

Distributeur : JBG-METAFIX

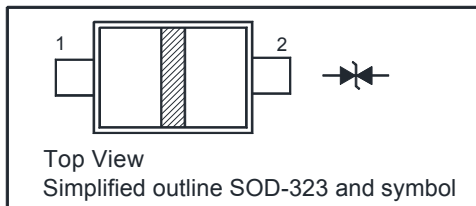
ESD3BL3V3WS THRU ESD3BL24WS ESD Protection Diodes

Features

- Low clamping voltage
- Low leakage current

PINNING

PIN	DESCRIPTION
1	Anode
2	Anode



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20 \mu\text{s}$)	P_{PK}	ESD3BL3V3WS ESD3BL5V0WS ESD3BL12WS ESD3BL15WS ESD3BL24WS	500 500 200 200 200
			W
Peak Pulse Current ($t_p = 8/20 \mu\text{s}$)	I_{PP}	ESD3BL3V3WS ESD3BL5V0WS ESD3BL12WS ESD3BL15WS ESD3BL24WS	18 15 5 5 3
			A
ESD Per IEC 61000-4-2 (Contact)	V_{ESD}	ESD3BL3V3WS ESD3BL5V0WS ESD3BL12WS ESD3BL15WS ESD3BL24WS	30 30 30 30 23
			KV
Operating Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^\circ\text{C}$

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Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage					
ESD3BL3V3WS	V_{RWM}	-	-	3.3	V
ESD3BL5V0WS		-	-	5	
ESD3BL12WS		-	-	12	
ESD3BL15WS		-	-	15	
ESD3BL24WS		-	-	24	
Reverse Breakdown Voltage at $I_R = 5\text{ mA}$					
ESD3BL3V3WS	$V_{(BR)R}$	5.8	-	6.9	V
ESD3BL5V0WS		7	-	8.2	
ESD3BL12WS		14.2	-	16.7	
ESD3BL15WS		17.1	-	20.3	
ESD3BL24WS		25.4	-	30.3	
Reverse Current					
at $V_{RWM} = 3.3\text{ V}$	I_R	-	-	2	μA
at $V_{RWM} = 5\text{ V}$		-	-	1	μA
at $V_{RWM} = 12\text{ V}$		-	-	50	nA
at $V_{RWM} = 15\text{ V}$		-	-	50	nA
at $V_{RWM} = 24\text{ V}$		-	-	50	nA
Diode Capacitance at $V_R = 0\text{ V}$, $f = 1\text{ MHz}$					
ESD3BL3V3WS	C_{tot}	-	101	-	pF
ESD3BL5V0WS		-	75	-	
ESD3BL12WS		-	19	-	
ESD3BL15WS		-	16	-	
ESD3BL24WS		-	11	-	
Clamping Voltage at $I_{PP} = 1\text{ A}$					
ESD3BL3V3WS	V_C	-	-	8	V
ESD3BL5V0WS		-	-	10	
ESD3BL12WS		-	-	20	
ESD3BL15WS		-	-	25	
ESD3BL24WS		-	-	40	
Clamping Voltage					
at $I_{PP} = 18\text{ A}$	V_C	-	-	26	V
at $I_{PP} = 15\text{ A}$		-	-	33	
at $I_{PP} = 5\text{ A}$		-	-	37	
at $I_{PP} = 5\text{ A}$		-	-	44	
at $I_{PP} = 3\text{ A}$		-	-	70	

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Electrical Characteristics Curves

