

DC Brush Motor Drivers

7V Max H-Bridge Drivers

Part No.	ch	Supply Voltage (V)	Output Current (A)	Input Threshold Voltage (V)		Output ON Resistance (Ω Typ)	Output Modes	Package
				H Level	L Level			
BD6210F	1	3.0 to 5.5	0.5	2.0 or more	0.8 or less	1.0	Forward/Reverse/Standby (Idle)/Brake	SOP8
BD6210HFP			HRP7					
BD6211F			1.0			SOP8		
BD6211HFP			1.0			HRP7		
BD6212FP			2.0			HSOP25		
BD6212HFP			2.0			HRP7		

18V Max H-Bridge Drivers

Part No.	ch	Supply Voltage (V)	Output Current (A)	Input Threshold Voltage (V)		Output ON Resistance (Ω Typ)	Output Modes	Package	
				H Level	L Level				
BD6220F	1	6.0 to 15.0	0.5	2.0 or more	0.8 or less	1.5	Forward/Reverse/Standby (Idle)/Brake	SOP8	
BD6221F			1.0			1.5		SOP8	
BD6222FP			2.0			1.0		HSOP25	
BD6222HFP			2.0			1.0		HRP7	
BD6225FP			2			0.5		1.5	HSOP25
BD6226FP						1.0		1.5	HSOP25

36V Max H-Bridge Drivers

Part No.	ch	Supply Voltage (V)	Output Current (A)	Input Threshold Voltage (V)		Output ON Resistance (Ω Typ)	Output Modes	Package
				H Level	L Level			
BD6230F	1	6.0 to 32.0	0.5	2.0 or more	0.8 or less	1.5	Forward/Reverse/Standby (Idle)/Brake	SOP8
BD6231F			1.0			1.5		SOP8
BD6231HFP			1.0			1.5		HRP7
BD6232FP			2.0			1.0		HSOP25
BD6232HFP			2.0			1.0		HRP7
BD6236FP			2			1.0		1.5
BD6236FM	2.0	1.0		HSOP-M28				
BD6237FM	1	8.0 to 28.0	0.5	2.0 or more	0.8 or less	1.8	Forward/Reverse/Standby (Idle)/Brake	HSOP-M28
BD62105AFVM			1.0			1.8		MSOP8
BD62110AEFJ			2.0			0.65		HTSOP-J8
BD62120AEFJ			3.0			0.35		HTSOP-J8
BD62130AEFJ			1.0			1.9		HTSSOP-B28
BD62210AEFV			1.7			0.65		HTSSOP-B24
BD60203EFV	2	2.0	0.65	HTSSOP-B28				
BD62220AEFV		2.0	0.55	HTSSOP-B28				
New BD62221MUV	2	8.0 to 28.0	2.0			0.55		VQFN032V5050

40V Max H-Bridge Drivers

Part No.	ch	Supply Voltage (V)	Output Current (A)	Output Modes	Output ON Resistance (Upper + Lower) (Ω Typ)	Operating Temperature ($^{\circ}$ C)	Package	Automotive Grade AEC-Q100
BD16950EFV-C	1	5.5 to 40.0	—	Available to select High, Low or Hi-Z Output by each Output terminal.	—	-40 to +125	HTSSOP-B24	YES
New BD16939AEFV-C	3 (Half 6ch)	6.3 to 32.0	1.0	Available to select High, Low or Hi-Z Output by each Output terminal.	1.35	-40 to +125	HTSSOP-B28	YES
New BD16938AEFV-C	4 (Half 8ch)	6.3 to 32.0	1.0	Available to select High, Low or Hi-Z Output by each Output terminal.	1.4	-40 to +125	HTSSOP-B28	YES
BD16912EFV-C	1	6.0 to 18.0	3.0	Forward/Reverse/Standby/Brake	0.36	-40 to +125	HTSSOP-B20	YES

50V Max H-Bridge Drivers

Part No.	ch	Supply Voltage (V)	Output Current (A)	Input Threshold Voltage (V)		Output ON Resistance (Ω Typ)	Output Modes	Package
				H Level	L Level			
BD63130AFM	1	8.0 to 46.2	3.0	2.0 or more	0.8 or less	0.55	Forward/Reverse/Standby (Idle)/Brake	HSOP-M36
BD63150AFM			5.0			0.3		HSOP-M36

H-Bridge Driver High-Current

Part No.	ch	Supply Voltage (V)	Output Current (A)	Input Threshold Voltage (V)		Output ON Resistance (Ω Typ)	Output Modes	Package
				H Level	L Level			
BD62321HFP	1	6.0 to 32.0	3.0	2.0 or more	0.8 or less	1.0	Forward/Reverse/Standby (Idle)/Brake	HRP7

H-Bridge Drivers High-Speed series								
Part No.	ch	Supply Voltage (V)	Output Current (A)	Input Threshold Voltage (V)		Output ON Resistance (Ω Typ)	Output Modes	Package
				H Level	L Level			
BD6736FV	1	2.0 to 9.0	1.0 peak 3.2	2.0 or more	0.7 or less	0.35	Forward/Reverse/ Standby (Idle)/ Brake	SSOP-B20
BD6376GUL	1	2.0 to 9.0	1.0	2.0 or more	0.7 or less	0.45		VCSP50L1
BD65494MUV	1	2.0 to 9.0	1.0 peak 2.5	2.0 or more	0.7 or less	0.55		VQFN016V3030
BD63576NUX	1	2.0 to 10.0	1.2 peak 3.2	$V_{CC} \times 0.7$ or more	$V_{CC} \times 0.3$ or less	0.55		VSON008X2020
BD65491FV	1	1.8 to 16.0	1.2 Peak 4	1.45 or more	0.5 or less	0.35		SSOP-B16
BD65496MUV	1	1.8 to 16.0	1.2 peak 5	1.45 or more	0.5 or less	0.35		VQFN024V4040
BD63573NUV	1	2.0 to 16.0	1.2 peak 3.2	1.45 or more	0.5 or less	0.38		VSON010V3030
BD6735FV	2	2.0 to 8.0	1.0	2.0 or more	0.7 or less	1.0		SSOP-B20
BD63572MUV	2	2.0 to 9.0	1.0 peak 2.5	1.85 or more	0.9 or less	0.4		VQFN20PV3535
BD63565EFV	2	1.8 to 16.0	1.0	1.45 or more	0.5 or less	0.9		HTSSOP-B20
BD65492MUV	2	1.8 to 16.0	1.0	1.45 or more	0.5 or less	0.9		VQFN024V4040
1.0A Reversible Motor Drivers (Single Motor)								
Part No.	Supply Voltage (V)	Output Current (A)	Input Threshold Voltage (V)		Output Saturation Voltage (V Typ)	Output Operation Modes	Package	
			H Level	L Level				
BA6287F	4.5 to 15.0	1.0	2.0 or more	0.8 or less	1 ($I_o=0.2A$)	Forward/Reverse/ Idle/Brake	SOP8	
BA6285FS	4.5 to 15.0	1.0	2.0 or more	0.8 or less	1 ($I_o=0.2A$)		SSOP-A16	
BA6285AFP-Y	4.5 to 24.0	1.0	2.0 or more	0.8 or less	1 ($I_o=0.2A$)		HSOP25	
BA6920FP-Y	6.5 to 34.0	1.0	3.0 or more	0.8 or less	2.2 ($I_o=0.02A$)		HSOP25	
2.0A or More Reversible Motor Driver (Single Motor)								
BA6219BFP-Y	8 to 18	2.2	3.0 or more	1.0 or less	2.4 ($I_o=0.4A$)	Forward/Reverse/ Idle/Brake	HSOP25	
1.0A or More Reversible Motor Driver (2 Motors)								
BA6247FP-Y	8 to 18	1.0	3.5 or more	1.0 or less	2.4 ($I_o=0.5A$)	Forward/Reverse/ Brake	HSOP25	

Stepper Motor Drivers

High Performance, High Reliability 36V Stepper Motor Drivers For PCs, MFPs, Industrial equipments etc.

