

2W SURFACE MOUNT ZENER DIODES- 5.1 to 75V

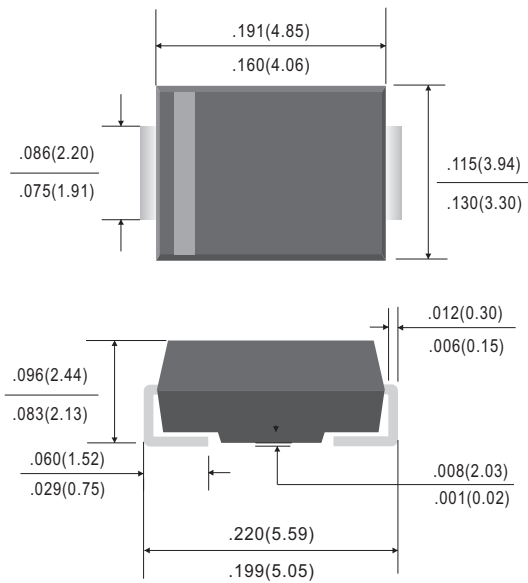
SMB PACKAGE

FEATURES

- Glass passivated chip
- Low leakage
- Built-in strain relief
- Low inductance
- High peak reverse power dissipation
- For use in stabilizing and clipping circuits with high power rating
- RoHS product for packing code suffix "G"
Halogen free product for packing code suffix "H"
- **Polarity:** Color band denotes cathode end
- **Moisture Sensitivity Level 1**



SMB(DO-214AA)



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: DO-214AA/SMB, Molded Plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Packing information: Taping Reel - 3K per 13" Reel

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Parameter	Symbol	Value	UNIT
DC Power Dissipation at $T_L = 50\text{ }^\circ\text{C}$ (Note1)	P_D	2.0	Watts
Maximum Forward Voltage at $I_F = 200\text{ mA}$.	V_F	1.5	Volts
Junction Temperature Range	T_J	- 55 to + 150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 55 to + 150	$^\circ\text{C}$

Note:

(1) T_L = Lead temperature at 3/8 " (9.5mm) from body.



