,500	120	90	±3	-40 to +125	Active miller clamping/Fault signal output/UVLO/DESAT/Ready output/Soft turn-off function for DESAT	SSOP-B28W	FSs	YES
BM60054AFV-C	4 to 32	10 to 20	-12 to 0	2,500	120	90	±3	-40 to +125	Active miller clamping/Fault signal output/UVLO/SCP/Ready output/Soft turn-off function for SCP	SSOP-B28W	FSs	YES
BM60055FV-C	4.5 to 30.0	9 to 24	—	2,500	250	170	±5	-40 to +125	Active miller clamping/Fault signal output/UVLO/SCP/Soft turn-off function for SCP/SCP/2 level turn off	SSOP-B28W	FSs	YES
BM60060FV-C	8 to 24	13.5 to 24.0	—	2,500	210	90	±9	-40 to +125	Active miller clamping/Fault signal output/UVLO/SCP/Soft turn-off function for SCP/Gate Resistance Selecting	SSOP-B28W	FSs	YES
BM60059FV-C	4.5 to 24	14 to 24	—	2,500	450	400	External Settings /-10	-40 to +125	Active miller clamping/Fault signal output/UVLO/SCP/Soft turn-off function for SCP/Gate Resistance Selecting	SSOP-B28W	FSs	YES

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*1 For more information about "ComfySIL™ Functional Safety", please refer to the reverse side of the cover.

Others

IGBT/MOSFET Low-side Gate Driver

Part No	Input-side Supply Voltage (V)	I/O Delay Time (ns)	Output Current (A)	ch	Operating Temperature (°C)	Package	Automotive Grade AEC-Q100
BD2310G	4.5 to 18	15	4/-4	1	-40 to +125	SSOP5	—

IGBT/MOSFET High-side Low-side Gate Drivers

Part No	Input-side Supply Voltage (V)	High-side Floating Supply Voltage (V)	I/O Delay Time (ns)	minimum Output Current (A)	ch	Miller Clamping Function	Operating Temperature (°C)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD2320UEFJ-LA	7.5 to 14.5	100	27/29	3.5/-4.5*2	2	—	-40 to +125	HTSOP-J8	—	—
BM60212FV-C	10 to 24	1,200	75	3/-3		✓	-40 to +125	SSOP-B20W	FSs	YES
BM60213FV-C	10 to 24	1,200	75	3/-3		—	-40 to +125	SSOP-B20W	FSs	YES

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*1 For more information about "ComfySIL™ Functional Safety", please refer to the reverse side of the cover.

*2 BD2320UEFJ-LA is a standard value.

(LAPIS Technology products)

Non-insulated Gate Driver for Battery Management System (BMS)

Part No.	Supply Voltage (V)	Gate Driving Voltage (V) Min	Turn on Time (μs) Max	Turn off Time (μs) Max	Operating temperature (°C)	Package
ML5810A	+6.5 to +64.0	10	350	70	-40 to +105	P-TSSOP20-0225-0.65-TK6

Power Management Switch

1 Channel Compact High Side Switch ICs

Part No.	Supply Voltage (V)	ON Resistance (mΩ)	Control Input Logic	Output Current (A)	Over-Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	OCP	Thermal Shut Down	Flag Output Delay/ at Over-Current (ms)	Discharge Resistance (Ω)	Package
BD2220G	2.7 to 5.5	160	H Active	0.5	0.5/-/1.0	1.0	Latch	Recovery	15	—	SSOP5
BD2221G	2.7 to 5.5	160	L Active	0.5	0.5/-/1.0	1.0	Latch	Recovery		—	SSOP5
BD6538G	2.7 to 5.5	150	H Active	0.5	0.5/-/1.0	1.0	Latch	Recovery		—	SSOP5
BD2224G	2.7 to 5.5	150	H Active	0.5	0.55/0.78/1.0	1.0	Recovery	Recovery		—	SSOP5
BD2225G	2.7 to 5.5	150	L Active	0.5	0.55/0.78/1.0	1.0	Recovery	Recovery		—	SSOP5
BD2226G	2.7 to 5.5	150	H Active	0.65	0.75/1.0/1.35	1.0	Recovery	Recovery		—	SSOP5
BD2227G	2.7 to 5.5	150	L Active	0.65	0.75/1.0/1.35	1.0	Recovery	Recovery		—	SSOP5
BD2232G	2.7 to 5.5	100	H Active	1.0	1.15/1.275/1.4	1.0	Recovery	Recovery		60	SSOP5
BD2233G	2.7 to 5.5	100	L Active	1.0	1.15/1.275/1.4	1.0	Recovery	Recovery		60	SSOP5
BD2240G	2.7 to 5.5	110	H Active	0.75	0.82/0.97/1.12	1.0	Recovery	Recovery		60	SSOP5
BD2241G	2.7 to 5.5	110	L Active	0.75	0.82/0.97/1.12	1.0	Recovery	Recovery		60	SSOP5
BD2246G	2.7 to 5.5	110	H Active	0.5	0.63/0.765/0.9	1.0	Recovery	Recovery		60	SSOP5
BD2247G	2.7 to 5.5	110	L Active	0.5	0.63/0.765/0.9	1.0	Recovery	Recovery		60	SSOP5
BD2248G	2.7 to 5.5	110	H Active	0.2	0.2/0.3/0.4	1.0	Recovery	Recovery		60	SSOP5
BD2222G*	2.8 to 5.5	90	H Active	1.5	0.2 to 1.7 (adjustable)	0.6	Recovery	Recovery	7	—	SSOP6
BD2242G*	2.8 to 5.5	90	H Active	1.5	0.2 to 1.7 (adjustable)	0.6	Recovery	Recovery		60	SSOP6
BD2243G*	2.8 to 5.5	90	L Active	1.5	0.2 to 1.7 (adjustable)	0.6	Recovery	Recovery		60	SSOP6