BD63730EFV																		
BD6387EFV																		
BD6385EFV																		
BD6383EFV																		
BD6389FM																		
BD68720EFV																		
BD68715EFV																		
BD68710EFV																		
BD63725BEFV																		
BD63720AEFV																		
BD63715AEFV																		
BD63710AEFV																		
BD63910MUV																		
BD63920MUV																		
BD63716AMWV																		
BD63740FM																		

*1 BD6387EFV, BD6385EFV, BD6383EFV and BD6389FM are function-compatible.
 *2 BD6387EFV, BD6385EFV and BD6383EFV are all pin-compatible.
 *3 BD68720EFV, BD68715EFV and BD68710EFV are function-compatible.
 *4 BD68720EFV, BD68715EFV and BD68710EFV are all pin-compatible.
 *5 BD63725BEFV, BD63720AEFV, BD63715AEFV and BD63710AEFV are function-compatible.
 *6 BD63725BEFV, BD63720AEFV, BD63715AEFV and BD63710AEFV are all pin-compatible.

































































































































































Part No.	Supply Voltage (V)	Output Current (A)	Circuit Current (mA)	Input Threshold Voltage (V)		Output ON Resistance (Ω)	Package
	V _{CC}			High Level	Low Level		
BD63730EFV	19 to 28	3.0	2.0	2.0	0.8	0.4	HTSSOP-B54
BD6387EFV	10 to 28	2.0	4.5	2.0	0.8	0.8	HTSSOP-B40
BD6385EFV	10 to 28	1.5	4.5	2.0	0.8	1.0	HTSSOP-B40
BD6383EFV	10 to 28	1.0	4.5	2.0	0.8	1.5	HTSSOP-B40
BD6389FM	10 to 28	2.2	4.5	2.0	0.8	0.7	HSOP-M36
BD68720EFV	19 to 28	2.0	2.0	2.0	0.8	0.65	HTSSOP-B28
BD68715EFV	19 to 28	1.5	2.0	2.0	0.8	0.95	HTSSOP-B28
BD68710EFV	19 to 28	1.0	2.0	2.0	0.8	1.2	HTSSOP-B28
BD63725BEFV	8 to 28	2.5	2.0	2.0	0.8	0.35	HTSSOP-B28
BD63720AEFV	19 to 28	2.0	2.0	2.0	0.8	0.65	HTSSOP-B28
BD63715AEFV	19 to 28	1.5	2.0	2.0	0.8	0.95	HTSSOP-B28
BD63710AEFV	19 to 28	1.0	2.0	2.0	0.8	1.2	HTSSOP-B28
BD63910MUV	8 to 28	1.0	2.5	2.0	0.8	1.3	VQFN028V5050
BD63920MUV	8 to 28	2.0	2.5	2.0	0.8	0.49	VQFN028V5050
BD63716AMWV	8 to 28	1.5	2.0	2.0	0.8	0.85	UQFN040V5050
BD63740FM	8 to 28	4.0	2.0	2.0	0.8	0.28	HSOP-M36

New
New

Symbol Key: Control signal input CLK-IN type, Control signal input PARALLEL-IN type, Iomax 0.8A, Iomax 1.0A, Iomax 1.2A, Iomax 1.5A, Iomax 2.0A, Iomax 2.2A, Iomax 2.5A, Iomax 3.0A, Iomax 4.0A, Maximum output current, I/2STEP, I/4STEP, I/8STEP, Number of step, Constant current PWM, Switch able between forward and reverse, SLOW/FAST/MIX DECAAY switching function, Thin package, Small power package, High power package, Function-compatible, Easy replacement pin compatible with competitor's

Motor/Actuator Drivers

Standard 36V Stepping Motor Drivers

BD6395FP	  	          
BD6393FP	  	          
BD68620EFV	  	         
BD68610EFV	  	         
BD6290EFV	  	          
BD63960EFV	  	           
BD63940EFV	  	           
BD63620AEFV	   	          
BD63610AEFV	   	          
BD63801EFV	   	           
BD60223FP	   	       
BD63888AEKV	   	      
BD68888AEKV	  	      
BD63888MUV	   	      

- *1 The BD6395FP, BD6393FP, and BD6290EFV are all function-compatible.
- *2 The BD6395FP and BD6393FP are all pin-compatible.
- *3 The BD63620AEFV, BD63610AEFV, and BD63801EFV are all function-compatible.
- *4 The BD63960EFV and BD63940EFV are all pin-compatible.
- *5 The BD68620EFV and BD68610EFV are all function-compatible.
- *6 The BD63960EFV and BD63940EFV are all function-compatible.

Part No.	Supply Voltage (V)	Output Current (A)	Circuit Current (mA)	Input Threshold Voltage (V)		Output ON Resistance (Ω)	Package
	V _{CC}			High Level	Low Level		
BD6395FP	16 to 28	1.5	3.0	2.0	0.8	1.2	HSOP25
BD6393FP	16 to 28	1.2	3.0	2.0	0.8	1.5	HSOP25
BD68620EFV	19 to 28	2.0	1.3	2.0	0.8	0.95	HTSSOP-B24
BD68610EFV	19 to 28	1.0	1.3	2.0	0.8	1.8	HTSSOP-B20
BD6290EFV	19 to 28	0.8	3.0	2.0	0.8	2.8	HTSSOP-B24
BD63960EFV	19 to 28	1.5	2.7	2.0	0.8	1.1	HTSSOP-B24
BD63940EFV	19 to 28	1.2	2.7	2.0	0.8	1.4	HTSSOP-B24
BD63620AEFV	19 to 28	2.0	1.3	2.0	0.8	0.95	HTSSOP-B24
BD63610AEFV	19 to 28	1.8	1.3	2.0	0.8	1.8	HTSSOP-B20
BD63801EFV	19 to 28	0.8	2.7	2.0	0.8	2.8	HTSSOP-B24
BD60223FP	8 to 28	1.5	2.5	2.0	0.8	0.55	HSOP25
BD63888AEKV	8 to 28	1.5	5.0	2.0	0.8	1.0	HTQFP48V
BD68888AEKV	8 to 28	1.5	5.0	2.0	0.8	1.0	HTQFP48V
BD63888MUV	8 to 28	1.2	5.0	2.0	0.8	1.0	VQFN036V6060

