

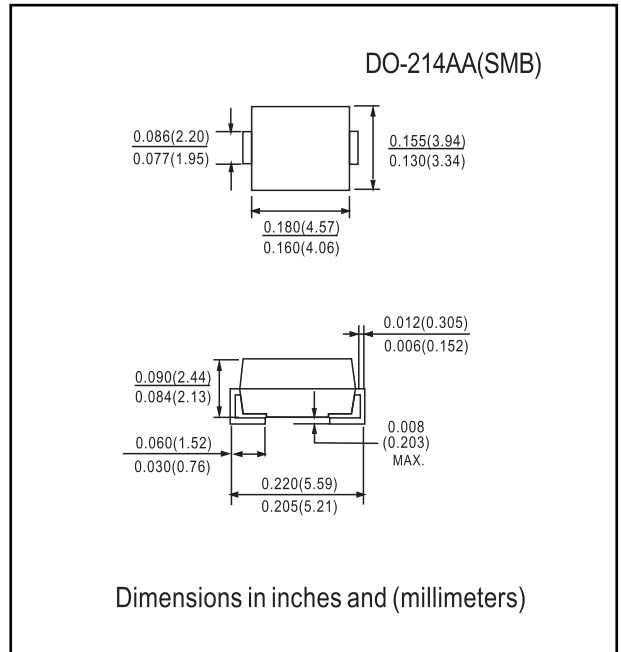


FEATURES

- Low profile package
- Built-in strain relief
- Low inductance
- Typical I<sub>0</sub> less than 1.0μA above 11V
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- High temperature soldering : 260°C /10 seconds at terminals
- Pb free product are available : 99% Sn can meet RoHS environment substance directive request

Mechanical Data

Case: JEDEC DO-214AA, Molded plastic over passivated junction  
 Terminals: Solder plated, solderable per MIL-STD-750, Method 2026  
 Polarity: Indicated by cathode band  
 Standard packing: 12mm tape (E1A-481)  
 Weight: 0.003 ounce, 0.093 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Units
Peak Pulse Power Dissipation on TA=50°C (Notes A) Derate above 70°C	P <sub>D</sub>	2.0 24.0	W atts mW/ °C
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	15	Amps
Operating Junction and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-55 to + 150	°C

NOTES:

A.Mounted on 5.0mm<sup>2</sup> (.013mm thick) land areas.

B.Measured on 8.3ms, and single half sine-wave or equivalent square wave ,duty cycle=4 pulses per minute maximum