*UL approved File No. E243261

Automotive 1 Channel Compact High Side Switch ICs													
Part No.	Supply Voltage (V)	ON Resistance (mΩ)	Control Input Logic	Output Current (A)	Over-Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	OCF	Thermal Shut Down	Flag Output Delay/ at Over-Current (ms)	Discharge Resistance (Ω)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD22621G-M	2.7 to 5.5	120	H Active	0.15	0.18/0.30/0.42	1.0	Recovery	Recovery	15	60	SSOP5	FSs	YES
BD2262G-M	2.7 to 5.5	120	H Active	0.2	0.2/0.3/0.4	1.0	Recovery	Recovery		60	SSOP5	FSs	YES
BD22641G-M	2.7 to 5.5	120	H Active	0.5	0.57/0.76/0.96	1.0	Recovery	Recovery		60	SSOP5	FSs	YES
BD2264G-M	2.7 to 5.5	120	H Active	0.5	0.63/0.765/0.9	1.0	Recovery	Recovery		60	SSOP5	FSs	YES
BD2265G-M	2.7 to 5.5	120	L Active	0.5	0.63/0.765/0.9	1.0	Recovery	Recovery		60	SSOP5	FSs	YES
BD2266G-M	2.7 to 5.5	120	H Active	0.75	0.82/0.97/1.12	1.0	Recovery	Recovery		60	SSOP5	FSs	YES
BD2267G-M	2.7 to 5.5	120	L Active	0.75	0.82/0.97/1.12	1.0	Recovery	Recovery		60	SSOP5	FSs	YES
BD2268G-M	2.7 to 5.5	110	H Active	1.0	1.15/1.275/1.4	1.0	Recovery	Recovery		60	SSOP5	FSs	YES
BD2269G-M	2.7 to 5.5	110	L Active	1.0	1.15/1.275/1.4	1.0	Recovery	Recovery	7	60	SSOP5	FSs	YES
BD2244G-M*2	2.8 to 5.5	100	H Active	1.5	0.2 to 1.7 (adjustable)	0.6	Recovery	Recovery		60	SSOP6	FSs	YES
BD2245G-M*2	2.8 to 5.5	100	L Active	1.5	0.2 to 1.7 (adjustable)	0.6	Recovery	Recovery		60	SSOP6	FSs	YES

1 Channel Compact High Side Switch ICs (Industrial Equipment)													
Part No.	Supply Voltage (V)	ON Resistance (mΩ)	Control Input Logic	Output Current (A)	Over-Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	OCF	Thermal Shut Down	Flag Output Delay/ at Over-Current (ms)	Discharge Resistance (Ω)	Package		
BD2220G-LB	2.7 to 5.5	160	H Active	0.5	0.5/-/1.0	1.0	Latch	Recovery	15	—	SSOP5		
BD2221G-LB	2.7 to 5.5	160	L Active	0.5	0.5/-/1.0	1.0	Latch	Recovery		—	SSOP5		
BD6538G-LB	2.7 to 5.5	150	H Active	0.5	0.5/-/1.0	1.0	Latch	Recovery		—	SSOP5		
BD2224G-LB	2.7 to 5.5	150	H Active	0.5	0.55/0.78/1.0	1.0	Recovery	Recovery		—	SSOP5		
BD2225G-LB	2.7 to 5.5	150	L Active	0.5	0.55/0.78/1.0	1.0	Recovery	Recovery		—	SSOP5		
BD2226G-LB	2.7 to 5.5	150	H Active	0.65	0.75/1.0/1.35	1.0	Recovery	Recovery		—	SSOP5		
BD2227G-LB	2.7 to 5.5	150	L Active	0.65	0.75/1.0/1.35	1.0	Recovery	Recovery		—	SSOP5		

1 Channel High Side Switch ICs													
Part No.	Supply Voltage (V)	ON Resistance (mΩ)	Control Input Logic	Output Current (A)	Over-Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	OCF	Thermal Shut Down	Flag Output Delay/ at Over-Current (ms)	Discharge Resistance (Ω)	Package		
BD82020FVJ*2	2.8 to 5.5	90	H Active	1.1	1.1/1.5/2.0	0.4	Recovery	Recovery	12	75	TSSOP-B8J		
BD82021FVJ*2	2.8 to 5.5	90	L Active	1.1	1.1/1.5/2.0	0.4	Recovery	Recovery		75	TSSOP-B8J		
BD82022FVJ*2	2.8 to 5.5	90	H Active	1.5	1.5/2.0/2.6	0.4	Recovery	Recovery		75	TSSOP-B8J		
BD82023FVJ*2	2.8 to 5.5	90	L Active	1.5	1.5/2.0/2.6	0.4	Recovery	Recovery		75	TSSOP-B8J		
BD82024FVJ*2	2.8 to 5.5	90	H Active	2.1	2.1/2.5/3.3	0.4	Recovery	Recovery		75	TSSOP-B8J		
BD82025FVJ*2	2.8 to 5.5	90	L Active	2.1	2.1/2.5/3.3	0.4	Recovery	Recovery		75	TSSOP-B8J		
BD2051AFJ	2.7 to 5.5	80	H Active	0.5	0.7/1.0/1.6	1.2	Recovery	Recovery	1.3	—	SOP-J8		
BD2065AFJ	2.7 to 5.5	80	H Active	1.0	1.1/1.5/2.3	1.2	Recovery	Recovery	2.5	—	SOP-J8		
BD82028FVJ*2	4.5 to 5.5	72	H Active	0.5	0.6/1.0/1.2	0.3	Recovery	Recovery	13	75	TSSOP-B8J		
BD82029FVJ*2	4.5 to 5.5	72	L Active	0.5	0.6/1.0/1.2	0.3	Recovery	Recovery		55	TSSOP-B8J		
BD82030FVJ*2	4.5 to 5.5	72	H Active	1.0	1.05/1.5/1.8	0.3	Recovery	Recovery		55	TSSOP-B8J		
BD82031FVJ*2	4.5 to 5.5	72	L Active	1.0	1.05/1.5/1.8	0.3	Recovery	Recovery		55	TSSOP-B8J		
BD82032FVJ*2	4.5 to 5.5	72	H Active	1.5	1.55/2.0/2.3	0.3	Recovery	Recovery		55	TSSOP-B8J		
BD82033FVJ*2	4.5 to 5.5	72	L Active	1.5	1.55/2.0/2.3	0.3	Recovery	Recovery		55	TSSOP-B8J		
BD82034FVJ*2	4.5 to 5.5	72	H Active	2.0	2.05/2.5/2.8	0.3	Recovery	Recovery		55	TSSOP-B8J		
BD82035FVJ*2	4.5 to 5.5	72	L Active	2.0	2.05/2.5/2.8	0.3	Recovery	Recovery		55	TSSOP-B8J		
BD82038FVJ*2	2.7 to 5.5	72	H Active	0.5	0.60/1.00/1.20	0.5	Recovery	Recovery	7	55	TSSOP-B8J		
BD82039FVJ*2	2.7 to 5.5	72	L Active	0.5	0.60/1.00/1.20	0.5	Recovery	Recovery		55	TSSOP-B8J		
BD82040FVJ*2	2.7 to 5.5	72	H Active	1.0	1.05/1.50/1.80	0.5	Recovery	Recovery		55	TSSOP-B8J		
BD82041FVJ*2	2.7 to 5.5	72	L Active	1.0	1.05/1.50/1.80	0.5	Recovery	Recovery		55	TSSOP-B8J		
BD82042FVJ*2	2.7 to 5.5	72	H Active	1.5	1.55/2.00/2.30	0.5	Recovery	Recovery		55	TSSOP-B8J		
BD82043FVJ*2	2.7 to 5.5	72	L Active	1.5	1.55/2.00/2.30	0.5	Recovery	Recovery		55	TSSOP-B8J		
BD82044FVJ*2	2.7 to 5.5	72	H Active	2.0	2.05/2.50/2.80	0.5	Recovery	Recovery		55	TSSOP-B8J		
BD82045FVJ*2	2.7 to 5.5	72	L Active	2.0	2.05/2.50/2.80	0.5	Recovery	Recovery		55	TSSOP-B8J		
BD82046FVJ*2	2.7 to 5.5	72	H Active	2.5	2.70/3.20/3.80	0.5	Recovery	Recovery	15	55	TSSOP-B8J		
BD82047FVJ*2	2.7 to 5.5	72	L Active	2.5	2.70/3.20/3.80	0.5	Recovery	Recovery		55	TSSOP-B8J		
BD82001FVJ	2.7 to 5.5	70	H Active	0.9	1.0/1.5/2.0	0.8	Recovery	Recovery		—	TSSOP-B8J		
BD82000FVJ	2.7 to 5.5	70	L Active	0.9	1.0/1.5/2.0	0.8	Recovery	Recovery		—	TSSOP-B8J		
BD82065FVJ	2.7 to 5.5	70	H Active	1.1	1.5/2.4/3.0	0.8	Recovery	Recovery		—	TSSOP-B8J		
BD82061FVJ	2.7 to 5.5	70	L Active	1.1	1.5/2.4/3.0	0.8	Recovery	Recovery		—	TSSOP-B8J		