μ-step 36V Stepper Motor Drivers

BD63860EFV	CLK IN	10max. 2.5A	10STEP	Constant Current PWM	FWRW	DECAY SW	Thin PKG	SMALL SIZE POWER PLUS	ONE POWER	T.S.D.	O.C.P.	UV	OVLO	
BD63847EFV	CLK IN	10max. 2.0A	10STEP	Constant Current PWM	FWRW	DECAY SW	Thin PKG	SMALL SIZE POWER PLUS	FUNCTION MODE	ONE POWER	T.S.D.	O.C.P.	UV	OVLO
BD63843EFV	CLK IN	10max. 1.0A	10STEP	Constant Current PWM	FWRW	DECAY SW	Thin PKG	SMALL SIZE POWER PLUS	FUNCTION MODE	ONE POWER	T.S.D.	O.C.P.	UV	OVLO
BD63510AEFV	CLK IN	10max. 1.0A	10STEP	Constant Current PWM	FWRW	DECAY SW	Thin PKG	SMALL SIZE POWER PLUS	FUNCTION MODE	ONE POWER	T.S.D.	O.C.P.	UV	OVLO
BD63511EFV	CLK IN	10max. 1.0A	10STEP	Constant Current PWM	FWRW	DECAY SW	Thin PKG	SMALL SIZE POWER PLUS	FUNCTION MODE	ONE POWER	T.S.D.	O.C.P.	UV	OVLO
BD63520AEFV	CLK IN	10max. 2.0A	10STEP	Constant Current PWM	FWRW	DECAY SW	Thin PKG	SMALL SIZE POWER PLUS	FUNCTION MODE	ONE POWER	T.S.D.	O.C.P.	UV	OVLO
BD63521EFV	CLK IN	10max. 2.0A	10STEP	Constant Current PWM	FWRW	DECAY SW	Thin PKG	SMALL SIZE POWER PLUS	FUNCTION MODE	ONE POWER	T.S.D.	O.C.P.	UV	OVLO
BD63524AEFV	CLK IN	10max. 2.5A	10STEP	Constant Current PWM	FWRW	DECAY SW	Thin PKG	SMALL SIZE POWER PLUS	FUNCTION MODE	ONE POWER	T.S.D.	O.C.P.	UV	OVLO
BD63525AEFV	CLK IN	10max. 2.5A	10STEP	Constant Current PWM	FWRW	DECAY SW	Thin PKG	SMALL SIZE POWER PLUS	FUNCTION MODE	ONE POWER	T.S.D.	O.C.P.	UV	OVLO
BD63740FM	CLK IN	10max. 4.0A	10STEP	Constant Current PWM	FWRW	DECAY SW	Thin PKG	SMALL SIZE POWER PLUS	FUNCTION MODE	ONE POWER	T.S.D.	O.C.P.	UV	OVLO

*1 The BD63847EFV and BD63843EFV are all function-compatible.
 *2 The BD63510AEFV, BD63520AEFV and BD63525AEFV are all function-compatible.
 *3 The BD63511AEFV and BD63521AEFV are all function-compatible.

Part No.	Supply Voltage (V)		Output Current (A)	Circuit Current (mA)	Input Threshold Voltage (V)		Output ON Resistance (Ω)	Package
	V _{CC}	V _M			High Level	Low Level		
BD63860EFV	16 to 28		2.5	4.0	2.0	0.8	0.8	HTSSOP-B28
BD63847EFV	19 to 28		2.0	2.5	2.0	0.8	0.85	HTSSOP-B28
BD63843EFV	19 to 28		1.0	2.5	2.0	0.8	1.9	HTSSOP-B28
BD63510AEFV	8 to 28		1.0	2.5	2.0	0.8	1.75	HTSSOP-B28
BD63511EFV	8 to 28		1.0	2.5	2.0	0.8	1.75	HTSSOP-B28
BD63520AEFV	8 to 28		2.0	2.5	2.0	0.8	0.65	HTSSOP-B28
BD63521EFV	8 to 28		2.0	2.5	2.0	0.8	0.65	HTSSOP-B28
BD63524AEFV	8 to 28		2.5	2.5	2.0	0.8	0.35	HTSSOP-B28
BD63525AEFV	8 to 28		2.5	2.5	2.0	0.8	0.35	HTSSOP-B28
BD63740FM	8 to 28		4.0	2.0	2.0	0.8	0.28	HSOP-M36

Low Voltage Stepper Motor Drivers For Mini and Handheld Printers

BD6382EFV	PARA IN	10max. 0.8A	10STEP	Constant Current PWM	Thin PKG	SMALL SIZE POWER PLUS	T.S.D.	O.C.P.	UV	OVLO	4KV	SPIN	Short Protection
BD6381EFV	PARA IN	10max. 1.2A	10STEP	Constant Current PWM	Thin PKG	SMALL SIZE POWER PLUS	T.S.D.	O.C.P.	UV	OVLO	4KV	SPIN	Short Protection
BD6380EFV	PARA IN	10max. 0.8A	10STEP	Constant Current PWM	Thin PKG	SMALL SIZE POWER PLUS	T.S.D.	O.C.P.	UV	OVLO	4KV	SPIN	Short Protection

Part No.	Supply Voltage (V)		Output Current (A)	Circuit Current (mA)	Input Threshold Voltage (V)		Output ON Resistance (Ω)	Package
	V _{CC}	V _M			High Level	Low Level		
BD6382EFV	3.0 to 5.5	5.5 to 13.5	0.8	1.6	2.0	0.8	1.2	HTSSOP-B24
BD6381EFV	2.5 to 5.5	6.0 to 13.5	1.2	1.6	2.0	0.8	1.0	HTSSOP-B24
BD6380EFV	2.5 to 5.5	4.0 to 13.5	0.8	1.6	2.0	0.8	1.2	HTSSOP-B24

40V Stepper Motor Drivers

BD63401EFV	PARA IN	10max. 1.35A	10STEP	Constant Current PWM	Thin PKG	SMALL SIZE POWER PLUS	ONE POWER	T.S.D.	O.C.P.	UV	OVLO	4KV
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Part No.	Supply Voltage (V)		Output Current (A)	Circuit Current (mA)	Input Threshold Voltage (V)		Output ON Resistance (Ω)	Package
	V _{CC}	V _M			High Level	Low Level		
BD63401EFV	8 to 33		1.35	2.0	2.0	0.8	1.0	HTSSOP-B20

45V Stepper Motor Drivers

BD6425EFV	CLK IN	10max. 1.5A	10STEP	Constant Current PWM	FWRW	DECAY SW	Thin PKG	SMALL SIZE POWER PLUS	ONE POWER	T.S.D.	O.C.P.	UV	OVLO	8KV	SPIN	Short Protection
BD6423EFV	CLK IN	10max. 1.0A	10STEP	Constant Current PWM	FWRW	DECAY SW	Thin PKG	SMALL SIZE POWER PLUS	ONE POWER	T.S.D.	O.C.P.	UV	OVLO	8KV	SPIN	Short Protection
BD6422EFV	PARA IN	10max. 1.0A	10STEP	Constant Current PWM	FWRW	DECAY SW	Thin PKG	SMALL SIZE POWER PLUS	ONE POWER	T.S.D.	O.C.P.	UV	OVLO	8KV	SPIN	Short Protection

Part No.	Supply Voltage (V)		Output Current (A)	Circuit Current (mA)	Input Threshold Voltage (V)		Output ON Resistance (Ω)	Package
	V _{CC}	V _M			High Level	Low Level		
BD6425EFV	19 to 42		1.5	2.0	2.0	0.8	1.1	HTSSOP-B28
BD6423EFV	19 to 42		1.0	2.0	2.0	0.8	2.0	HTSSOP-B24
BD6422EFV	19 to 42		1.0	2.0	2.0	0.8	2.0	HTSSOP-B24

Symbol Key	CLK IN Control signal input CLK-IN type	SERVO Built-in servo circuit	PARA IN Control signal input PARALLEL-IN type	10max. 0.8A	10max. 1.0A	10max. 1.2A	10max. 1.35A	10max. 1.5A	10max. 2.0A	10max. 2.5A	10max. 4.0A	Maximum output current	36V MAX	40V MAX	60V MAX	100V MAX	Rated Voltage
120° SLOPE PWM	120° PWM	180° PWM	Output power system	10STEP	10STEP	10STEP	10STEP	Number of step	Constant-current PWM	Thin package	FWRW	Switch able between forward and reverse	SMALL SIZE POWER PLUS	Small power package	High Power Package	High power package	
DECAY SW	SLOW/FAST/MIX DECADE switching function	SPIN	Easy replacement pin compatible with competitor's	External FET	External FET	External FET	External FET	External output FET H-side: Nch/L-side: Nch	External output FET H-side: Pch/L-side: Nch	DMOS	DMOS output	FG AMP	Built-in FG Amplifier				