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GLASS PASSIVATED JUNCTION SILICON ZENER DIODES

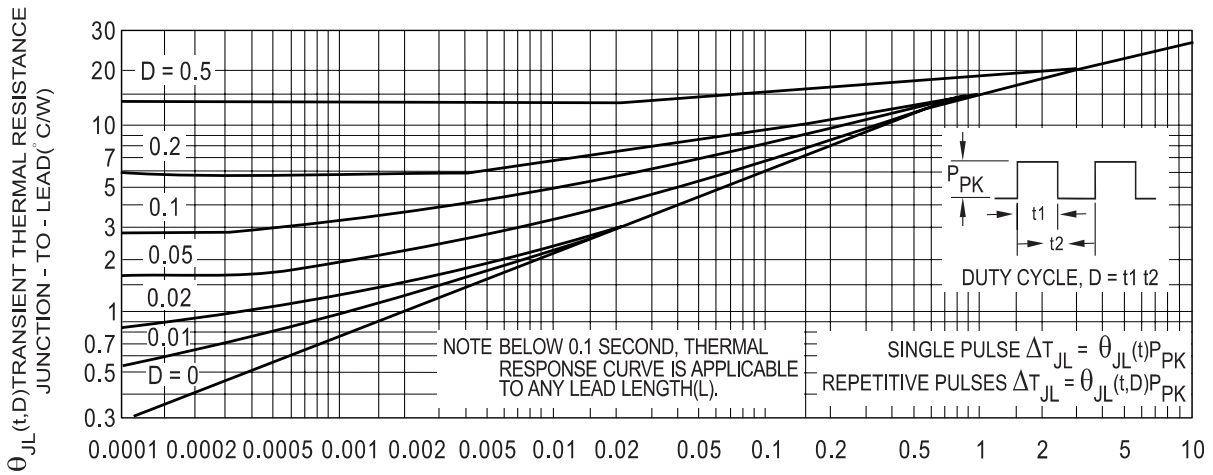
**1SMB2EZ6.8 THRU 1SMB2EZ100**

6.8V-100V 5.0mA-73.5mA

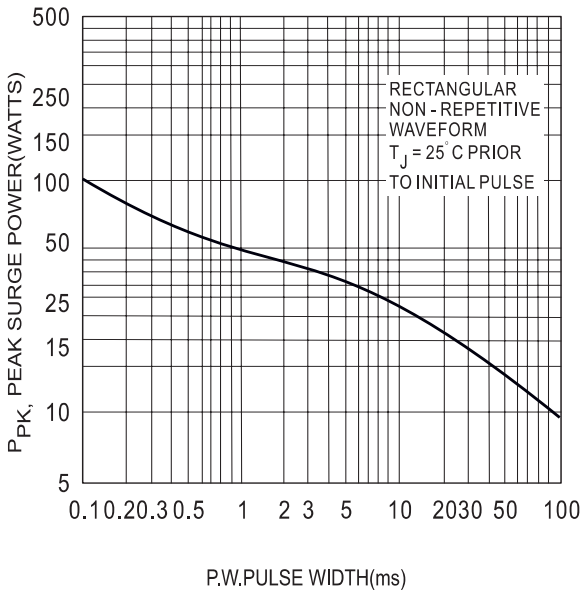
Part Number	Nominal Zener Voltage			Maximum Zener Impedance				Max. Reverse Leakage Current		Marking Code	Package
	V <sub>Z</sub> @ I <sub>ZT</sub>			Z <sub>ZT</sub> @ I <sub>ZT</sub>	I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>ZK</sub>	I <sub>ZK</sub>	I <sub>R</sub> @ V <sub>R</sub>			
	Nom. V	Min. V	Max. V	Ohms	mA	Ohms	mA	μA	V		
2.0 watt Zener Diodes											
1SMB2EZ6.8	6.8	6.46	7.14	2	73.5	700	1.00	5.00	4.00	2006	SMB
1SMB2EZ7.5	7.5	7.13	7.88	2	66.5	700	0.50	5.00	5.00	2007	SMB
1SMB2EZ8.2	8.2	7.79	8.61	2	61.0	700	0.50	5.00	6.00	2008	SMB
1SMB2EZ8.7	8.7	8.27	9.14	2	58.0	700	0.50	4.00	6.60	20A8	SMB
1SMB2EZ9.1	9.1	8.65	9.56	3	55.0	700	0.50	3.00	7.00	2009	SMB
1SMB2EZ10	10	9.50	10.50	4	50.0	700	0.25	3.00	7.60	2010	SMB
1SMB2EZ11	11	10.45	11.55	4	45.5	700	0.25	1.00	8.40	2011	SMB
1SMB2EZ12	12	11.40	12.60	5	41.5	700	0.25	1.00	9.10	2012	SMB
1SMB2EZ13	13	12.35	13.65	5	38.5	700	0.25	0.50	9.90	2013	SMB
1SMB2EZ14	14	13.30	14.70	6	35.7	700	0.25	0.50	10.60	2014	SMB
1SMB2EZ15	15	14.25	15.75	7	33.4	700	0.25	0.50	11.40	2015	SMB
1SMB2EZ16	16	15.20	16.80	8	31.2	700	0.25	0.50	12.20	2016	SMB
1SMB2EZ17	17	16.15	17.85	9	29.4	750	0.25	0.50	13.00	2017	SMB
1SMB2EZ18	18	17.10	18.90	10	27.8	750	0.25	0.50	13.70	2018	SMB
1SMB2EZ19	19	18.05	19.95	11	26.3	750	0.25	0.50	14.40	2019	SMB
1SMB2EZ20	20	19.00	21.00	11	25.0	750	0.25	0.50	15.20	2020	SMB
1SMB2EZ22	22	20.90	23.10	12	22.8	750	0.25	0.50	16.70	2022	SMB
1SMB2EZ24	24	22.80	25.20	13	20.8	750	0.25	0.50	18.20	2024	SMB
1SMB2EZ25	25	23.75	26.25	14	20.0	750	0.25	0.50	19.00	2025	SMB
1SMB2EZ27	27	25.65	28.35	18	18.5	750	0.25	0.50	20.60	2027	SMB
1SMB2EZ28	28	26.60	29.40	18	17.0	750	0.25	0.50	21.30	2028	SMB
1SMB2EZ30	30	28.50	31.50	20	16.6	1000	0.25	0.50	22.50	2030	SMB
1SMB2EZ33	33	31.35	34.65	23	15.1	1000	0.25	0.50	25.10	2033	SMB
1SMB2EZ36	36	34.20	37.80	25	13.9	1000	0.25	0.50	27.40	2036	SMB
1SMB2EZ39	39	37.05	40.95	30	12.8	1000	0.25	0.50	29.70	2039	SMB
1SMB2EZ43	43	40.85	45.15	35	11.6	1500	0.25	0.50	32.70	2043	SMB
1SMB2EZ47	47	44.65	49.35	40	10.6	1500	0.25	0.50	35.80	2047	SMB
1SMB2EZ51	51	48.45	53.55	48	9.8	1500	0.25	0.50	38.80	2051	SMB
1SMB2EZ56	56	53.20	58.80	55	9.0	2000	0.25	0.50	42.60	2056	SMB
1SMB2EZ60	60	57.00	63.00	58	8.5	2000	0.25	0.50	45.60	2060	SMB
1SMB2EZ62	62	58.90	65.10	60	8.1	2000	0.25	0.50	47.10	2062	SMB
1SMB2EZ68	68	64.60	71.40	75	7.4	2000	0.25	0.50	51.70	2068	SMB
1SMB2EZ75	75	71.25	78.75	90	6.7	2000	0.25	0.50	56.00	2075	SMB
1SMB2EZ82	82	77.90	86.10	100	6.1	3000	0.25	0.50	62.20	2082	SMB
1SMB2EZ87	87	82.65	91.35	120	5.8	3000	0.25	0.50	66.10	2087	SMB
1SMB2EZ91	91	86.45	95.55	125	5.5	3000	0.25	0.50	69.20	2091	SMB
1SMB2EZ100	100	95.00	105.00	175	5.0	3000	0.25	0.50	76.00	2100	SMB