Automotive 1 Channel High Side Switch ICs													
Part No.	Supply Voltage (V)	ON Resistance (mΩ)	Control Input Logic	Output Current (A)	Over-Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	OCF	Thermal Shut Down	Flag Output Delay/ at Over-Current (ms)	Discharge Resistance (Ω)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD82004FVJ-M	2.7 to 5.5	70	H Active	0.9	1.0/1.5/2.0	0.8	Recovery	Recovery	15	—	TSSOP-B8J	FSs	YES
BD82005FVJ-M	2.7 to 5.5	70	L Active	0.9	1.0/1.5/2.0	0.8	Recovery	Recovery		—	TSSOP-B8J	FSs	YES
BD82006FVJ-M	2.7 to 5.5	70	H Active	1.1	1.5/2.4/3.0	0.8	Recovery	Recovery		—	TSSOP-B8J	FSs	YES
BD82007FVJ-M	2.7 to 5.5	70	L Active	1.1	1.5/2.4/3.0	0.8	Recovery	Recovery		—	TSSOP-B8J	FSs	YES

1 Channel High Side Switch ICs (Industrial Equipment)													
Part No.	Supply Voltage (V)	ON Resistance (mΩ)	Control Input Logic	Output Current (A)	Over-Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	OCF	Thermal Shut Down	Flag Output Delay/ at Over-Current (ms)	Discharge Resistance (Ω)	Package		
BD82001FVJ-LB	2.7 to 5.5	70	H Active	0.9	1.0/1.5/2.0	0.8	Recovery	Recovery	15	—	TSSOP-B8J		
BD82000FVJ-LB	2.7 to 5.5	70	L Active	0.9	1.0/1.5/2.0	0.8	Recovery	Recovery		—	TSSOP-B8J		
BD82065FVJ-LB	2.7 to 5.5	70	H Active	1.1	1.5/2.4/3.0	0.8	Recovery	Recovery		—	TSSOP-B8J		
BD82061FVJ-LB	2.7 to 5.5	70	L Active	1.1	1.5/2.4/3.0	0.8	Recovery	Recovery		—	TSSOP-B8J		

2 Channel High Side Switch ICs													
Part No.	Supply Voltage (V)	ON Resistance (mΩ)	Control Input Logic	Output Current (A)	Over-Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	OCF	Thermal Shut Down	Flag Output Delay/ at Over-Current (ms)	Discharge Resistance (Ω)	Package		
BD6516F*2	3.0 to 5.5	110	H Active	1.1	1.2/1.65/2.5	1.3	Recovery	Recovery	1	—	SOP8		
BD2066FJ*2	2.7 to 5.5	80	H Active	1.0	1.5/2.4/3.0	0.8	Recovery	Recovery	15	—	SOP-J8		
BD2062FJ*2	2.7 to 5.5	80	L Active	1.0	1.5/2.4/3.0	0.8	Recovery	Recovery		—	SOP-J8		

Automotive 2 Channel High Side Switch ICs													
Part No.	Supply Voltage (V)	ON Resistance (mΩ)	Control Input Logic	Output Current (A)	Over-Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	OCF	Thermal Shut Down	Flag Output Delay/ at Over-Current (ms)	Discharge Resistance (Ω)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD2068FJ-M	2.7 to 5.5	80	H Active	1.0	1.5/2.4/3.0	0.8	Recovery	Recovery	15	—	SOP-J8	FSs	YES
BD2069FJ-M	2.7 to 5.5	80	L Active	1.0	1.5/2.4/3.0	0.8	Recovery	Recovery		—	SOP-J8	FSs	YES

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 *1 For more information about "ComfySIL™ Functional Safety", please refer to the reverse side of the cover.
 *2 UL approved File No. E243261

Power Management Switch

2 Channel High Side Switch ICs (Industrial Equipment)

Part No.	Supply Voltage (V)	ON Resistance (mΩ)	Control Input Logic	Output Current (A)	Over-Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	OCF	Thermal Shut Down	Flag Output Delay/ at Over-Current (ms)	Discharge Resistance (Ω)	Package
BD2066FJ-LB*	2.7 to 5.5	80	H Active	1.0	1.5/2.4/3.0	0.8	Recovery	Recovery	15	—	SOP-J8
BD2062FJ-LB*	2.7 to 5.5	80	L Active	1.0	1.5/2.4/3.0	0.8	Recovery	Recovery		—	SOP-J8

