

Featured Products



Class-leading* TLP characteristics (operating resistance) provide superior protection

Low Voltage 3.3V V_{RWM} TVS Diodes (High ESD Resistance)

VS3V3BxxFS/ES/HS Series (RASMID)

*ROHM March 2017 Survey

Advantages

Class-leading* TLP Characteristics important for TVS

High surge immunity with low clamp voltage

TVS Diodes
(ESD Protection)

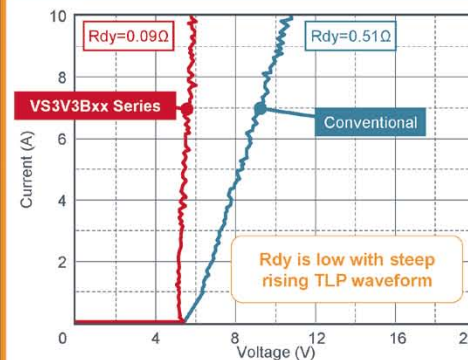
RASMID

3.3V V_{RWM} contributes to lower IC voltages

RASMID structure features a dimensional accuracy of $\pm 10\mu\text{m}$

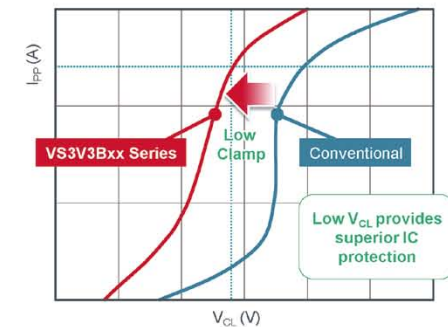
Superior TLP Characteristics

Key Point Primary reason for adoption



Low operating resistance protects the circuit from ESD

Low Clamp Voltage + High Surge Immunity



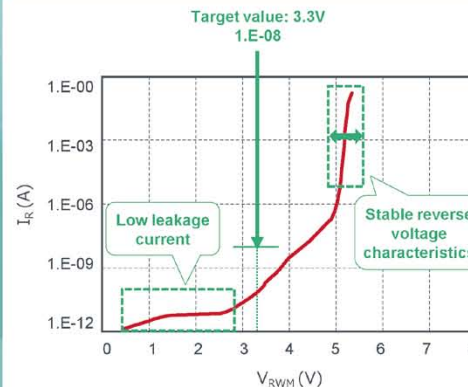
Clamp voltage is also extremely low, preventing surges from escaping to subsequent stages

VS3V3Bxx Series Lineup

Part No.	V_{RWM} [V]	P_D [mW]	V_{CL}^{*1} (Max.) [V]	I_{PP} [A]	Capacitance ^{*2} (Typ.) [pF]	P_{PP} [W]	ESD ^{*3} [kV]	Package mm [inch]	Equivalent Circuit
New VS3V3BT1FS	3.3	100	7.50	2.8	4	21	15	0402 [01005]	
New VS3V3BA1FS			8.00	3.3	6	27	15	DSN0402-2 (SMD0402)	
New VS3V3BB1FS			7.60	5.0	10	38	15		
New VS3V3BA1ES			8.00	3.5	6	28	15	0603 [0201]	
New VS3V3BB1ES			8.20	5.5	10	45	20	DSN0603-2 (SMD0603)	
New VS3V3BC1HS			8.50	8.2	18	70	30	0603 [0201] DSN0603-2 (SMD0603B)	

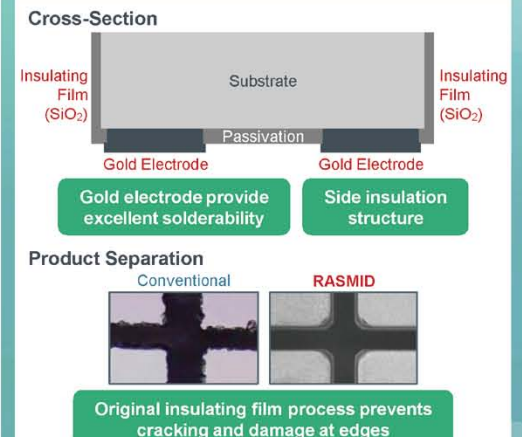
*1: $I_{PP}=3.3\text{A}$, $t_p=8/20\mu\text{s}$ *2: $V_R=0\text{V}$, $f=1\text{MHz}$ *3: IEC61000-4-2 (air)

Low V_{RWM} Contributes to Greater Power Savings



Supports 3.3V CPU operation

RASMID Design Provides Ultra-High Precision and Reliability



RASMID: Ultra-compact series that achieves breakthrough miniaturization using ROHM's proprietary construction methods featuring unprecedented dimensional accuracy

Select RASPID products from among ROHM's broad lineup of diodes

RASPID Diode Family

Part Number Configuration

Ex:

V	S	3	V	3	B	T	1	F	S	T	2	7	N
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Part No.

