



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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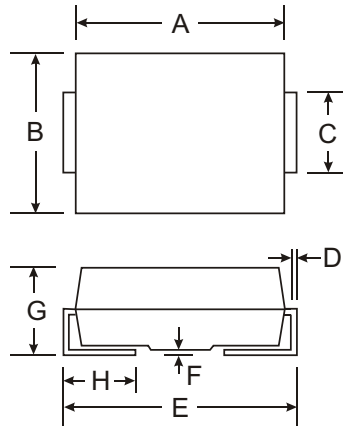
Features

- 30A Peak Pulse Current @ 10/1000 μ s
- 150A Peak Pulse Current @ 8/20 μ s
- 58 - 320V Stand-Off Voltages
- Oxide-Glass Passivated Junction
- Bi-Directional Protection In a Single Device
- High Off-State impedance and Low On-State Voltage

Mechanical Data

- Case: SMB, Molded Plastic
- Plastic Material: UL Flammability Classification Rating 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solder Plated Terminal - Solderable per MIL-STD-202, Method 208
- Polarity: None; Bi-Directional Devices Have No Polarity Indicator
- Weight: 0.093 grams (approx.)
- Marking: Date Code and Marking Code (See Page 4)
- Ordering Information: See Page 4

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SMB		
Dim	Min	Max
A	4.06	4.57
B	3.30	3.94
C	1.96	2.21
D	0.15	0.31
E	5.21	5.59
F	0.05	0.20
G	2.01	2.62
H	0.76	1.52
All Dimensions in mm		

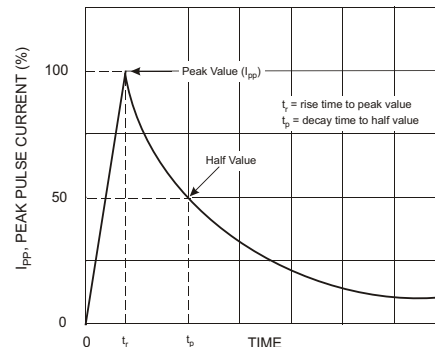
Maximum Ratings @ T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Impulse Current @ 10/1000us	I _{pp}	30	A
Non-Repetitive Peak On-State Current @ 8.3ms (one-half cycle)	I _{TSM}	15	A
Junction Temperature Range	T _j	-40 to +150	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C
Thermal Resistance, Junction to Lead	R _{θJL}	30	°C/W
Thermal Resistance, Junction to Ambient	R _{θJA}	120	°C/W
Typical Positive Temperature Coefficient for Breakdown Voltage	ΔVBR/ΔT _j	0.1	%/°C

Maximum Rated Surge Waveform

Waveform	Standard	I _{pp} (A)
2/10 us	GR-1089-CORE	200
8/20 us	IEC 61000-4-5	150
10/160 us	FCC Part 68	100
10/700 us	ITU-T, K20/K21	60
10/560 us	FCC Part 68	50
10/1000 us	GR-1089-CORE	30

