

SMBJ5918B3~SMBJ5956B3

ZENER DIODES

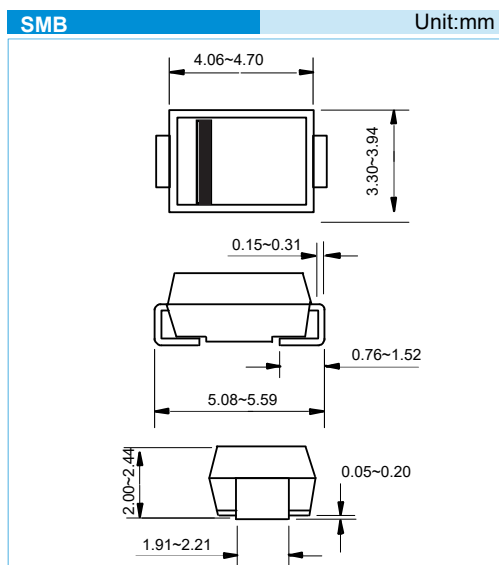
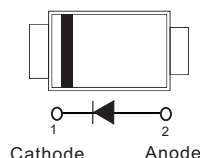
VOLTAGE 5.1 to 200 Volt **POWER** 3.0 Watt

FEATURES

- Flat Handling Surface for Accurate Placement
- Glass Passivated Junction
- Low Profile Package
- Low Zener Impedance
- Lead free in compliance with EU RoHS

MECHANICAL DATA

- Case Material: Molded Plastic.
- UL Flammability Classification Rating 94V-0



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Characteristic	Symbol	Value	Unit
Forward Voltage @ $I_F = 200\text{mA}$	V_F	1.5	V
Power Dissipation	P_d	3.0	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	42	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~+150	°C

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ELECTRICAL CHARACTERISTICS @25°C

MCC PART NUMBER	ZENER VOLTAGE VZ (1)	TEST CURRENT IZT	MAXIMUM DYNAMIC IMPEDANCE ZZT @IZT	KNEE CURRENT IZK	KNEE IMPEDANCE ZZK	MAXIMUM REVERSE CURRENT IR	REVERSE VOLTAGE VR	DEVICE MARKING
	VOLTS	mA	OHMS	mA	OHMS	μA	VOLTS	
SMBJ5918B3	5.1	73.5	4	1	350	5.0	2	H18B
SMBJ5919B3	5.6	66.9	2	1	250	5.0	3	H19B
SMBJ5920B3	6.2	60.5	2	1	200	5.0	4	H20B
SMBJ5921B3	6.8	55.1	2.5	1	200	5.0	5.2	H21B
SMBJ5922B3	7.5	50	3	0.5	400	5.0	6	H22B
SMBJ5923B3	8.2	45.7	3.5	0.5	400	5.0	6.5	H23B
SMBJ5924B3	9.1	41.2	4	0.25	500	5.0	7	H24B
SMBJ5925B3	10	37.5	4.5	0.25	500	5.0	8	H25B
SMBJ5926B3	11	34.1	5.5	0.25	550	1.0	8.4	H26B
SMBJ5927B3	12	31.2	6.5	0.25	550	1.0	9.1	H27B
SMBJ5928B3	13	28.8	7	0.25	550	1.0	9.9	H28B
SMBJ5929B3	15	25	9	0.25	600	1.0	11.4	H29B
SMBJ5930B3	16	23.4	10	0.25	600	1.0	12.2	H30B
SMBJ5931B3	18	20.8	12	0.25	650	1.0	13.7	H31B
SMBJ5932B3	20	18.7	14	0.25	650	1.0	15.2	H32B
SMBJ5933B3	22	17	17.5	0.25	650	1.0	16.7	H33B
SMBJ5934B3	24	15.6	19	0.25	700	1.0	18.2	H34B
SMBJ5935B3	27	13.9	23	0.25	700	1.0	20.6	H35B
SMBJ5936B3	30	12.5	28	0.25	750	1.0	22.8	H36B
SMBJ5937B3	33	11.4	33	0.25	800	1.0	25.1	H37B
SMBJ5938B3	36	10.4	38	0.25	850	1.0	27.4	H38B
SMBJ5939B3	39	9.6	45	0.25	900	1.0	29.7	H39B
SMBJ5940B3	43	8.7	53	0.25	950	1.0	32.7	H40B
SMBJ5941B3	47	8	67	0.25	1000	1.0	35.8	H41B
SMBJ5942B3	51	7.3	70	0.25	1100	1.0	38.8	H42B
SMBJ5943B3	56	6.7	86	0.25	1300	1.0	42.6	H43B
SMBJ5944B3	62	6	100	0.25	1500	1.0	47.1	H44B
SMBJ5945B3	68	5.5	120	0.25	1700	1.0	51.7	H45B
SMBJ5946B3	75	5	140	0.25	2000	1.0	56	H46B
SMBJ5947B3	82	4.6	160	0.25	2500	1.0	62.2	H47B
SMBJ5948B3	91	4.1	200	0.25	3000	1.0	69.2	H48B
SMBJ5949B3	100	3.7	250	0.25	3100	1.0	76	H49B
SMBJ5950B3	110	3.4	300	0.25	4000	1.0	83.6	H50B
SMBJ5951B3	120	3.1	380	0.25	4500	1.0	91.2	H51B
SMBJ5952B3	130	2.9	450	0.25	5000	1.0	98.8	H52B
SMBJ5953B3	150	2.5	600	0.25	6000	1.0	114	H53B
SMBJ5954B3	160	2.3	700	0.25	6500	1.0	121.6	H54B
SMBJ5955B3	180	2.1	900	0.25	7000	1.0	136.8	H55B
SMBJ5956B3	200	1.9	1200	0.25	8000	1.0	152	H56B