*UL approved File No. E243261

Load Switch ICs

Part No.	Input Voltage (V)	Current Consumption (μA)	ON Resistance (mΩ)	Number of Output channel (ch)	Control Input Logic	Output Current (A)	Over-Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	Thermal Shut Down	Discharge Resistance (Ω)	Package (mm)
BD6528HFV	V _{DD} =2.7 to 4.5/ V _{IN} =0 to 2.7	20	110	1	H Active	0.5	—	0.5	—	70	HVSOF6
BD6529GUL	V _{DD} =2.7 to 4.5/ V _{IN} =0 to 2.7	20	100		H Active	0.5	—	0.5	—	70	VCSP50L1 1.0×1.5, H=0.55
BD2200GUL	2.7 to 5.5	20	100		H Active	0.5	—	1.0	—	70	VCSP50L1 1.0×1.5, H=0.55
BD2201GUL	2.7 to 5.5	20	100		H Active	1.0	—	1.0	—	70	VCSP50L1 1.0×1.5, H=0.55
BD2204GUL	V _{IN1} =2.7 to 4.5/ V _{IN2} =1.2 to 2.4	30	120		H Active	0.5	—	0.06	Recovery	80	VCSP50L1 1.0×1.5, H=0.55
BD2202G	2.7 to 3.6	70	150		H Active	0.2	0.25/—/1.0	1.2	Recovery	—	SSOP5
BD2206G	2.7 to 3.6	70	150		H Active	0.5	0.8/—/1.6	1.2	Recovery	—	SSOP5
BD6520F	3.0 to 5.5	110	50		H Active	2.0	—	2.0	Latch	350	SOP8
BD6522F	3.0 to 5.5	110	50		H Active	2.0	—	1.0	Latch	350	SOP8

Load Switch ICs (Industrial Equipment)

Part No.	Input Voltage (V)	Current Consumption (μA)	ON Resistance (mΩ)	Number of Output channel (ch)	Control Input Logic	Output Current (A)	Over-Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	Thermal Shut Down	Discharge Resistance (Ω)	Package
BD2202G-LB	2.7 to 3.6	70	150	1	H Active	0.2	0.25/—/1.0	1.2	Recovery	—	SSOP5
BD2206G-LB	2.7 to 3.6	70	150		H Active	0.5	0.8/—/1.6	1.2	Recovery	—	SSOP5

Compact High Side Load Switch ICs

Part No.	Input Voltage (V)	Current Consumption (μA)	ON Resistance (mΩ)	Number of Output channel (ch)	Control Input Logic	Output Current (A)	Over-Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	Thermal Shut Down	Discharge Resistance (Ω)	Package (mm)
BUS1DJC0GWZ	1.1 to 5.0	0.35	63	1	H Active	2.0	—	0.012	—	80	UCSP30L1 0.8×0.8, H=0.35
BUS1DJC3GWZ	1.1 to 5.0	0.35	63		H Active	2.0	—	0.19	—	80	UCSP30L1 0.8×0.8, H=0.35
BDS2EJAAGUL	3.0 to 3.6	0.2	45	2	H Active	1.0	1.0	— (Soft Start)	Recovery	30	VCSP50L1 1.95×1.0, H=0.55

34V Withstand Voltage 1ch Compact High Side Load Switch ICs

Part No.	Input Voltage (V)	Current Consumption (μA)	ON Resistance (mΩ)	Number of Output channel (ch)	Control Input Logic	Output Current (A)	Over-Current Detection (A) Min/Typ/Max	Output Turn on Time (ms)	Thermal Shut Down	Discharge Resistance (Ω)	Package
BV1HAL45EFJ	8 to 32	0.5	45	1	H Active	3.4 to 9.9 Adjustable	17.4 to 34.6	11.79 to 64.05 Adjustable	Recovery	—	HTSOP-J8
BV1HAL85EFJ	8 to 32	0.5	85		H Active	2.5 to 6.5 Adjustable	8.7 to 17.3	5.45 to 29.60 Adjustable	Recovery	—	HTSOP-J8
BV1HALA5EFJ	8 to 32	0.5	150		H Active	0.75 to 2.1 Adjustable	5.7 to 11.3	5.45 to 29.60 Adjustable	Recovery	—	HTSOP-J8

Controller IC for High Side NMOSFET

Part No.	Supply Voltage (V)	Current Consumption (μA)	Output Voltage (V)		Number of Output channel (ch)	Control Input Logic	Output Turn on Time (ms)	Discharge Resistance (Ω)	Package
			V _{CC} =3.3V	V _{CC} =5.0V					
BD2270HFV	2.7 to 5.5	50	9.5	13.5	1	H Active	0.13	200	HVSOF5

Controller IC for High Side NMOSFET (Industrial Equipment)

Part No.	Supply Voltage (V)	Current Consumption (μA)	Output Voltage (V)		Number of Output channel (ch)	Control Input Logic	Output Turn on Time (ms)	Discharge Resistance (Ω)	Package
			V _{CC} =3.3V	V _{CC} =5.0V					
BD2270HFV-LB	2.7 to 5.5	50	9.5	13.5	1	H Active	0.13	200	HVSOF5

Wireless Charging LSIs

(LAPIS Technology products)