WILLAS

**SMB2EZ5.1D5****THRU****SMB2EZ75D5****2W SURFACE MOUNT ZENER DIODES- 5.1 to 75V****SMB PACKAGE**

Part No.	Nominal Zener Voltage			Max. Zener Impedance				Max Reverse Leakage Current		Maximum DC Zener Current	Marking Code
	$V_Z @ I_{ZT}$			$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$		I_{ZM}	
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V	(mA)	
SMB2EZ5.1D5	5.1	4.85	5.36	3.5	98.0	600	1.00	5.0	1.0	354.0	2H7
SMB2EZ5.6D5	5.6	5.32	5.88	2.5	89.5	500	1.00	5.0	2.0	323.0	2H8
SMB2EZ6.2D5	6.2	5.89	6.51	1.5	80.5	700	1.00	5.0	3.0	292.0	2A0
SMB2EZ6.8D5	6.8	6.46	7.14	2.0	73.5	700	1.00	5.0	4.0	266.0	2A1
SMB2EZ7.5D5	7.5	7.13	7.88	2.0	66.5	700	0.50	5.0	5.0	242.0	2A2
SMB2EZ8.2D5	8.2	7.79	8.61	2.3	61.0	700	0.50	5.0	6.0	220.0	2A3
SMB2EZ9.1D5	9.1	8.65	9.56	2.5	55.0	700	0.50	3.0	7.0	200.0	2A4
SMB2EZ10D5	10.0	9.50	10.50	3.5	50.0	700	0.25	3.0	7.6	182.0	2A5
SMB2EZ11D5	11.0	10.45	11.55	4.0	45.5	700	0.25	1.0	8.4	166.0	2A6
SMB2EZ12D5	12.0	11.40	12.60	4.5	41.5	700	0.25	1.0	9.1	152.0	2A7
SMB2EZ13D5	13.0	12.35	13.65	5.0	38.5	700	0.25	0.5	9.9	138.0	2A8
SMB2EZ14D5	14.0	13.30	14.70	5.5	35.7	700	0.25	0.5	10.6	130.0	2A9
SMB2EZ15D5	15.0	14.25	15.75	7.0	33.4	700	0.25	0.5	11.4	122.0	2B0
SMB2EZ16D5	16.0	15.20	16.80	8.0	31.2	700	0.25	0.5	12.2	114.0	2B1
SMB2EZ17D5	17.0	16.15	17.85	9.0	29.4	750	0.25	0.5	13.0	107.0	2B2
SMB2EZ18D5	18.0	17.10	18.90	10.0	27.8	750	0.25	0.5	13.7	100.0	2B3
SMB2EZ19D5	19.0	18.05	19.95	11.0	26.3	750	0.25	0.5	14.4	95.0	2B4
SMB2EZ20D5	20.0	19.00	21.00	11.0	25.0	750	0.25	0.5	15.2	90.0	2B5
SMB2EZ22D5	22.0	20.90	23.10	12.0	22.8	750	0.25	0.5	16.7	82.0	2B6
SMB2EZ24D5	24.0	22.80	25.20	13.0	20.8	750	0.25	0.5	18.2	76.0	2B7
SMB2EZ27D5	27.0	25.65	28.35	18.0	18.5	750	0.25	0.5	20.6	68.0	2B8
SMB2EZ30D5	30.0	28.50	31.50	20.0	16.6	1000	0.25	0.5	22.5	60.0	2B9
SMB2EZ33D5	33.0	31.35	34.65	23.0	15.1	1000	0.25	0.5	25.1	55.0	2C0
SMB2EZ36D5	36.0	34.20	37.80	25.0	13.9	1000	0.25	0.5	27.4	50.0	2C1
SMB2EZ39D5	39.0	37.05	40.95	30.0	12.8	1000	0.25	0.5	29.7	47.0	2C2
SMB2EZ43D5	43.0	40.85	45.15	35.0	11.6	1500	0.25	0.5	32.7	43.0	2C3
SMB2EZ47D5	47.0	44.65	49.35	40.0	10.6	1500	0.25	0.5	35.8	39.0	2C4
SMB2EZ51D5	51.0	48.45	53.55	48.0	9.8	1500	0.25	0.5	38.8	36.0	2C5
SMB2EZ56D5	56.0	53.20	58.80	55.0	9.0	2000	0.25	0.5	42.6	32.0	2C6
SMB2EZ62D5	62.0	58.90	65.10	60.0	8.1	2000	0.25	0.5	47.1	29.0	2C7
SMB2EZ68D5	68.0	64.60	71.40	75.0	7.4	2000	0.25	0.5	51.7	27.0	2C8
SMB2EZ75D5	75.0	71.25	78.75	90.0	6.7	2000	0.25	0.5	56.0	24.0	2C9

Notes :

- (1) The type number listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$.
- (2) The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC Method.

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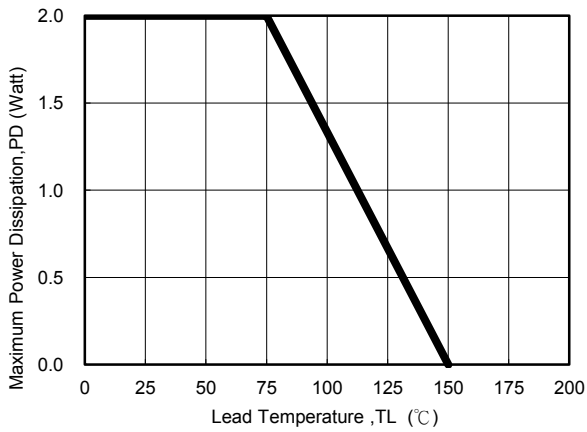