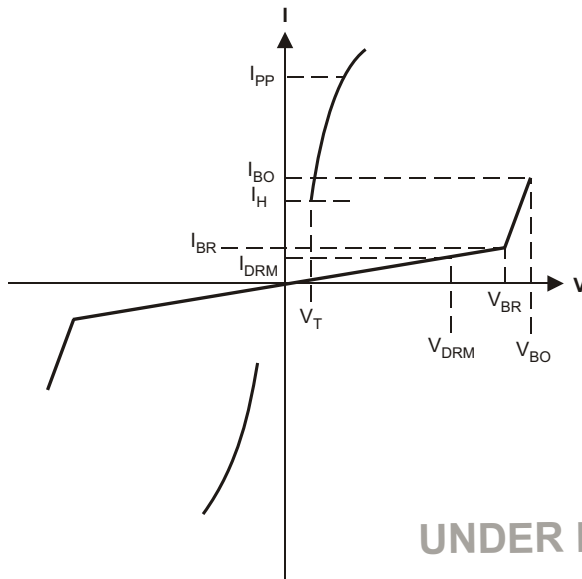


Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Part Number	Rated Repetitive Off-State Voltage	Off-State Leakage Current @ V_{DRM}	Breakover Voltage	On-State Voltage @ $I_T = 1\text{A}$	Breakover Current I_{BO}		Holding Current I_{H}		Off-State Capacitance	Marking Code
	V_{DRM} (V)	I_{DRM} (μA)	V_{BO} (V)	V_{T} (V)	Min (mA)	Max (mA)	Min (mA)	Max (mA)	C_{O} (pF)	
TB0640L	58	5	77	3.5	50	800	150	800	100	T064L
TB0720L	65	5	88	3.5	50	800	150	800	100	T072L
TB0900L	75	5	98	3.5	50	800	150	800	100	T090L
TB1100L	90	5	130	3.5	50	800	150	800	60	T110L
TB1300L	120	5	160	3.5	50	800	150	800	60	T130L
TB1500L	140	5	180	3.5	50	800	150	800	60	T150L
TB1800L	160	5	220	3.5	50	800	150	800	60	T180L
TB2300L	190	5	265	3.5	50	800	150	800	40	T230L
TB2600L	220	5	300	3.5	50	800	150	800	40	T260L
TB3100L	275	5	350	3.5	50	800	150	800	40	T310L
TB3500L	320	5	400	3.5	50	800	150	800	40	T350L

Symbol	Parameter
V_{DRM}	Stand-off Voltage
I_{DRM}	Leakage current at stand-off voltage
V_{BR}	Breakdown voltage
I_{BR}	Breakdown current
V_{BO}	Breakover voltage
I_{BO}	Breakover current
I_{H}	Holding current NOTE: 1
V_{T}	On state voltage
I_{PP}	Peak pulse current
C_{O}	Off-state capacitance NOTE: 2

- Notes:
- $I_{\text{H}} > (V_{\text{L}}/R_{\text{L}})$ If this criterion is not obeyed, the TSPD triggers but does not return correctly to high-resistance state. The surge recovery time does not exceed 30ms.
 - Off-state capacitance measured at $f = 1.0\text{MHz}$, $1.0V_{\text{RMS}}$ signal, $V_{\text{R}} = 2V_{\text{DC}}$ bias.



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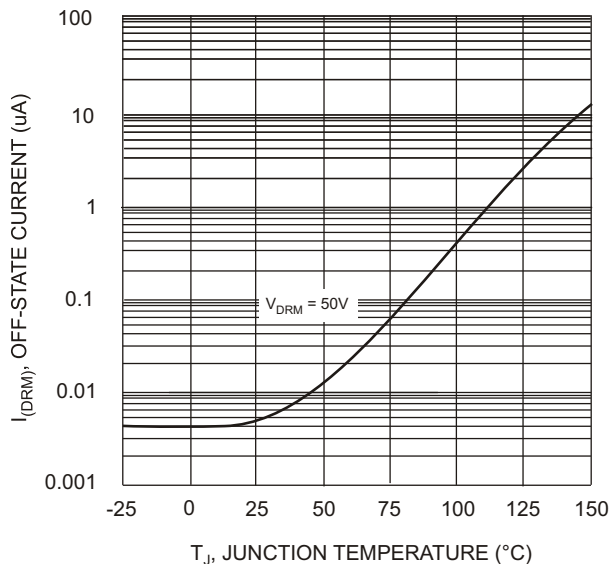