13.56MHz Wireless Charge													
Part No.	Function Overview	Maximum Charging Power	NFC Forum Compliant	Feature	Charging Control	NFC Tag Type	Communication Speed (kbps)	I/F	Clock Source (MHz)	Supply Voltage (V)	Application	Operating Temperature (°C)*1	Package
ML7630	Power Receiver	200mW		Built-in LDO	Current, Voltage, Temperature Monitoring	NFC Forum Type3 Tag	212	I²C slave×1ch	—	Generated from magnetic field	Consumer	−40 to +85	S-UFLGA34-2.59×2.59-0.40-W (WL-CSP34)
ML7631	Power Transmitter				Transmission Power Adjust Control		212	I²C slave×1ch	27.12MHz (Crystal)	4.5 to 5.5	Consumer	−40 to +85	P-WQFN32-0505-0.50-A63
☆ML7650	Power Receiver	3W			Current, Voltage, Temperature Monitoring	NFC Forum Type3 Tag	212/424	I²C slave×1ch SPI slave×1ch	—	Generated from magnetic field	Consumer/Industrial	−40 to +85	S-UFLGA30-2.28×2.61-0.40-W (WL-CSP30) P-WQFN32-0505-0.50-A63
☆ML7651	Power Transmitter				Transmission Power Adjust Control		212/424	I²C slave×1ch SPI slave×1ch	27.12MHz (Crystal)	4.5 to 5.5	Consumer/Industrial	−40 to +85	P-WQFN40-0606-0.50-63
ML7660	Power Receiver	1W			Current, Voltage, Temperature Monitoring	NFC Forum Type3 Tag	212/424	I²C slave×1ch SPI slave×1ch	—	Generated from magnetic field	Consumer/Industrial	−40 to +85	S-UFLGA30-2.28×2.61-0.40-W (WL-CSP30) P-WQFN32-0505-0.50-A63
ML7661	Power Transmitter				Transmission Power Adjust Control		212/424	I²C slave×1ch SPI slave×1ch	27.12MHz (Crystal)	4.5 to 5.5	Consumer/Industrial	−40 to +85	P-WQFN40-0606-0.50-63
New ML7662	Power Receiver	1W	✓*2		Current, Voltage, Temperature Monitoring	NFC Forum Type3 Tag	212/424	I²C slave×1ch SPI slave×1ch	—	Generated from magnetic field	Consumer/Industrial	−40 to +85	S-UFLGA30-2.28×2.61-0.40-W (WL-CSP30) P-WQFN32-0505-0.50-A63
New ML7663	Power Transmitter		✓*2		Transmission Power Adjust Control		212/424	I²C slave×1ch SPI slave×1ch	27.12MHz (Crystal)	4.5 to 5.5	Consumer/Industrial	−40 to +85	P-WQFN40-0606-0.50-63
New ML7670	Power Receiver	250mW	✓*2	Built-in LDO	Current, Voltage, Temperature Monitoring	NFC Forum Type3 Tag	212/424	I²C slave×1ch SPI slave×1ch	—	Generated from magnetic field	Consumer	−40 to +85	S-UFLGA30-2.28×2.56-0.40-W (WL-CSP30)
New ML7671	Power Transmitter		✓*2		Transmission Power Adjust Control		212/424	I²C slave×1ch SPI slave×1ch	27.12MHz (Crystal)	4.5 to 5.5	Consumer	−40 to +85	P-WQFN40-0606-0.50-63
☆ML7740	Power Receiver	1W×2			Current, Voltage, Temperature Monitoring	NFC Forum Type3 Tag	212/424	I²C slave×1ch	—	Generated from magnetic field	Consumer	−40 to +85	S-UFLGA30-2.28×2.61-0.40-W (WL-CSP30)
☆ML7741	Power Transmitter			Dual TX	Transmission Power Adjust Control		212/424	I²C slave×1ch	27.12MHz (Crystal)	2.6 to 5.5	Consumer	−40 to +85	TBD
☆ML7750	Power Receiver	1W		Antenna Sharing	Current, Voltage, Temperature Monitoring	NFC Forum Type3 Tag	212/424	I²C slave×1ch	—	Generated from magnetic field	Consumer	−40 to +85	S-UFLGA30-2.28×2.61-0.40-W (WL-CSP30)
☆ML7751	Power Transmitter				Transmission Power Adjust Control		212/424	I²C slave×1ch	27.12MHz (Crystal)	4.5 to 5.5	Consumer	−40 to +85	P-WQFN40-0606-0.50-63
13.56MHz Wireless Charge (for Automotive)													
Part No.	Function Overview	Maximum Charging Power	NFC Forum Compliant	Feature	Charging Control	NFC Tag Type	Communication Speed (kbps)	I/F	Clock Source (MHz)	Supply Voltage (V)	Application	Operating Temperature (°C)*1	Package
New ML7800	Power Receiver	1W	✓*2	AEC-Q100	Current, Voltage, Temperature Monitoring	NFC Forum Type3 Tag	212/424	I²C slave×1ch	—	Generated from magnetic field	Automotive*3	−40 to +85	P-WQFN32-0505-0.50-A63
New ML7801	Power Transmitter		✓*2	AEC-Q100	Transmission Power Adjust Control		212/424	I²C slave×1ch	27.12MHz (Crystal)	4.5 to 5.5	Automotive*3	−40 to +85	P-WQFN40-0606-0.50-63

*1 Communication period
*2 Type-F only
*3 Please inquire to the sales

☆: Under Development

Battery Management

Battery Charger ICs

Part No.	Supply Voltage (V)	ON Resistance (mΩ)	Charge Voltage (V)	Charge Current Accuracy (%)	Switching Frequency (kHz)	Operating Temperature (°C)	Package
BD71631QWZ	(2.9V: 30mA, 4.0V: 300mA) to 5.5	—	2.0 to 4.7 (±2%)	±10 (ICHG=100mA to 300mA)	—	–30 to +105	UMMP10LZ1824
BD8664GW	4.1 to 5.5	70	8.3±0.5%	±2	1,000	–30 to +85	UCSP75M2
BD8665GW	4.1 to 5.5	70	8.4±0.5%	±3	1,000	–30 to +85	UCSP75M2
BD99950MUUV	6.0 to 24.0	—	8.4/12.6±0.5%	±3	600 to 1,200	–10 to +85	VQFN20PV3535
BD99954GW	3.8 to 25.0	—	4.192/8.4/ 12.592/16.8±0.5%	±2 to ±40	600 to 1,200	–30 to +85	UCSP55M3C
BD99954MWV	3.8 to 25.0	—	4.192/8.4/ 12.592/16.8±0.5%	±2 to ±40	600 to 1,200	–30 to +85	UQFN040V5050

Charge Protection ICs

Standard Protection type

Part No.	Absolute Maximum Ratings (V)	Over Voltage Detection Level (V)	Under Voltage Detection Level (V)	Over-Current Detection Level (A)	Ron (mΩ)	OK/FLGB PIN Logic			Package (mm)
						<UVLO	Normal	>OVLO	
BD6040GUL	+30	6.4±0.2	2.65±0.12	Min 1.2	125 (Typ)	H	L	H	VCSP50L1 1.6×1.6, H=Max 0.55
BD6041GUL	+30	5.85±0.15	2.65±0.12	Min 1.2	125 (Typ)	H	L	H	VCSP50L1 1.6×1.6, H=Max 0.55

Negative Voltage Protection type

Part No.	Absolute Maximum Ratings (V)	Over Voltage Detection Level (V)	Under Voltage Detection Level (V)	Over-Current Detection Level (A)	Ron (mΩ)	OK/FLGB PIN Logic			Package (mm)
						<UVLO	Normal	>OVLO	
BD6046GUL	±30	6.7±0.2	3.6±0.18	Min 1.2	250 (Typ)	H	H	L	VCSP50L2 2.5×2.5, H=Max 0.55
BD6047AGUL	±30	5.85±0.15	3.6±0.18	Min 1.7	125 (Typ)	H	H	L	VCSP50L1 1.95×1.95, H=Max 0.55

Standard Protection type: Charger protection IC provides over voltage protection for charger IC. Built-in circuits include overvoltage lockout, over-current limit, undervoltage protection, internal start up delay, and status flag.
Negative Voltage Protection type: Addition to the conventional standard charge protection IC, it prevents the negative voltage happened by the USB reverse insertion without any additional components.