Fig 1. Pulse Waveform

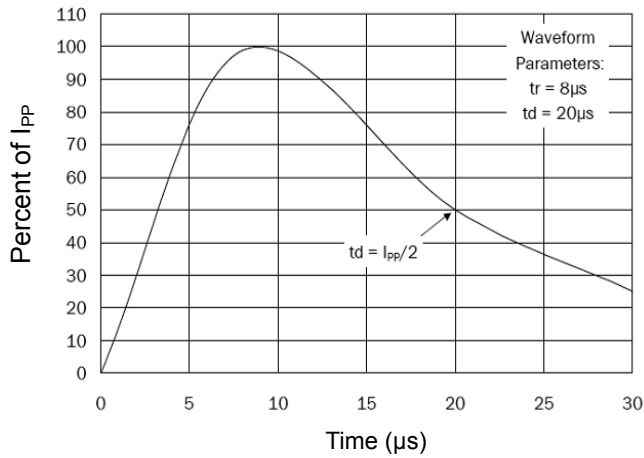


Fig 2. Power Derating Curve

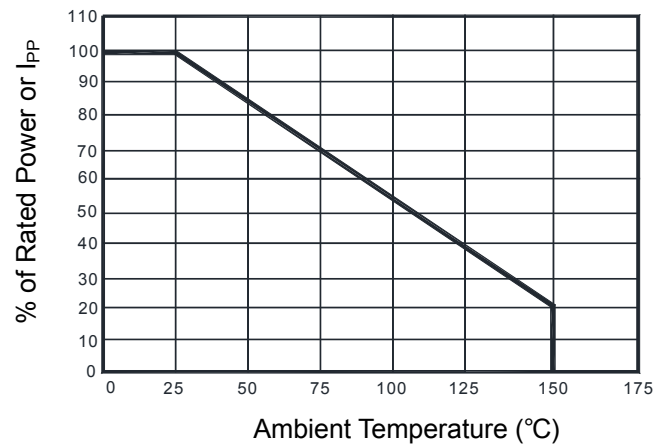


Fig 3. Clamping Voltage Curve

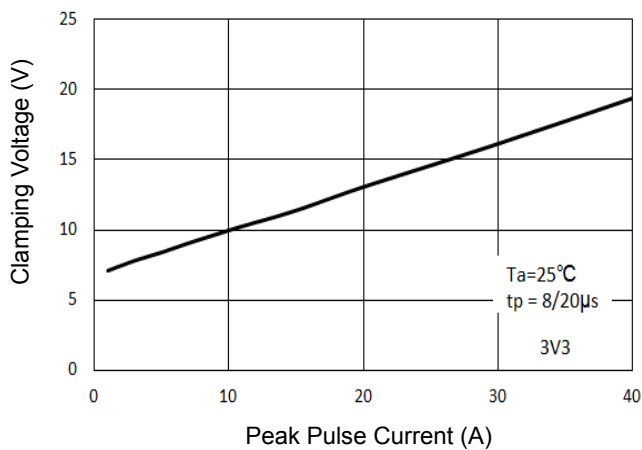


Fig 4. Junction Capacitance