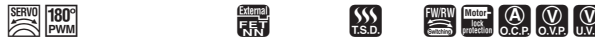
3-Phase Brushless Motor Drivers

3-Phase Brushless Motor Pre-Drivers with Speed Control

BD6762FV



BD63030EKV-C



Part No.	Max Voltage (V)	Supply Voltage (V)	Operating Temperature (°C)	Circuit Current (mA)	Input Threshold Voltage (V)		External FET Drive Voltage		PWM Frequency (kHz)	Package	
					H Level	L Level	Upper (V)	Lower (V)			
BD6762FV	36	16 to 28	-25 to +75	17	2.2	0.8	V _{CC} +6.8	10.8	16	HTSSOP-B24	
Part No.	Max Voltage (V)	Supply Voltage (V)	Operating Temperature (°C)	Circuit Current (mA)	Input Threshold Voltage (V)		External FET Drive Voltage V _{CC} =6.5V		PWM Frequency (kHz)	Package	Automotive Grade AEC-Q100
					H Level	L Level	Upper (V)	Lower (V)			
BD63030EKV-C	50	6.5 to 18.0	-40 to +125	18	3.8	1.9	2×V _{CC} -1.0	5.5	20	HTQFP64AV	YES

3-Phase Brushless Motor Driver with Speed Control

BD67929EFV



Part No.	Max Voltage (V)	Supply Voltage (V)	Operating Temperature (°C)	Circuit Current (mA)	Input Threshold Voltage (V)		External FET Drive Voltage (V)		PWM Frequency (kHz)	Package
					H Level	L Level	Upper	Lower		
BD67929EFV	36	19 to 28	-25 to +85	4.0	3.0	1.5	-	-	200	HTSSOP-B28

3-Phase Brushless Motor Pre-Drivers

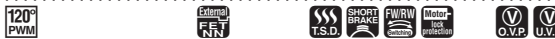
BD6761FS



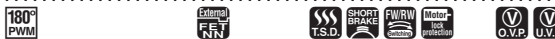
BD63001AMUV



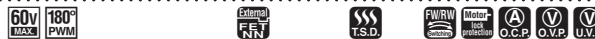
BD63002AMUV



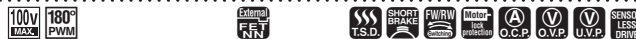
BM62300MUV



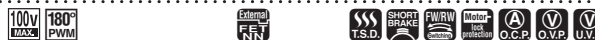
BD16805FV-M



BM64070MUV



BM64300MUV



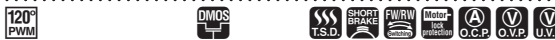
Part No.	Max Voltage (V)	Supply Voltage (V)	Operating Temperature (°C)	Circuit Current (mA)	Input Threshold Voltage (V)		External FET Drive Voltage (V)		PWM Frequency (kHz)	Package	Automotive Grade AEC-Q100
					H Level	L Level	Upper	Lower			
BD6761FS	36	16 to 28	-35 to +75	15.0	2.2	0.8	V _{CC} +6	10.5	15	SSOP-A32	-
BD63001AMUV	33	4.5 to 5.5/6 to 28	-40 to +85	2.5	2.0	0.8	V _{CC} -0.2	9.5	20	VQFN024V4040	-
BD63002AMUV	33	8.0 to 26.4	-40 to +85	2.5	2.0	0.8	V _{CC} +7	5.0	External IN	VQFN028V5050	-
BM62300MUV	33	8 to 28	-40 to +105	14	V _{REG50} -1.2	0.8	V _G -0.1	0.1	40	VQFN032V5050	-
BD16805FV-M	60	8 to 18	-40 to +110	15.2	3.0	1.0	2×V _{CC} -0.5	8.0	25	SSOP-B40	YES
New BM64070MUV	100	28 to 77	-40 to +105	6.4	2.8	0.8	V _G -0.1	0.1	90	VQFN040V6060	-
New BM64300MUV	100	28 to 63	-40 to +105	13	V _{REG50} -1.2	0.8	V _G -0.1	0.1	40	VQFN040V6060	-

3-Phase Brushless Motor Drivers

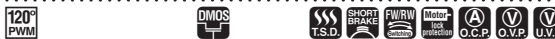
BD63005AMUV



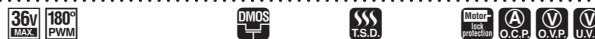
BD63006MUV



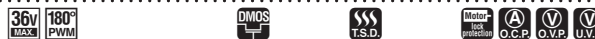
BD63007MUV



BD63015EFV



BD63035EFV-M



Part No.	Max Voltage (V)	Supply Voltage (V)	Output Current (A)	Operating Temperature (°C)	Circuit Current (mA)	Input Threshold Voltage (V)		Output ON Resistance (Ω)	PWM Frequency (kHz)	Package	Automotive Grade AEC-Q100
						H Level	L Level				
BD63005AMUV	33	10 to 28	2.0	-25 to +85	4.4	2.0	0.8	0.17	External IN	VQFN040V6060	-
BD63006MUV	33	8 to 28	1.5	-40 to +85	4.4	2.0	0.8	0.8	External IN	VQFN024V4040	-
BD63007MUV	33	8 to 28	3.0	-25 to +85	4.4	2.0	0.8	0.17	External IN	VQFN040V6060	-
BD63015EFV	36	8 to 28	1.5	-40 to +105	8.0	2.0	0.8	0.6	External IN	HTSSOP-B20	-
BD63035EFV-M	36	8 to 28	1.5	-40 to +105	8.0	2.0	0.8	0.6	22.7	HTSSOP-B20	YES

Built-in hysteresis Amplifier	1 power supply system due to built-in regulator	Built-in thermal shut-down circuit	Built-in short brake	High RPM-compatible	No-CLOCK input detection function	Built-in motor lock-up protection circuit
Built-in over current protection circuit	Built-in over voltage protection circuit	Built-in under voltage protection circuit	Function-compatible	Built-in under voltage lock out circuit	Built-in over voltage lock out circuit	4kV 8kV ESD resistance
Adjacent pin short protection	Standby current 0µA	-40°C to +85°C Operating temperature range	Feed back speed control			

Fan Motor Drivers

5V Single-Phase Full-wave Fan Motor Drivers

BH6766FVM					
BD6965NUX					
BU6909AGFT					
BU69090NUX					

Part No.	Supply Voltage (V)	I _o Max (mA)	Power Transistor	Output Saturation Voltage (V)	Speed Control	Hall Bias Voltage (V)	Lock Time Ratio	Package
BH6766FVM	2.0 to 6.0	630	CMOS	Upper and Lower 0.6 (I _o =250mA)	—	1.3	—	MSOP8
BD6965NUX	2.0 to 5.5	800	CMOS	Upper and Lower 0.4 (I _o =250mA)	Direct PWM	—	1 : 10	VSON008X2030
BU6909AGFT	1.8 to 5.5	800	CMOS	Upper and Lower 0.16 (I _o =200mA)	Direct PWM	Include Hall sensor	1 : 10	TSSOF6
BU69090NUX	1.8 to 5.5	800	CMOS	Upper and Lower 0.16 (I _o =200mA)	Direct PWM	Include Hall sensor	1 : 10	VSON008X2030

Standard Single-Phase Full-wave Fan Motor Drivers

BD6981FVM						
BD6982FVM						
BD6967FVM						
BD6968FVM						
BD6962FVM						
BD6964FVM						
BD6961F						
BD6964F						
BD69830FV						



























































