Taping Code

RASPID: Ultra-compact series that achieves breakthrough miniaturization using ROHM's proprietary construction methods featuring unprecedented dimensional accuracy

3.3V V_{RWM} 100mW P_D TVS Diodes (ESD Protection)										
Product Name		V_{RWM} [V]	P_D [mW]	V_{CL}^{-1} (Max.) [V]	I_{PP} [A]	Capacitance* ² (Typ.) [pF]	P_{PP} [W]	ESD* ³ [kV]	Package mm [inch]	Equivalent Circuit
Part No.	Taping Code									
New VS3V3BT1FS	T27N	3.3	100	7.50	2.8	4	21.0	15	0402 [01005] DSN0402-2 (SMD0402)	
New VS3V3BA1FS	T27N			8.00	3.3	6	26.5	15		
New VS3V3BB1FS	T27N			7.60	5.0	10	38.0	15	0603 [0201] DSN0603-2 (SMD0603)	
New VS3V3BA1ES	T15R			8.00	3.5	6	28.0	15		
New VS3V3BB1ES	T15R			8.20	5.5	10	45.0	20	0603 [0201] DSN0603-2 (SMD0603B)	
New VS3V3BC1HS	T15R			8.50	8.2	18	70.0	30		

5.0V V_{RWM} 100mW P_D TVS Diodes (ESD Protection)										
Product Name		V_{RWM} [V]	P_D [mW]	V_{CL}^{-1} (Max.) [V]	I_{PP} [A]	Capacitance* ² (Typ.) [pF]	P_{PP} [W]	ESD* ³ [kV]	Package mm [inch]	Equivalent Circuit
Part No.	Taping Code									
New VS5V0BA1FS	T27N	5.0	100	9.15	2.90	6.00	26.5	15	0402 [01005] DSN0402-2 (SMD0402)	
New VS5V0BB1FS	T27N			9.50	4.75	10.00	45.0	15		
VS5V0BA1ES	T15R			10.00	1.00	5.00	10.0	15	0603 [0201] DSN0603-2 (SMD0603)	
VS5V0BB1ES	T15R			11.40	2.20	7.00	25.0	15		
VS5V0BC1ES	T15R			12.00	5.00	15.00	60.0	15	0603 [0201] DSN0603-2 (SMD0603B)	
New VS5V0BL1HS	T15R			18.00	2.00	0.25	36.0	15		
New VS5V0BN1HS	T15R	18.00	2.00	0.50	36.0	15				

*1: $I_{PP}=3.3A$, $t_p=8/20\mu s$ *2: $V_R=0V$, $f=1MHz$
*3: IEC61000-4-2 (air)

Notes: Packages denote JEDEC notation. (.) indicates ROHM package type.

2-Terminal (Single) Zener Diodes										
Product Name		P_D [mW]	V_Z [V]			I_R [μA]		Package mm [inch]	Equivalent Circuit	
Part No.	Taping Code		Min.	Max.	I_Z [mA]	Max.	V_R [V]			
FDZ5.1	T27R	100	4.84	5.37	5	2.0	1.5	0402 [01005] DSN0402-2 (SMD0402)		
FDZ5.6			5.31	5.92	5	1.0	2.5			
FDZ6.2			5.86	6.53	5	1.0	3.0			
FDZ6.8			6.47	7.14	5	0.5	3.5			
FDZ7.5			7.06	7.84	5	0.5	4.0			
FDZ8.2			7.76	8.64	5	0.5	5.0			
SDZ5.1	T15R	100	4.84	5.37	5	1.5	1.5	0603 [0201] DSN0603-2 (SMD0603)		
SDZ5.6			5.31	5.92	5	2.5	2.5			
SDZ6.2			5.86	6.53	5	3.0	3.0			
SDZ6.8			6.47	7.14	5	3.5	3.5			
SDZ7.5			7.06	7.84	5	4.0	4.0			
SDZ8.2			7.76	8.64	5	5.0	5.0			

Notes: Packages denote JEDEC notation. (.) indicates ROHM package type.

RASPID Package Dimensions Tolerance $\leq \pm 10\mu m$ (Unit: mm [inch])

0402 [01005] Size
DSN0402-2 (SMD0402)

0603 [0201] Size
DSN0603-2 (SMD0603)

0603 [0201] Size
DSN0603-2 (SMD0603B)

1006 [0402] Size
DSN1006-2 (SMD1006)

Small-Signal Schottky Barrier Diodes											
Product Name		V_{RM} [V]	P_D [mW]	I_O [A]	I_{FSM} [A]	V_F (Max.) [mV]	I_F [A]	I_R [μA]		Package mm [inch]	Equivalent Circuit
Part No.	Taping Code							V_R [V]	Max.		
RB522FS-30	T27R	30	100	0.1	0.5	370	0.01	7	10	0402 [01005] DSN0402-2 (SMD0402)	
RB522ES-30	T15R			0.1	0.5	370	0.01	7	10		
RB531ES-30	T15R			0.1	0.5	300	0.01	7	10		
New RB161QS-40	T18R	40	200	1.0	7.0	600	1.00	100	10	1006 [0402] DSN1006-2 (SMD1006)	
New RB061QS-20	T18R	20		1.0	15.0	470	2.00	200	10		

Note: Packages denote JEDEC notation. (.) indicates the ROHM package type.

The content specified in this document is correct as of March 1st, 2017.

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ROHM Co., Ltd.

21 Sain Mizosaki-cho, Ukyo-ku,
Kyoto 615-8585 Japan

www.rohm.com