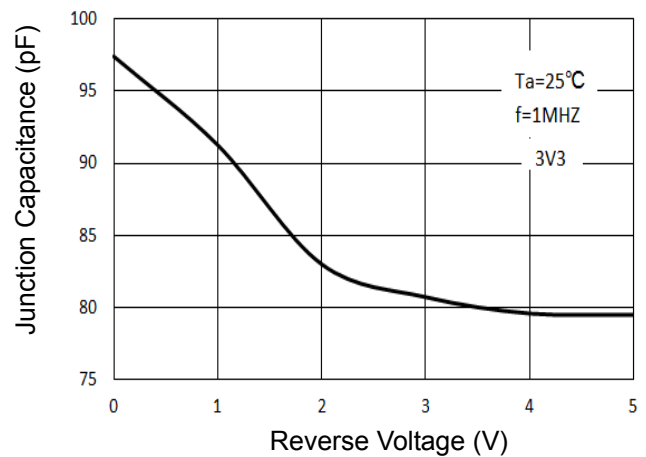


Fig 5. Clamping Voltage Curve

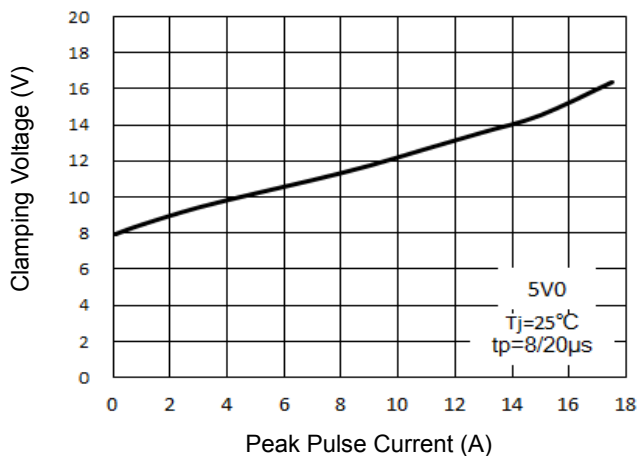
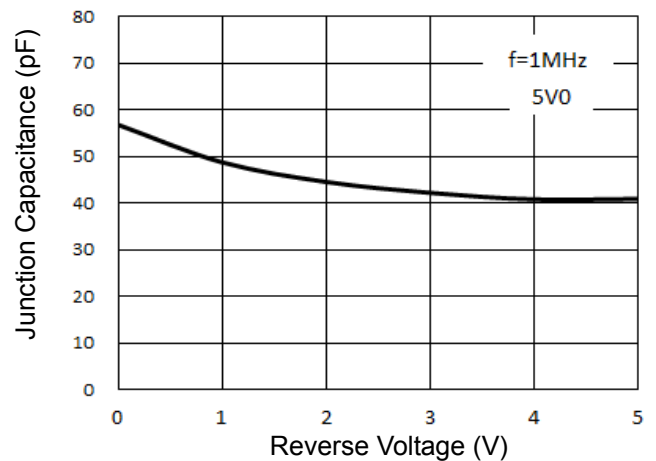


Fig 6. Junction Capacitance



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Electrical Characteristics Curves