Automotive Cell Balance IC of Power Storage Element Cells

Automotive EDLC Cell Balance IC (4 to 6 series)

Part No.	Absolute Maximum Ratings (V)	Cell Voltage Detection Range VCB (V)	Over-voltage Detection Voltage 1 (V)	Over-voltage Detection Voltage 2 (V)	Shunt SW Ron (Ω)	Function			Package (mm)	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
						EN	OVLO	Stack IC			
BD14000EFV-C	+28	2.4 to 3.1V± (1%) (0.1V/step usable)	VCB+0.15 or 0.25 (OVLOSEL=L or H)	VCB+0.3 or 0.5 (OVLOSEL=L or H)	1 (Typ)	✓	✓	✓	HTSSOP-B30 10.0×7.6, H=Max 1.0	FSs	YES

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Automotive Coulomb Counter IC

Automotive Coulomb Counter IC

Part No.	Supply Voltage (V)	Gain (V/V)	Resolution (bit)	I/F	Operating Temperature (°C)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD7220FV-C	4.5 to 5.5	5/25/51	16	SPI	–40 to +125	SSOP-B20 6.5×6.4 (t=1.45)	FSs	YES

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Li-ion Battery Monitoring LSIs

(LAPIS Technology products)

Stand-alone type

Part No.	Description	Supply Voltage (V)	Overvoltage Detection Accuracy (Typ) (mV)	Charge/Discharge Control FET driver	Cell Balancing Switch	Current Consumption (Typ) (μA)		Overvoltage/Undervoltage Detection	Charge and Discharge Over-Current Detection	Temperature Detection	Short Circuit Detection	Open Wire Detection	Parameter Change	Operation Temperature (°C)	Package
						Operating	Power-down								
ML5241	5-cells, 2nd protection	+5 to +25	±25	—	—	1	0.1	Overvoltage detection	—	—	—	✓	Mask option	–20 to +85	P-WSN10 -0303-0.50-63
ML5205	5-cells/2nd protection, number of connected battery cells detection					3	—								P-VSSOP8 -0150-0.65-TK6
ML5206	5-cells, 2nd protection with Autonomous Cell Balancing					1	—								P-VSSOP8 -0150-0.65-TK6
ML5243	5-cells, cell voltage/current/temperature protection	+5 to +60	±15	Low-side	—	4.5	0.1	✓	✓	✓	✓	—	Mask option	–40 to +85	P-TSSOP20 -0225-0.65-TK6
ML5233	10-cells, cell voltage/current/temperature protection, cascade connection					25	0.1								P-LQFP32 -0707-0.80-TK6
ML5245	13-cells, cell voltage/current/temperature protection, cell voltage monitoring					2.5	—								P-SSOP30 -56-0.65-ZK6
ML5232	14-cells, 2nd protection	+7 to +80	±20	—	—	2.5	—	Overvoltage detection	—	—	—	—	—	–40 to +105	P-TSSOP20 -0225-0.65-TK6

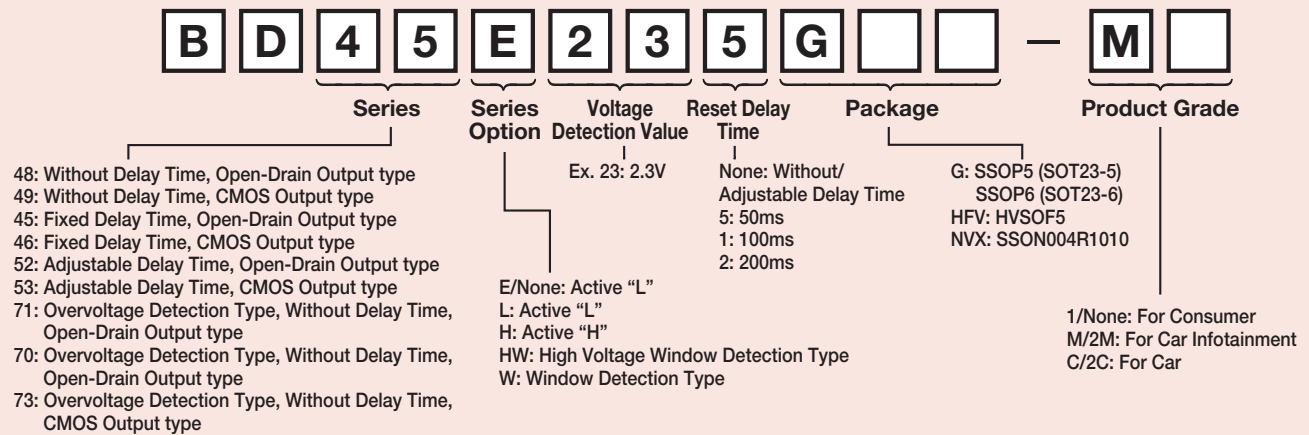
Analog Front-End type

Part No.	Description	Supply Voltage (V)	Cell Voltage Measurement Error (Typ) (mV)	Monitoring Output	Charge/Discharge Control FET driver	Cell Balancing Switch	Current Consumption (Typ) (μA)		Overvoltage/Undervoltage Detection	Charge and Discharge Over-Current Detection	Short Circuit Detection	Parameter Change	Operation Temperature (°C)	Package
							Operating	Power-down						
ML5204	5-cells, analog monitoring output	+3.3 to +42.0	±25	cell voltage/ current	—	internal	14	0.1	✓	✓	✓	Mask option	–40 to +85	P-TSSOP20 -0225-0.65-TK6
ML5248	7-cells, analog monitoring output	+5.0 to +31.5	±20				32	0.1	—	—				P-SSOP30 -56-0.65-ZK6
ML5236	14-cells, ADC built-in, digital monitoring output	+8 to +64	±15	cell voltage/ current/temperature	High-side	internal	330	0.1	Overvoltage detection	—	✓	MCU control	–40 to +85	P-TQFP44 -1010-0.80-ZK6
ML5238	16-cells, analog monitoring output	+7 to +80	±20	cell voltage/ current			50	0.1						P-QFP44 -910-0.80-ZK6
ML5239	16-cells, ADC built-in, cascade connection, digital monitoring output	+10 to +72	±10	cell voltage/ temperature	—	external	1200	0.1	—	—	—	—	–40 to +105	P-TQFP64 -1010-0.50-ZK6

Voltage Detectors (Reset ICs)