Fig. 1 Off-State Current vs. Junction Temperature

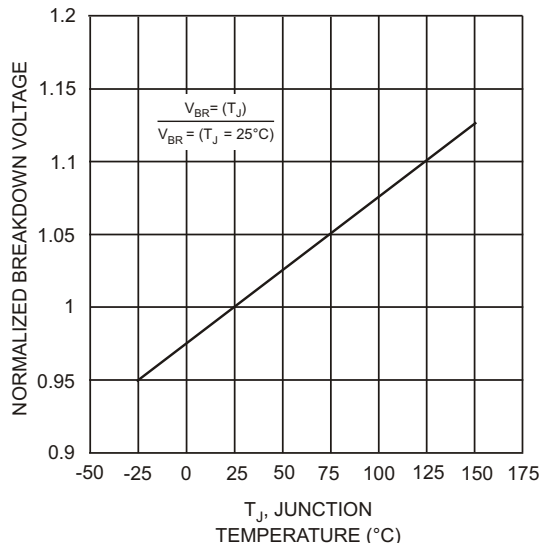


Fig. 2 Relative Variation of Breakdown Voltage vs. Junction Temperature

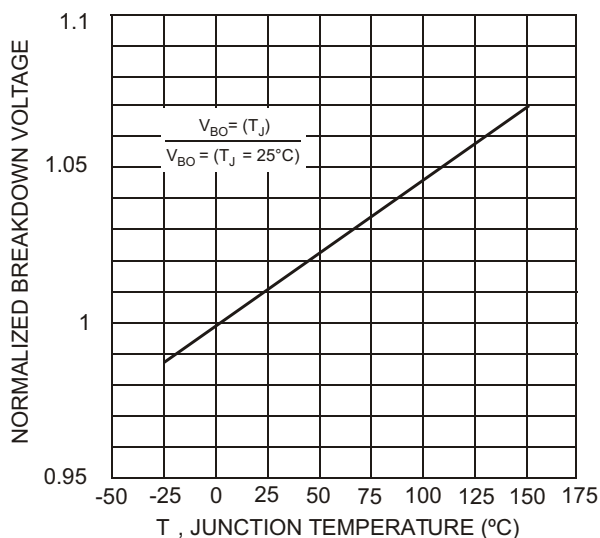


Fig. 3 Relative Variation of Breakover Voltage vs. Junction Temperature

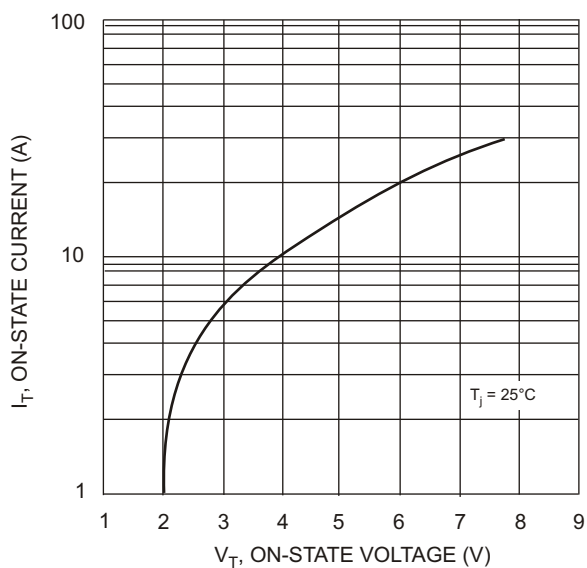


Fig. 4 On-State Current vs. On-State Voltage

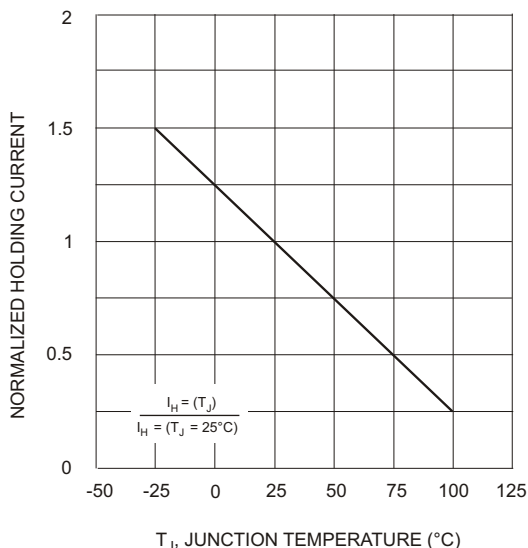


Fig. 5 Relative Variation of Holding Current vs. Junction Temperature

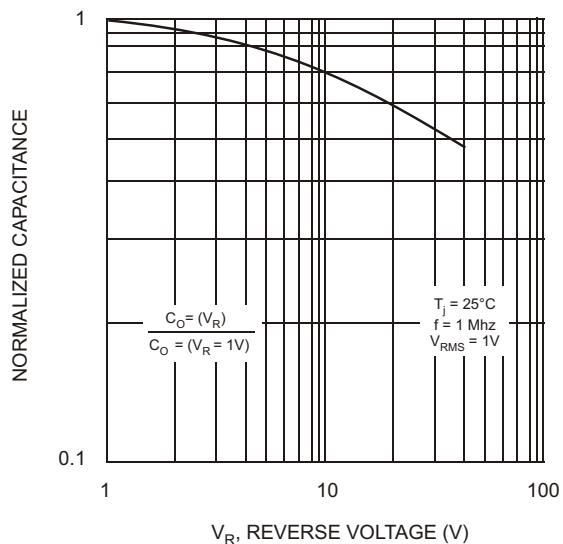


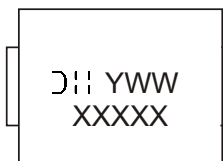
Fig. 6 Relative Variation of Junction Capacitance vs. Reverse Voltage Bias

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Ordering Information (Note 3)

Device	Packaging	Shipping
TB0640L-13 TB0720L-13 TB0900L-13 TB1100L-13 TB1300L-13 TB1500L-13 TB1800L-13 TB2300L-13 TB2600L-13 TB3100L-13 TB3500L-13	SMB	3000/Tape & Reel

Notes: 3. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information

XXXXX = Product Type Marking Code
 YWW = Date Code Marking
 Y = Year ex: 2 = 2002
 WW = Week

Date Code Key

Year	2002	2003	2004
Code	2	3	4

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