Part No.	Supply Voltage (V)	I _o Max (mA)	Power Transistor	Output Saturation Voltage (V)	Speed Control	Hall Bias Voltage (V)	Lock Time Ratio	Package
BD6981FVM	2.8 to 16.0	800	DMOS	Upper and Lower 0.45 (I _o =200mA)	—	1.2	1 : 6	MSOP8
BD6982FVM	2.8 to 16.0	800	DMOS	Upper and Lower 0.45 (I _o =200mA)	—	1.2	1 : 6	MSOP8
BD6967FVM	3.3 to 14.0	800	DMOS	Upper and Lower 0.45 (I _o =200mA)	DC/Direct PWM	1.2	1 : 10	MSOP10
BD6968FVM	3.3 to 14.0	800	DMOS	Upper and Lower 0.45 (I _o =200mA)	DC/Direct PWM	1.2	1 : 10	MSOP10
BD6962FVM	3.3 to 14.0	800	DMOS	Upper and Lower 0.4 (I _o =300mA)	Direct PWM	—	1 : 10	MSOP8
BD6964FVM	3.3 to 14.0	800	DMOS	Upper and Lower 0.4 (I _o =300mA)	Direct PWM	—	1 : 10	MSOP8
BD6961F	3.3 to 14.0	1,000	DMOS	Upper and Lower 0.4 (I _o =300mA)	Direct PWM	—	1 : 10	SOP8
BD6964F	3.3 to 14.0	1,000	DMOS	Upper and Lower 0.4 (I _o =300mA)	Direct PWM	—	1 : 10	SOP8
BD69830FV	6.0 to 28.0	900	DMOS	Upper and Lower 0.6 (I _o =200mA)	Direct PWM	1.2	1 : 30	SSOP-B14

Motor/Actuator Drivers

Symbol Key



- Power supply compatible
- This is an indication of the amount of current that can flow into a motor running at fixed speed.
- This is an indication of the amount of current that can flow into a motor running at fixed speed.
- Include Hall sensor
- Small mount type
- RPM pulse signal output
- Drive method with hall sensor for detecting the rotor position
- One hall sensor drive
- Three hall sensor drive
- Soft switching
- Output power system
- Built-in hall element power supply voltage
- Rotational speed control possible

Multifunction Single-Phase Full-wave Fan Motor Drivers

BD6971FV		      
BD6994FV		        
BD6995FV		       
BD61243FV		      
BD61245EFV		       
BD61248NUX	 	    
BD69730FV		       
BD69740FV		       
BD61250MUV	 	        
BD61251FV		        


























































Part No.	Supply Voltage (V)	I _o Max (mA)	Power Transistor	Output Saturation Voltage (V)	Speed Control	Hall Bias Voltage (V)	Lock Time Ratio	Package
BD6971FV	3.5 to 17.0	1,000	DMOS	Upper and Lower 0.6 (I _o =200mA)	DC/PWM	1.3	1 : 10	SSOP-B14
BD6994FV	4.5 to 17.0	1,200	DMOS	Upper and Lower 0.6 (I _o =400mA)	DC/PWM	1.25	1 : 10	SSOP-B16
BD6995FV	4.3 to 17.0	1,200	DMOS	Upper and Lower 0.6 (I _o =400mA)	DC	1.25	1 : 10	SSOP-B16
BD61243FV	5.5 to 16.0	1,200	DMOS	Upper and Lower 0.4 (I _o =400mA)	DC/PWM	1.25	1 : 10	SSOP-B14
BD61245EFV	4.0 to 16.0	1,800	DMOS	Upper and Lower 0.2 (I _o =400mA)	DC/PWM	—	1 : 10	HTSSOP-B16
New BD61248NUX	4.5 to 16.0	1,200	DMOS	Upper and Lower 0.2 (I _o =200mA)	PWM	—	1 : 10	VSON010X3030
BD69730FV	4.3 to 17.0	10	Pre-Driver	—	DC/PWM	1.26	1 : 20	SSOP-B16
BD69740FV	4.3 to 17.0	10	Pre-Driver	—	DC/PWM	1.26	1 : 20	SSOP-B16
BD61250MUV	4.5 to 36.0	10	Pre-Driver	—	DC/PWM	—	1 : 20	VQFN024V4040
BD61251FV	4.5 to 16.0	10	Pre-Driver	—	PWM	—	1 : 20	SSOP-B16

2-Phase Half-wave Fan Motor Drivers









BD6701F		    
BA6406F		 

Part No.	Supply Voltage (V)	I _o Max (mA)	Power Transistor	Output Saturation Voltage (V)	Speed Control	Hall Bias Voltage (V)	Zener Diode Clamp Voltage (V)	Output Clamp Voltage (V)	Lock Time Ratio	Package
BD6701F	6.0 to 28.0	800	DMOS	0.3 (I _o =200mA)	—	—	—	54	1 : 10	SOP8
BA6406F	4.0 to 28.0	70	Pre-Driver	—	—	—	—	—	1 : 4.5	SOP8

3-Phase Full-wave Fan Motor Drivers

BD67173NUX	 	     
BD6326ANUX	 	     
BD63282EFV	 	     
BD63242EFV	 	     
BD63242FV	 	     
BD63241FV	 	     
BD63251MUV	 	      

Part No.	Supply Voltage (V)	I _o Max (mA)	Power Transistor	Output Saturation Voltage (V)	Speed Control	Hall Bias Voltage (V)	Lock Time Ratio	Package
BD67173NUX	2.2 to 5.5	700	CMOS	Upper and Lower 0.25 (I _o =250mA)	PWM	—	1 : 5	VSON010X3030
BD6326ANUX	2.2 to 5.5	700	CMOS	Upper and Lower 0.25 (I _o =250mA)	PWM	—	1 : 5	VSON010X3030
BD63282EFV	5.0 to 16.0	1,000	DMOS	Upper and Lower 0.3 (I _o =300mA)	DC/PWM	—	1 : 2, 1 : 5, 1 : 10	HTSSOP-B20
BD63242EFV	5.0 to 16.0	1,000	DMOS	Upper and Lower 0.3 (I _o =300mA)	DC/PWM	1.25	Setting of SOS-C-pin	HTSSOP-B16
BD63242FV	5.0 to 16.0	1,000	DMOS	Upper and Lower 0.24 (I _o =300mA)	PWM	1.25	1 : 5	SSOP-B16
BD63241FV	5.0 to 16.0	1,000	DMOS	Upper and Lower 0.24 (I _o =300mA)	PWM	1.25	1 : 5	SSOP-B16
BD63251MUV	5.5 to 15.0	10	Pre-Drive	—	PWM	1.5	1 : 10	VQFN024V4040

-  External capacitor for detecting motor lock not necessary
-  Motor lock detection function
-  Lock alarm signal output
-  Minimum rotational speed setting
-  Motor startup possible low-duty
-  Built-in thermal shut-down circuit
-  Output current limit can be set
-  Soft start

3-Phase Brushless Fan Motor Drivers For Household Appliances

BM6241FS									
BM6242FS									
BM6243FS									
BM6244FS									
BM6245FS									
BM6246FS									
BM6247FS									
BM6248FS									
BM6249FS									

Part No.	Control	Output Device	Rated Voltage (V)	Output Current (A)	Output ON Resistance (Ω)	Diode Forward Voltage (V)	Package
BM6241FS	6 inputs	MOSFET	250	2.0	0.9	0.9	SSOP-A54_23
BM6242FS	6 inputs	MOSFET	600	1.5	2.7	1.1	SSOP-A54_23
BM6243FS	6 inputs	MOSFET	600	2.5	1.7	1.1	SSOP-A54_23
BM6244FS	120°	MOSFET	250	2.0	0.9	0.9	SSOP-A54_36A
BM6245FS	120°	MOSFET	600	1.5	2.7	1.1	SSOP-A54_36A
BM6246FS	120°	MOSFET	600	2.5	1.7	1.1	SSOP-A54_36A
BM6247FS	180° (Sinusoidal)	MOSFET	250	2.0	0.9	0.9	SSOP-A54_36A
BM6248FS	180° (Sinusoidal)	MOSFET	600	1.5	2.7	1.1	SSOP-A54_36A
BM6249FS	180° (Sinusoidal)	MOSFET	600	2.5	1.7	1.1	SSOP-A54_36A