Fig 7. Clamping Voltage Curve

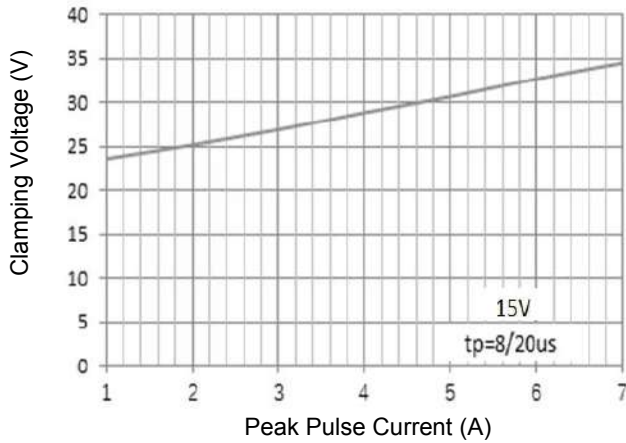


Fig 8. Junction Capacitance

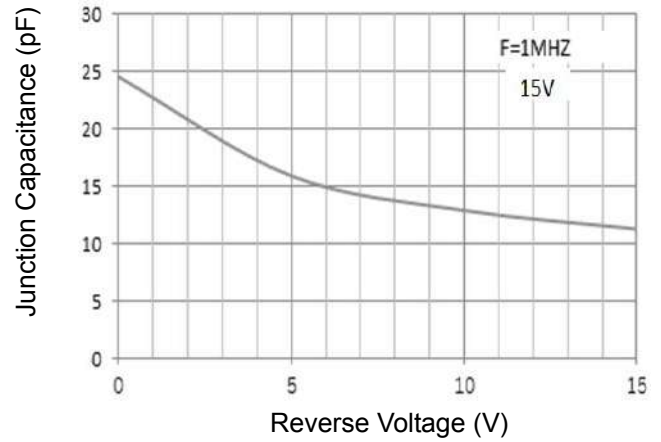


Fig 9. Clamping Voltage Curve

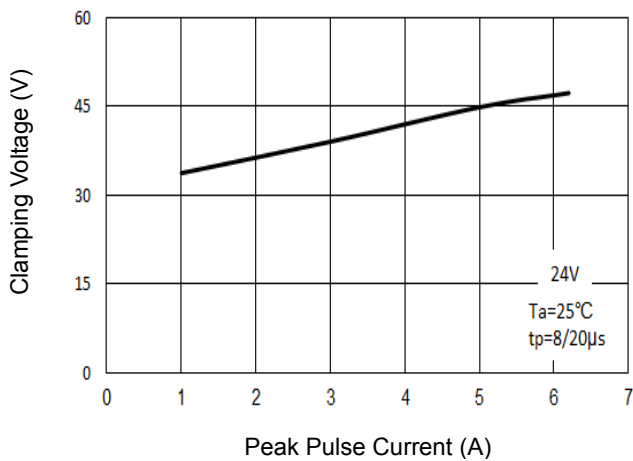


Fig 10. Junction Capacitance

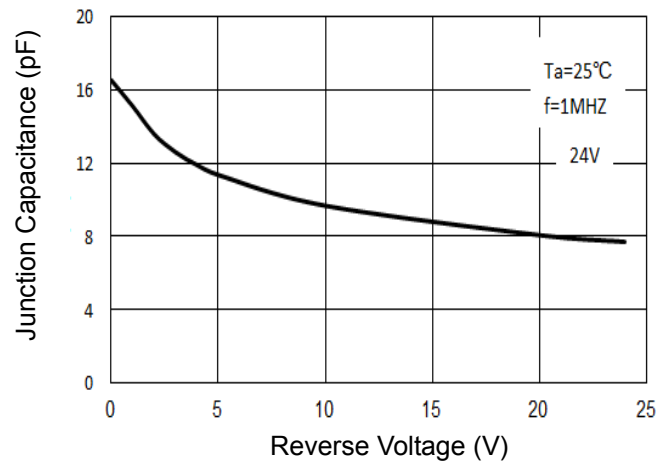


Fig. 11 TLP Curve

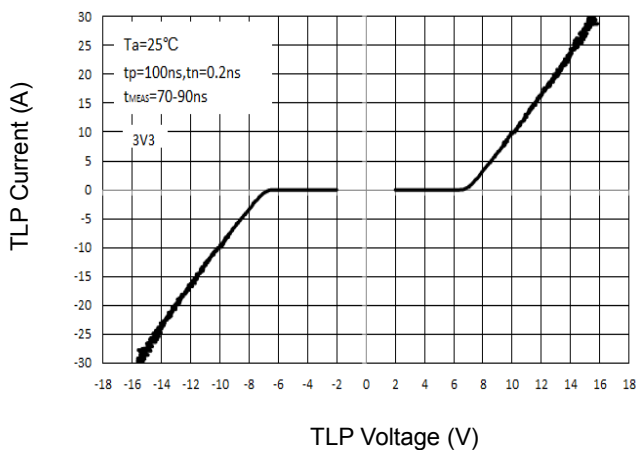
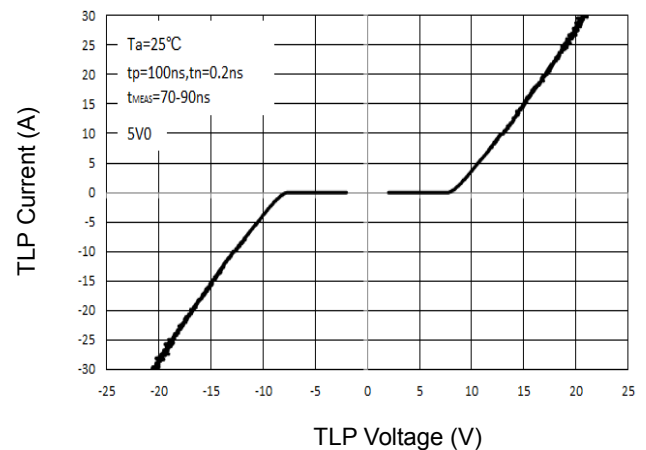