**RATINGS AND CHARACTERISTIC CURVES**

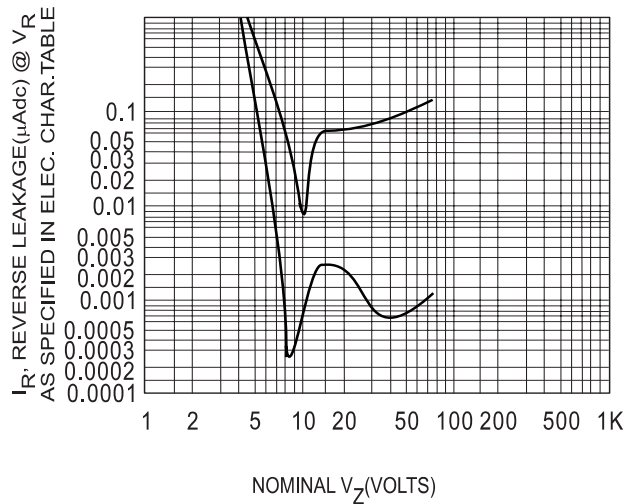
**1SMB2EZ6.8 THRU 1SMB2EZ100**



**FIGURE 1. TYPICAL THERMAL RESPONSE L,**



**FIGURE 2. MAXIMUM SURGE POWER**



**FIGURE 3. TYPICAL REVERSE LEAKAGE**



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GLASS PASSIVATED JUNCTION SILICON ZENER DIODES

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RATINGS AND CHARACTERISTIC CURVES