Over Voltage Detectors (Reset ICs)	P.61	Voltage Detectors with Adjustable Delay Time	P.61
Voltage Detectors for Automotive	P.62	Power Supply Monitoring IC for Automotive	P.62
Voltage Detectors with Watchdog Timer	P.62	Composite type Voltage Detector (2ch+Comparator)	P.62

Voltage Detectors How to find part number



Voltage Detectors (Reset ICs)

Over Voltage Detectors (Reset ICs)

Over Voltage Detector ICs

Part No.	Voltage Detection Precision at $T_a=+25^{\circ}\text{C}$ (%)	Voltage Detection (V)	RESET Active Voltage (V)	Detection Step (V)	Output type	Circuit Current (μA)		Hysteresis Voltage (mV)	"L" Output Current (mA)	Package
						I_{OCL}	I_{OCH}			
BD71L4LG-1	± 0.8	4.05	1.2 to 7.0	—	Open Drain	0.6	0.7	30	$\frac{4}{(V_{\text{DD}}=4.25\text{V})}$	SSOP5
BD71L4LHFV-1	± 0.8	4.05	1.2 to 7.0	—					$\frac{4}{(V_{\text{DD}}=4.25\text{V})}$	HVSOF5
BD71L3SHFV	± 1.0	3.83	1.2 to 7.0	—					$\frac{4}{(V_{\text{DD}}=4.03\text{V})}$	HVSOF5

Over Voltage Detector ICs (125°C Corresponding)

Part No.	Types	Voltage Detection Precision Within The All Temperature (%)	Voltage Detection (V)	RESET Active Voltage (V)	Detection Step (V)	Output type	Circuit Current (μA)		Hysteresis Voltage (V)	"L" Output Current (mA)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
							ON	OFF		$V_{\text{DD}}=1.2\text{V}$			
Nano BD70HxxG-2C series	0.1V step 4 types	± 1.4	3.46 to 3.76	0.8 to 6.0	0.1	Open Drain	0.27	0.3	—	1.0mA or more	SSOP5	FSs	YES
Nano BD73HxxG-2C series	0.1V step 4 types		3.46 to 3.76	0.8 to 6.0	0.1	CMOS					SSOP5	—	YES

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*1 For more information about "ComfySIL™ Functional Safety", please refer to the reverse side of the cover. Detection voltage is applied in the xx of part No. Please see the Data sheet specifications.

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Voltage Detectors with Adjustable Delay Time

Voltage Detectors with Externally-Adjustable Delay Time

Part No.	Types	Voltage detection Precision at $T_a=+25^{\circ}\text{C}$ (%)	Voltage Detection (V)	RESET Active Voltage (V)	Detection Step (V)	Output type	Circuit Current (μA)		Hysteresis Voltage (V)	"L" Output Current (mA)		RESET Active Timeout Period (ms)	Package
							ON	OFF		$V_{\text{DD}}=1.2\text{V}$	$V_{\text{DD}}=2.4\text{V}$		
New BD52xxG-1 series	0.1V step 42 types	± 0.9	0.9 to 5.0	0.8 to 6.0	0.1	Open Drain	0.23	0.27	$V_{\text{DET}} \times 0.05$	1.0 or more	2.0 or more	Variable	SSOP5

Voltage Detectors with Voltage Detection/Externally-Adjustable Delay Time

Part No.	Voltage Detection Precision at $T_a=+25^{\circ}\text{C}$ (%)	Voltage Detection (V)	Power Supply Voltage (V)	Output type	Circuit Current (μA)	Hysteresis Voltage (V)	Output ON Resistance (Ω)	RESET Active Timeout Period (ms)	Package
BD4142HFV	± 1.8	0.5	3.0 to 5.5	Open Drain	7.5	0.01	100	Variable	HVSOF5

Voltage Detectors with Externally-Adjustable Delay Time: Detection voltage (from 0.9V to 5.0V as 0.1V step) is applied in the xx of part No. Ex: In case of 2.3V detection voltage in BD52xxG-1 series, part No. is BD5223G-1.

Voltage Detectors for Automotive

Voltage Detectors (105°C Corresponding)

Part No.	Types	Voltage Detection Precision at T _a =25°C (%)	Voltage Detection (V)	RESET Active Voltage (V)	Detection Step (V)	Output type	Circuit Current (μA)		Hysteresis Voltage (V)	“L” Output Current (mA)		RESET Active Timeout Period (ms)	Delay Time Precision (%)	Manual Reset PIN	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100										
							ON	OFF																			
BD48ExxG-M series	0.1V step 38 types	±1	2.3 to 6.0	0.95 to 10.00	0.1	Open Drain	0.60 (V _{DET} =4.8V)	0.85 (V _{DET} =4.8V)	V _{DET} ×0.05	0.4 or more (V _{DD} =1.5V V _{DS} =0.5V)	2 or more (V _{DD} =2.4V V _{DS} =0.5V)	—	—	NO	SSOP5	FSs	YES										
BD49ExxG-M series	0.1V step 38 types		2.3 to 6.0	0.95 to 10.00	0.1	CMOS						—	—	NO	SSOP5	FSs	YES										
BD45Exx5G-M series	0.1V step 26 types		2.3 to 4.8	0.95 to 10.00	0.1	Open Drain						0.80 (V _{DET} =4.8V)	0.85 (V _{DET} =4.8V)	V _{DET} ×0.05	0.45 or more (V _{DD} =1.2V V _{DS} =0.3V)	1.3 or more (V _{DD} =2.4V V _{DS} =0.3V)	50	—	YES	SSOP5	FSs	YES					
BD45Exx1G-M series	0.1V step 26 types		2.3 to 4.8	0.95 to 10.00	0.1												100	—	YES	SSOP5	FSs	YES					
BD45Exx2G-M series	0.1V step 26 types		2.3 to 4.8	0.95 to 10.00	0.1												200	—	YES	SSOP5	FSs	YES					
BD46Exx5G-M series	0.1V step 26 types		2.3 to 4.8	0.95 to 10.00	0.1	CMOS											0.80 (V _{DET} =4.8V)	0.85 (V _{DET} =4.8V)	V _{DET} ×0.05	0.45 or more (V _{DD} =1.2V V _{DS} =0.3V)	1.3 or more (V _{DD} =2.4V V _{DS} =0.3V)	50	—	YES	SSOP5	FSs	YES
BD46Exx1G-M series	0.1V step 26 types		2.3 to 4.8	0.95 to 10.00	0.1																	100	—	YES	SSOP5	FSs	YES
BD46Exx2G-M series	0.1V step 26 types		2.3 to 4.8	0.95 to 10.00	0.1																	200	—	YES	SSOP5	FSs	YES
BD52xxG-2M series	0.1V step 42 types	±2.5 (All Temperature)	0.9 to 5.0	0.8 to 6.0	0.1	Open Drain	0.23	0.27	V _{DET} ×0.05	1.0 or more (V _{DD} =1.2V V _{DS} =0.4V)	2.0 or more (V _{DD} =2.4V V _{DS} =0.4V)											Variable	±30% (All Temperature)	NO	SSOP5	FSs	YES
BD53xxG-2M series	0.1V step 42 types		0.9 to 5.0	0.8 to 6.0	0.1	CMOS																Variable	±30% (All Temperature)	NO	SSOP5	FSs	YES