3-Phase Brushless Fan Motor Controllers For Household Appliances

Part No.	Supply Voltage (V)	Commutation Logic	Control Voltage Input (V)	Phase Control (deg)	FG Conversion Ratio	Package
BD62017AFS	10.0 to 18.0	180° (Sinusoidal)	2.1 to 5.4	0 to +40	15 : 12	SSOP-A24
BD62018AFS	10.0 to 18.0	180° (Sinusoidal)	2.1 to 5.4	0 to +40	12 : 12	SSOP-A24

Fractional Pulse Rate Converters

Part No.	Supply Voltage (V)	Circuit Current (mA)	Input Frequency (kHz)	Conversion Ratio	Package
BU6821G	4.5 to 5.5	0.5	0.005 to 5	15 : 12	SSOP5
BU6823G	4.5 to 5.5	0.5	0.005 to 5	21 : 12	SSOP5

Driver for ODD

1ch System Motor Driver ICs Wide Application

Part No.	Power Supply (V)	Dynamic Range of Driver Output (V)	I/F Amplifire	Mute of Driver Output	Regulator for DSP (V)	Protect Circuit for Low Power Supply	Protect for Abnormal Input	Temp. Protection	Standby Circuit	Package
BD7931F	4.5 to 14.0	7.5 (V _{CC} =8V, R _L =500mA)	—	—	—	—	—	✓	✓	SOP8
BH6578FVM	4.5 to 5.5	4.5 (V _{CC} =5V, R _L =500mA)	—	—	—	—	—	✓	—	MSOP8

4ch System Motor Driver ICs Basic type for CD player

Part No.	Power Supply (V)	I/F	FOCUS TILT (ch)	TRACKING (ch)	SLED	LOADING	SPINDLE	Short Circuit Protection for Loading	Protect for Pickup	Regulator	Reset	Package	Automotive Grade AEC-Q100
BD8229EFV	4.5 to 14.0	Analog & PWM	1	1	DC Select input	DC	DC	—	—	—	1 input 1 output	HTSSOP-B24	—
BD8266EFV-M	4.5 to 10.0	Analog & PWM	1	1	DC Select input	DC	DC	—	Self off	—	—	HTSSOP-B24	YES
BD8263EFV-M	4.5 to 10.0	Analog & PWM	1	1	DC Select input	DC	DC	✓	—	—	—	HTSSOP-B28	YES

5ch System Motor Driver ICs Loading Channel Added

Part No.	Power Supply (V)	I/F	FOCUS TILT (ch)	TRACKING (ch)	SLED	LOADING	SPINDLE	Short Circuit Protection for Loading	Protect for Pickup	Regulator	Package	Automotive Grade AEC-Q100
BD8205EFV-M	6.0 to 10.0	Analog & PWM	1	1	DC	DC	DC	—	—	—	HTSSOP-B24	YES
BD8203EFV	4.5 to 14.0	Analog & PWM	1	1	DC	DC	DC	—	—	Variable voltage×1/ 5V Fixed×1	HTSSOP-B40	—

6ch to 9ch System Motor Driver ICs Basic type for DVD Player, Blu-ray

Part No.	Power Supply (V)	I/F	FOCUS TILT (ch)	TRACKING (ch)	SLED	LOADING	SPINDLE	LVDS for SA	Short Circuit Protection for Loading	Protect for Pickup	Package	Automotive Grade AEC-Q100
BD8256EFV-M	4.5 to 10.5	SPI	2	1	2ch STEPPING	DC	3-Phase Brushless	2ch	✓	Self off	HTSSOP-B54	YES

Symbol Key			Rated Voltage				Maximum output current		Built-in thermal shut-down circuit		Built-in under voltage lock out circuit		Built-in over current protection circuit		Output current limit can be set
			External capacitor for detecting motor lock not necessary				RPM pulse signal output								

System Motor Driver IC for Half Height Drives (Sensorless) Space Saving Type										
Part No.	Supply Voltage (V)	ch	Output System	Output (Ω)	Output Gain	Under Voltage Protection	Overvoltage Protection	Input Abnormality Protection	Temperature Protection	Package
BD7763EFV	4.3 to 5.5	1 to 3	PWM	1.5	17.5dB	✓	-	✓	✓	HTSSOP-B54
		4, 5	PWM	1.3	17.5dB					
	10.8 to 13.2	6, 7	PWM	2.2	1.15A/V					
		8	PWM	1.0	1.15A/V					
		9	PWM	1.5	-					

System Motor Driver ICs for Slim Drives (3 Sensors) Basic Type										
BH5510KVT	4.0 to 5.5	1 to 3	PWM	1.3	14dB	✓	✓	✓	✓	TQFP48V
		4, 5	PWM	1.5	14dB					
		6	PWM	0.6	1A/V or 0.2A/V					

Drivers for Printer

3-Phase Brushless Motor Driver for Polygonal Mirrors For LBP, PPC										
Part No.	Power Supply (V)	Output Current (A)	Circuit Current (mA)	Input Threshold Voltage (V)		Current Limit Detect Voltage (V)	Output ON Resistance (Ω)	Circuit Current When Motor Stop (mA)	PWM Frequency (kHz)	Package
				H Level	L Level					
BD67929EFV	19.0 to 28.0	2.5	4.0	3.0	1.5	0.5	1.35 (I _{CC} =1.0A)	1.0	200	HTSSOP-B28

Motor Drivers with Brush for Printers									
Part No.	Supply Voltage (V)	Output Current (A)	Output Current Peak (A)	Circuit Current (mA)	Input Threshold Voltage (V)		Output ON Resistance (Ω)	Package	
					H Level	L Level			
BD62210AEFV	8.0 to 28.0	1.0	1.5	2.5	2.0	0.8	1.9	HTSSOP-B28	
BD62220AEFV	8.0 to 28.0	2.0	2.8	2.5	2.0	0.8	0.65	HTSSOP-B28	
BD63130AFM	8.0 to 46.2	3.0	5.0	2.5	2.0	0.8	0.55	HSOP-M36	
BD63150AFM	8.0 to 46.2	5.0	6.0	2.5	2.0	0.8	0.3	HSOP-M36	

Bipolar Stepper Motor Drivers for Paper Feed/Carriage For LBP, PPC, Scanner, Photo, Printer, FAX, IJP Please Refer to Page A70 to A72 General Purpose ICs for The Other Stepper Motor Driver Lineup										
Part No.	Power Supply (V)	Output Current (A)	Circuit Current (mA)	Input Threshold Voltage (V)		Output ON Resistance (Ω)	Package			
				High Level	Low Level					
BD63801EFV	19.0 to 28.0	0.8	2.7	2.0	0.8	2.8	HTSSOP-B24			
BD68715EFV	19.0 to 28.0	1.5	2.0	2.0	0.8	0.95	HTSSOP-B28			
BD63715AEFV	19.0 to 28.0	1.5	2.0	2.0	0.8	0.95	HTSSOP-B28			

3-Phase Brushless Motor Pre-Drivers for Paper Feed For LBP, PPC										
Part No.	Max Voltage (V)	Power Supply (V)	Operating Temperature (°C)	Circuit Current (mA)	Input Threshold Voltage (V)		External Threshold Voltage (V)		PWM Frequency (kHz)	Package
					H Level	L Level	Upper	Lower		
BD6761FS	36	16.0 to 28.0	-35 to +75	15.0	2.2	0.8	V _{CC} +6	10.5	15	SSOP-A32
BD6762FV	36	16.0 to 28.0	-25 to +75	17.0	2.2	0.8	V _{CC} +6.8	10.8	16	SSOP-B40

3-Phase Brushless Motor Driver for Polygonal Mirrors For LBP, PPC: Current limit value is calculated by dividing current limit voltage by RNF resistance which is to detect the output current.
 Motor Drivers with Brush for Printers: The BD62210AEFV and BD62220AEFV are all pin-compatible.