Fig. 1 - Power Temperature Derating (

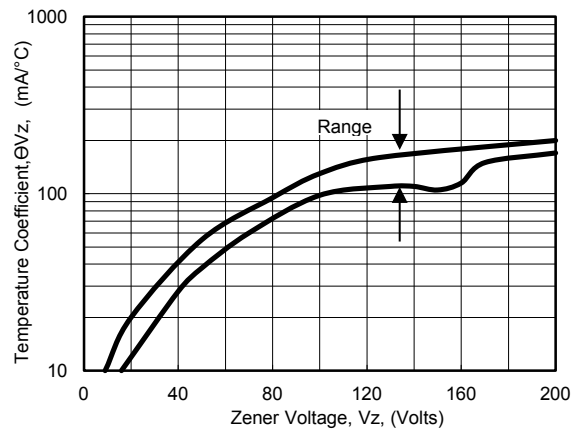


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

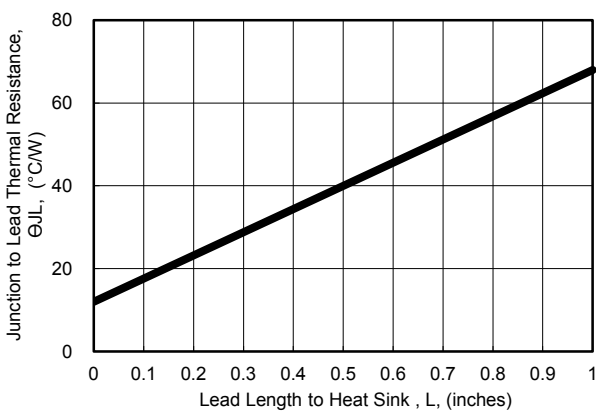


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

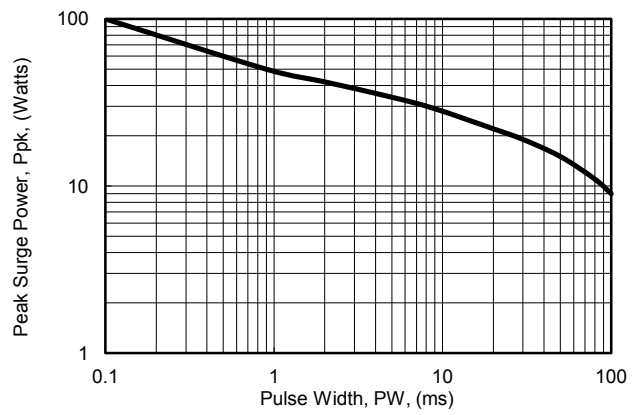


Fig. 4 - Maximum Surge Power

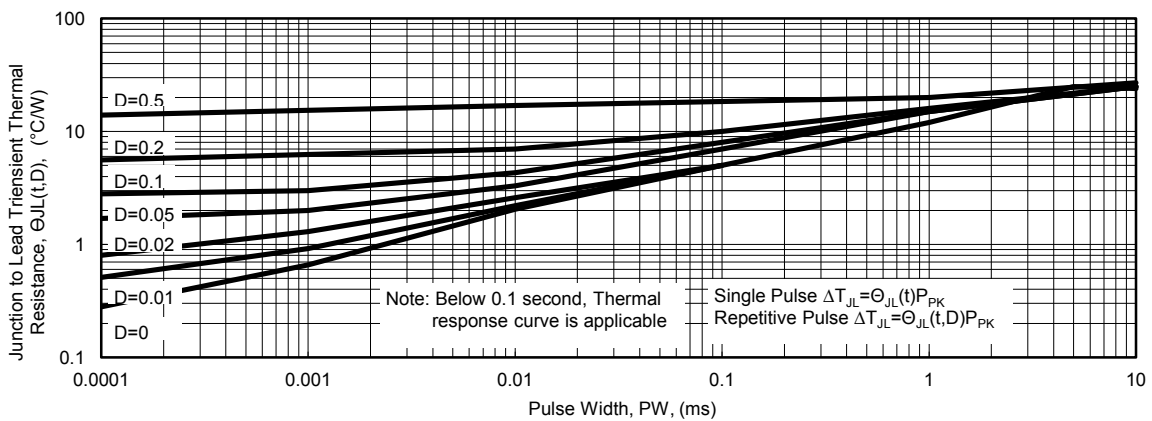


Fig. 5 - Typical Thermal Response L, Lead Length=3/8inch