1SMB2EZ6.8 THRU 1SMB2EZ100

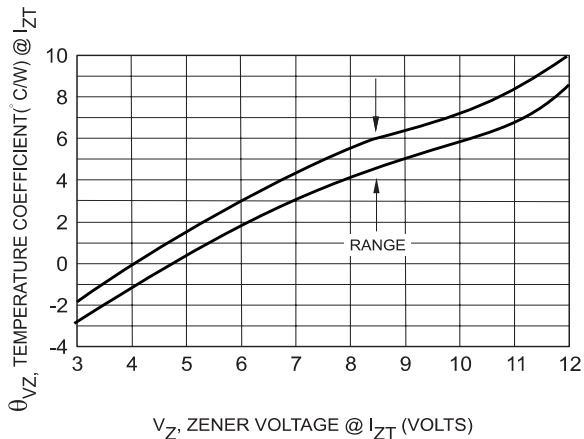


FIGURE 4 . UNITS TO 12 VOLTS

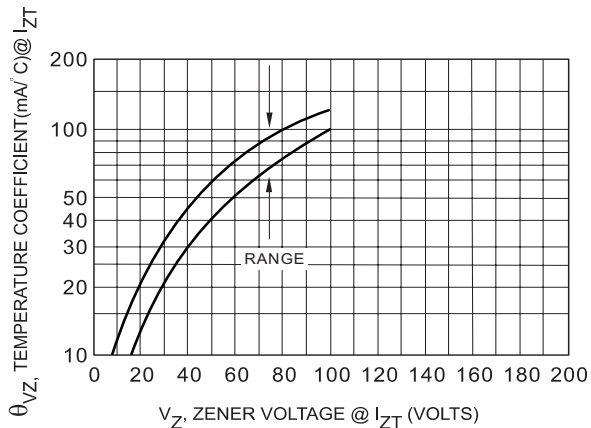


FIGURE 5 . UNIT 10 TO 200 VOLTS

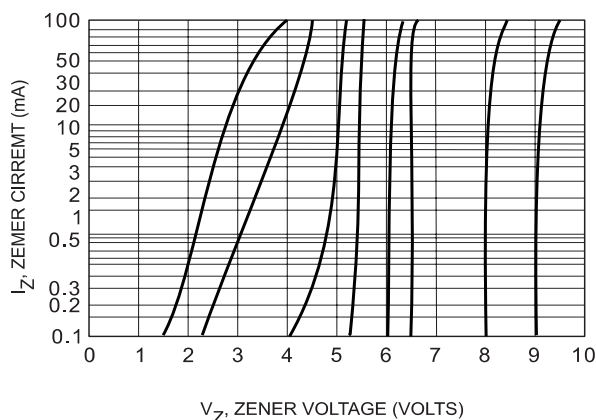


FIGURE 6.  $V_Z = 3.9$  THRU 10 VOLTS

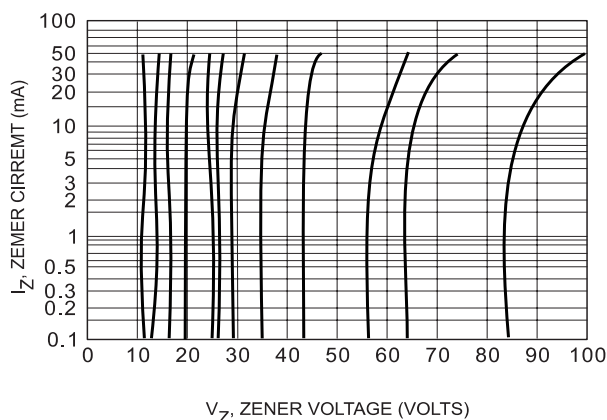


FIGURE 7.  $V_Z = 12$  THRU 82 VOLTS

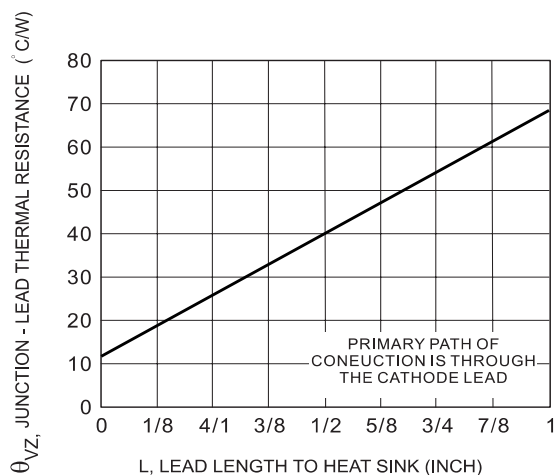


FIGURE 8 . TYPICAL THERMAL RESISTANCE