Fig. 12 TLP Curve



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Electrical Characteristics Curves

Fig. 13 TLP Curve

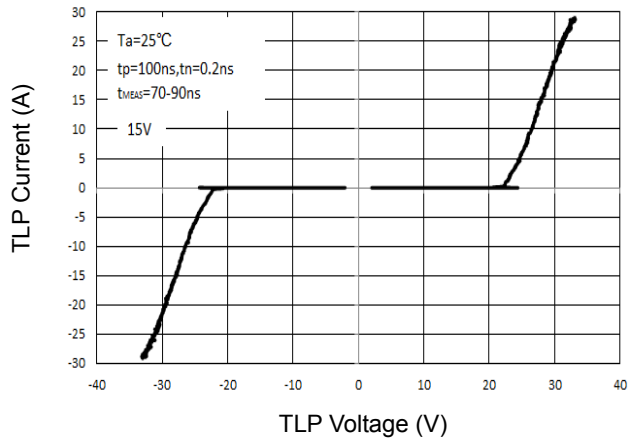
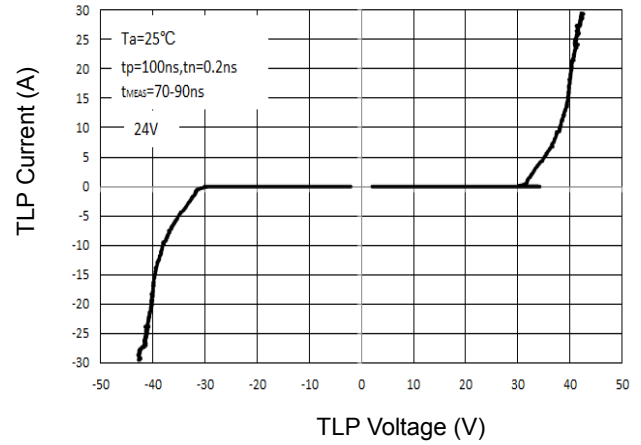


Fig. 14 TLP Curve

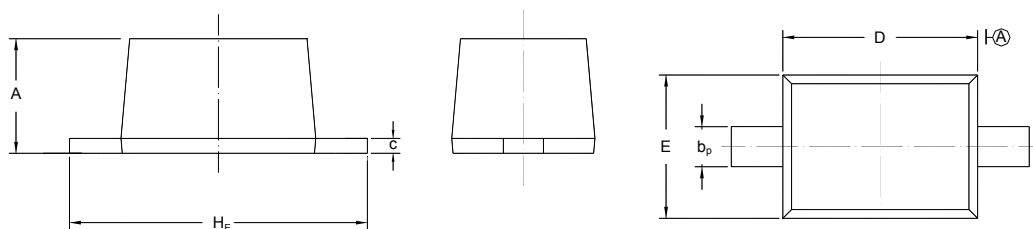


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PACKAGE OUTLINE

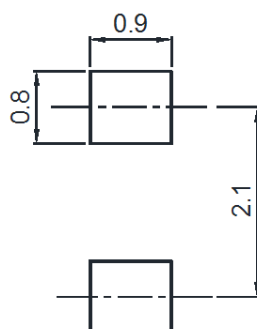
Plastic surface mounted package; 2 leads

SOD-323



UNIT	A	b _p	C	D	E	H _E
mm	1.10 0.80	0.40 0.25	0.15 0.10	1.80 1.60	1.35 1.15	2.80 2.30

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOD-323	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000