Driver for Camera

5ch System Lens Driver for Cameras										
Part No.	Supply Voltage (V)	Driver Output Max Current (A)	Drive Method Examples of Actuator (Driven Motor, Driving System, and Output ON Resistance (Ω))				Input I/F	Reference Voltage Output for Output Setting Current (V)	Package (mm)	
			AF	Zoom	Iris	Shutter				
BD6758KN	2.5 to 5.5	0.8	e.g. STM (1, 2ch) FULL ON 1.2	DCM (3ch) FULL ON 1.2	DCM or VCM (4ch) FULL ON 1.2	VCM (5ch) Constant current 1.0	Parallel	1.2 (±3%)	VQFN36 6.2x6.2, H=Max 0.95	

6ch System Lens Drivers for Cameras										
Part No.	Supply Voltage (V)	Driver Output Max Current (A)	Drive Method Examples of Actuator (Driven Motor, Driving System, and Output ON Resistance (Ω))				Input I/F	Reference Voltage Output for Output Setting Current (V)	Package (mm)	
			AF	Zoom	Iris	Shutter				
BD6373GW	2.5 to 5.5	0.8	e.g. STM (1, 2ch) FULL ON 1.2	STM (3, 4ch) FULL ON 1.2	DCM or VCM (5ch) FULL ON 1.2	VCM (6ch) FULL ON 1.2	Parallel	-	UCSP75M2 2.6x2.6, H=Max 0.85	
BD6753KV	4.5 to 10.5 (1, 2ch) 2.0 to 10.5 (3 to 6ch)	0.8	e.g. STM (1, 2ch) FULL ON 1.2	STM (3, 4ch) FULL ON 1.2	DCM or VCM (5ch) PWM (±3%) 1.2	VCM (6ch) PWM (±3%) 1.2	Parallel + Serial	0.9 (±10%)	VQFP48C 9.0x9.0, H=Max 1.60	

Single and Dual-Channel Lens Drivers for SLRs (Single Lens Reflex)													
Part No.	ch	Supply Voltage (V)	Driver Output Max Current (A)	Drive Method Examples of Actuator (Driven Motor, Driving System, and Output ON Resistance (Ω))					Turn on Time	Turn off Time (ns)	Control Frequency (kHz) (Max)	Package (mm)	
				Cleaner	AF	Zoom	Iris	Shutter					
BD65492MUV	2	1.8 to 16.0	1.0	e.g. —	STM (2ch) FULL ON 0.9	—	—	—	200ns (Including 80ns to Prevent from overlap current.)	80	500	VQFN024V4040 4.0x4.0, H=Max 1.0	
BD6735FV	2	2.0 to 8.0	1.0	e.g. —	—	—	STM (2ch) FULL ON 1.0	—	300ns (Including 90ns to Prevent from overlap current.)	100	100	SSOP-B20 6.5x6.4, H=Max 1.25	
BD6376GUL	1	2.0 to 9.0	1.0	e.g. —	—	DCM (1ch) FULL ON 0.45	—	—	200ns (Including 80ns to Prevent from overlap current.)	60	200	VCSP50L1 1.6x1.6, H=Max 0.55	
BD65491FV	1	1.8 to 16.0	1.2 Peak 4.0	e.g. —	—	—	—	Plunger (1ch) FULL ON 0.35	150ns (Including 80ns to Prevent from overlap current.)	50	500	SSOP-B16 6.5x5.0, H=Max 1.25	
BD6736FV	1	2.0 to 9.0	1.0 Peak 3.2	e.g. —	—	—	—	Plunger (1ch) FULL ON 0.35	1000ns (Including 800ns to Prevent from overlap current.)	100	100	SSOP-B20 6.5x6.4, H=Max 1.25	
BD65499MUV	1	4.0 to 27.0	0.5 Peak 2.0	e.g. Piezo (1ch) FULL ON 0.6	—	—	—	—	150ns (Including 80ns to Prevent from overlap current.)	50	300	VQFN028V5050 5.0x5.0, H=Max 1.0	
BD65494MUV	1	2.0 to 9.0	1.0 Peak 2.5	e.g. —	—	—	—	Plunger (1ch) FULL ON 0.55	200ns (Including 80ns to Prevent from overlap current.)	60	200	VQFN016V3030 3.0x3.0, H=Max 1.0	
BD65496MUV	1	1.8 to 16.0	1.2 Peak 5.0	e.g. —	—	—	—	Plunger (1ch) FULL ON 0.35	150ns (Including 80ns to Prevent from overlap current.)	50	500	VQFN024V4040 4.0x4.0, H=Max 1.0	

STM: Stepping motor, DCM: DC motor, VCM: Voice coil motor ("Drive method examples of actuator" are recommendation. Another types may be evaluated.)

μ-step System Lens Drivers for Cameras											
Part No.	Supply Voltage (V)	Driver Output Max Current (A)	Drive Method Examples of Actuator (Driven Motor, Driving System, and Output ON Resistance (Ω))					Input I/F	μ-step Resolution	Package (mm)	
			AF	Zoom	Iris	Shutter	Others				
BU24020GU	2.7 to 3.6 (Logic) 2.7 to 5.5 (Driver)	0.5	e.g. 1	STM (1, 2ch) μ-step (class-D) 1.5	STM (3, 4ch) μ-step (class-D) 1.5	—	—	3-wire serial	1024	VCSP85H2 2.6x2.6, H=Max 1.0	
			e.g. 2	—	DCM (3ch) FULL ON (PWM) 1.5	VCM (4ch) FULL ON (PWM) 1.5	—				
BU24033GW	1.62 to 3.6 (Io) 2.7 to 3.6 (Logic) 2.7 to 5.5 (Driver)	0.5/0.6	e.g. 1	STM (1, 2ch) μ-step (class-D) 1.5	STM (3, 4ch) μ-step (class-D) 1.5	VCM (5ch) FULL ON (PWM) 1.0	VCM (6ch) constant current 1.0	3-wire serial	1024	UCSP75M3 3.0x3.0, H=Max 0.85	
			e.g. 2	—	DCM (5ch) FULL ON (PWM+Speed control) 1.0	VCM (3ch) FULL ON (PWM) 1.5					DCM (4ch) FULL ON (PWM) 1.5
BU24035GW	2.7 to 3.6 (Logic) 2.7 to 5.5 (Driver)	0.5/0.6	e.g. 1	STM (1, 2ch) μ-step (class-D) 1.5	DCM (5ch) FULL ON (PWM+Speed control) 1.0	STM (3, 4ch) μ-step (class-D) 1.5	VCM (6ch) constant current 1.0	3-wire serial	1024	UCSP75M3 3.1x3.1, H=Max 0.85	
			e.g. 2	—	DCM (3ch) FULL ON (PWM+Speed control) 1.5	VCM (5ch) FULL ON (PWM)/constant current 1.0					VCM (4ch) FULL ON (PWM) 1.5
BU24036MWV	2.7 to 3.6 (Logic) 2.7 to 5.5 (Driver)	0.5/0.6	e.g. 1	STM (1, 2ch) μ-step (class-D) 2.0	DCM (5ch) FULL ON (PWM+Speed control) 1.0	STM (3, 4ch) μ-step (class-D) 1.5	VCM (6ch) constant current 1.0	3-wire serial	1024	UQFN040V5050 5.0x5.0, H=Max 1.0	
			e.g. 2	—	DCM (3ch) FULL ON (PWM+Speed control) 1.5	VCM (5ch) FULL ON (PWM)/constant current 1.0					VCM (4ch) FULL ON (PWM) 1.5

STM: Stepping motor, DCM: DC motor, VCM: Voice Coil Motor ("Drive method examples of actuator" are recommendation. Another types may be evaluated.)