Voltage Detectors (125°C Corresponding)

Part No.	Types	Voltage Detection Precision Within The All Temperature (%)	Voltage Detection (V)	RESET Active Voltage Range (V)	Detection Step (V)	Output Type	Circuit current (μA)		Hysteresis Voltage (V)	“L” Output current (mA) (V _{DS} =0.4V)		RESET Active Timeout Period (ms)	Delay Time Precision (%)	Manual Reset PIN	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
							ON	OFF		V _{DD} =1.2V V _{DS} =0.4V	V _{DD} =2.4V V _{DS} =0.4V						
Nano BD52xxG-2C series	0.1V step 42 types	±3	0.9 to 5.0	0.8 to 6.0	0.1	Open Drain	0.23	0.27	V _{DET} ×0.05	1.0 or more (V _{DD} =1.2V)	2.0 or more (V _{DD} =2.4V)	Variable	±50 (All Temperature)	NO	SSOP5	FSs	YES
Nano BD53xxG-2C series	0.1V step 42 types		0.9 to 5.0	0.8 to 6.0	0.1	CMOS						Variable		NO	SSOP5	FSs	YES
Nano BD5320NVX-2C	1	±2.5	2.0	0.8 to 6.0	—	Open Drain	0.23	0.27	V _{DET} ×0.05	1.0 or more (V _{DD} =1.2V)	2.0 or more (V _{DD} =2.4V)	Variable		NO	SSON004R1010	FSs	YES
Nano BD52xxNVX-2C series	8 types		1.4 to 3.1	0.8 to 6.0	—							Variable		NO	SSON004R1010	FSs	YES
Nano BD70HxxG-2C/BD70HxxG-C series	0.1V step 5 types	±1.4	3.46 to 3.76/3.06	0.8 to 6.0	0.1	Open Drain	0.27	0.3	—	1.0 or more (V _{DD} =1.2V)	2.0 or more (V _{DD} =2.4V)	—	—	NO	SSOP5	FSs/FSs	YES
Nano BD73HxxG-2C series	0.1V step 4 types		3.46 to 3.76	0.8 to 6.0	0.1	CMOS						—		NO	SSOP5	FSs	YES

Window Voltage Detectors (125°C Corresponding)

	Part No.	Operating Supply Voltage (V)	Voltage Detection Precision Within The All Temperature (%)	Over Voltage Detection (V)	Low Voltage Detection (V)	Output Type	Circuit current (μA)	Hysteresis Voltage (V)	“L” Output Current (mA) (V _{OS} =0.4V)		RESET Active Timeout Period (ms)	Delay Time Precision (%)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100	
	BD48HW0G-C	1.8 to 40	±0.75	1.277	1.277	Open Drain	0.5	V _{DET} ×0.01	2 or more (V _{DD} =1.8V)		—	—	SSOP6	FSs	YES	
	BD48W00G-C		±2.5	1.2	1.2		3				—	—	SSOP6	FSs	YES	
	BD52W01G-C	1.6 to 6.0	±5	1.32	1.08		0.3		1 or more (V _{DD} =1.6V)	2 or more (V _{DD} =2.4V)	Variable	±50 (All Temperature)	SSOP6	FSs	YES	
	BD52W02G-C			1.65	1.35								SSOP6	FSs	YES	
	BD52W03G-C			1.98	1.62								SSOP6	FSs	YES	
	BD52W04G-C			2.75	2.25								SSOP6	FSs	YES	
	BD52W05G-C			3.63	2.97								SSOP6	FSs	YES	
	BD52W06G-C			5.5	4.5								SSOP6	FSs	YES	

Detection voltage is applied in the “xx” of part No. Ex.: In case of 2.3V detection voltage in BD48ExxG-M series, Part No. is BD48E23G-M.

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Power Supply Monitoring IC for Automotive

4ch System Power Good (Watchdog Timer+Reset)

Part No.	Supply Voltage (V)	RESET Detection Voltage (V)	Power good Detection Voltage (V)	Detection level (%)	Detection Precision (%)	Power good ch	Output type	WDT type	RESET Active Timeout Period	Self-diagnosis function	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
BD39040MUF-C	2.7 to 5.5	Variable	Variable	±10	±3	4	Open Drain	Window Type	10ms	YES	VQFN16FV3030	FSs	YES
BD39042MUF-C	2.7 to 5.5			±6	±1.4				10ms		VQFN16FV3030	FSs	YES

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Others

Voltage Detectors with Watchdog Timer

Part No.	Voltage Detection Precision (%)	Voltage Detection (V)	RESET Active Voltage (V)	Output type	Circuit Current (μA)	Hysteresis Voltage (V)	“L” Output Current (mA)		RESET Active Timeout Period	Delay Circuit Resistance (MΩ)	WDT Active Voltage (V)	INH Mode (Active)	Package
							V _{DD} =1.2V	V _{DS} =0.5V					
BD37A19FVM	±1.5	1.9	1.0 to 10.0	Open Drain	5	V _{DET} ×0.13	0.7	Variable	10	2.5 to 10.0			H
BD37A41FVM	±1.5	4.1	1.0 to 10.0										H
BD87A28FVM	±1.5	2.8	1.0 to 10.0										L
BD87A29FVM	±1.5	2.9	1.0 to 10.0										L
BD87A34FVM	±1.5	3.4	1.0 to 10.0										L
BD87A41FVM	±1.5	4.1	1.0 to 10.0										L
BD99A41F	±1.5	4.1	1.0 to 10.0										H

Composite type Voltage Detector (2ch+Comparator)

Part No.	Voltage Detection Precision (%)	Voltage Detection (V)	Output type	Circuit Current (μA) V _{SB} =5V	Hysteresis Voltage (mV)	RESET Active Timeout Period	Input Voltage (V)	Package
BD3775AF	±1.5	1.23	Open Collector+Constant Current Pull Up	350	28	Variable	3.5 to 18.0	SOP8