Mobile Phone Module Drivers

Parallel Interface Lens Driver for Voice Coil Motors														
Part No.	Supply Voltage (V)	Applications	ch	Drive System	Driver Output Max Current (A)	Driver Output ON Resistance (Ω)	Input I/F	Input Mode Selection Terminal	Current Sense Resistor	Temperature Protection	Power Save Function	Back side coating	Package (mm)	
BD6369GUL	2.5 to 5.5	Drive AF using voice coil motor	1	Constant voltage (±5%)	400	0.8 (V _M =5V, I _o =0.4A)	Parallel	✓	–	✓	✓	with	VCSP50L2 2.1×2.1, H=Max 0.55	
2-wire Serial (I ² C-compatible) Interface Lens Drivers for Uni-directional Voice Coil Motors														
Part No.	Supply Voltage (V)	Applications	ch	Drive System	Driver Output Max Current (mA)	Driver Output Low Voltage (V)	Input I/F	Ringing Compensation	Temperature Protection	Back side coating	Package (mm)			
BU64241GWZ	2.3 to 4.8	Drive AF using voice coil motor	0.25	Constant current (±10%)	130	0.15 (V _{CC} =3V, I _o =100mA)	I ² C Fm compatible	ISRC	✓	without	UCSP30L1 1.3×0.77, H=Max 0.33			
BU64243GWZ	2.3 to 4.8	Drive AF using voice coil motor	0.25	Constant current (±10%)	130	0.15 (V _{CC} =3V, I _o =100mA)	I ² C Fm compatible	ISRC	✓	with	UCSP35L1 0.77×1.3, H=Max 0.40			
BU64244GWZ	2.3 to 4.8	Drive AF using voice coil motor	0.25	Constant current (±10%)	130	0.15 (V _{CC} =3V, I _o =100mA)	I ² C Fm compatible	ISRC	✓	with	UCSP35L1 0.77×1.3, H=Max 0.36			
BU64249GWX	2.3 to 4.8	Drive AF using voice coil motor	0.25	Constant current (±10%)	130	0.15 (V _{CC} =3V, I _o =100mA)	I ² C Fm compatible	ISRC	✓	without	UCSP16X1 1.3×0.77, H=Max 0.2			
BU64291GWZ	2.3 to 4.8	Drive AF using voice coil motor	0.5	Constant current (±5%)	100	0.25 (V _{CC} =3V, I _o =100mA)	I ² C Fm compatible	ISRC	✓	without	UCSP30L1 0.77×1.37, H=Max 0.33			
BU64292GWZ	2.5 to 3.6	Drive AF using voice coil motor	0.25	Constant current (±5%)	125	0.28 (V _{DD} =3V, I _o =100mA)	I ² C Fm+ compatible	ISRC	✓	without	UCSP25L1 0.68×1.08, H=Max 0.30			
BU64980AGWZ	2.3 to 4.8	Drive AF using voice coil motor	0.25	Constant current (±5%)	100	0.25 (V _{CC} =3V, I _o =100mA)	I ² C Fm+ compatible	ISRC	✓	without	UCSP25L1 0.72×1.13, H=Max 0.30			
BU64981AGWZ	2.3 to 4.8	Drive AF using voice coil motor	0.25	Constant current (±5%)	100	0.25 (V _{CC} =3V, I _o =100mA)	I ² C Fm+ compatible	ISRC	✓	with	UCSP30L1A 0.72×1.13, H=Max 0.33			
BU64982GWZ	2.5 to 3.6	Drive AF using voice coil motor	0.25	Constant current (±5%)	125	0.28 (V _{DD} =3V, I _o =100mA)	I ² C Fm+ compatible	ISRC	✓	with	UCSP30L1A 0.68×1.08, H=Max 0.33			
2-wire Serial (I ² C-compatible) Interface Lens Drivers for Bi-directional Voice Coil Motors														
Part No.	Supply Voltage (V)	Applications	ch	Drive System	Driver Output Max Current (A)	Driver Output ON Resistance (Ω)	Input I/F	Ringing Compensation	Temperature Protection	Back side coating	Package (mm)			
BU64295GWZ	2.3 to 4.8	Drive AF using voice coil motor	1	Constant current (±5%)	±100	2.0 (V _{DD} =3V)	I ² C Fm compatible	ISRC	✓	without	UCSP30L1 0.77×1.2, H=Max 0.33			
BU64296GWX	2.3 to 4.8	Drive AF using voice coil motor	1	Constant current (±5%)	±100	2.0 (V _{DD} =3V)	I ² C Fm compatible	ISRC	✓	without	UCSP16X1 0.77×1.2, H=Max 0.20			
BU64297GWZ	2.3 to 4.8	Drive AF using voice coil motor	1	Constant current (±5%)	±100	2.0 (V _{DD} =3V)	I ² C Fm compatible	ISRC	✓	with	UCSP35L1 0.77×1.2, H=Max 0.36			
BU64253GWZ	2.5 to 4.5	Drive AF using voice coil motor	1	Constant current (±5%)	±100	3.2 (V _{DD} =3V)	I ² C Fm+ compatible	ISRC	✓	with	UCSP30L1A 0.72×1.13, H=Max 0.33			
BU64985GWZ	1.6 to 1.98	Drive AF using voice coil motor	1	Constant current (±5%)	±60	1.3 (V _{DD} =1.8V)	I ² C Fm+ compatible	ISRC	✓	with	UCSP35L1 0.77×1.2, H=Max 0.36			
BU64987GWZ	1.6 to 1.98	Drive AF using voice coil motor	1	Constant current (±5%)	±100	1.3 (V _{DD} =1.8V)	I ² C Fm+ compatible	ISRC	✓	with	UCSP35L1 0.77×1.2, H=Max 0.36			
2-wire Serial (I ² C-compatible) Interface Lens Driver for Piezo Actuators														
Part No.	Supply Voltage (V) V _{CC}	Applications	ch	Drive System	Driver Output Max Current (mA)	Driver Output ON Resistance (Ω)	Input I/F	Base Clock	Temperature Protection	Power Save Function	Back side coating	Package (mm)		
BU64562GWZ	2.3 to 4.8	e.g. 1 Drive AF using piezo actuator	1	FULL ON	500	1.4 (V _{CC} =3V)	I ² C Fm compatible	Built-in 15MHz	✓	✓	without	UCSP30L1 1.90×0.77, H=Max 0.33		
		e.g. 2 Drive Zoom using piezo actuator												
Parallel Interface Lens Driver for Stepping Motors														
Part No.	Supply Voltage (V)	Applications	ch	Drive System	Driver Output Max Current (mA)	Driver Output ON Resistance (Ω)	Input I/F	Input Mode Selection Terminal	Built-In Wave Sloping Comparator	Temperature Protection	Power Save Function	Back side coating	Package (mm)	
BD6360GUL	2.3 to 5.5	e.g. 1 Drive AF using piezo actuator e.g. 2 Drive Zoom using piezo actuator	2	FULL ON	500	1.0 (V _{CC} =3V, I _o =0.4A)	Parallel	✓	✓	✓	✓	with	VCSP50L2 2.1×2.1, H=Max 0.55	

Motor/Actuator Drivers