1) TOLERANCE AND VOLTAGE DESIGNATION - The type numbers listed indicate a tolerance of +/- 5%.

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RATING AND CHARACTERISTIC CURVES

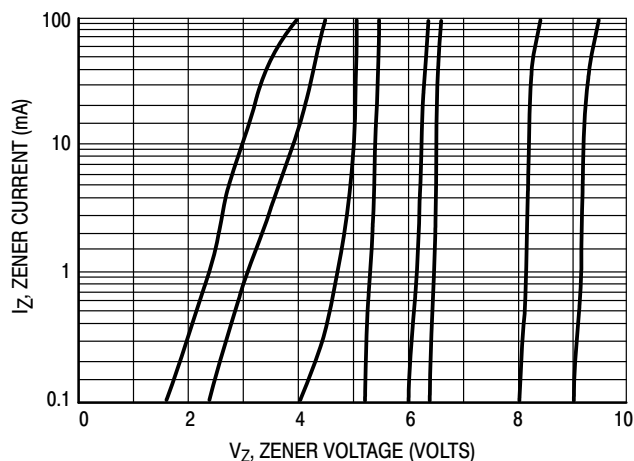


Figure 1. V_Z – 5.1 thru 10 Volts

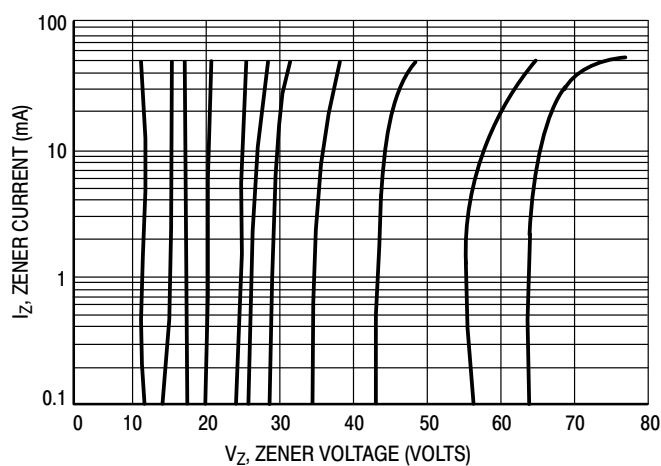


Figure 2. V_Z = 12 thru 68 Volts

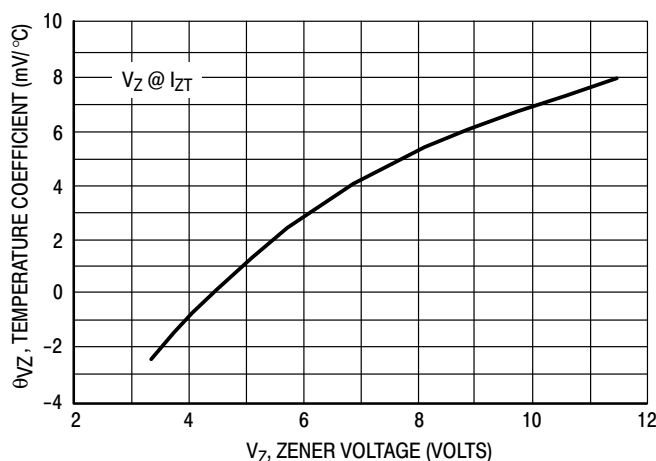


Figure 3. Zener Voltage – 5.1 to 12 Volts

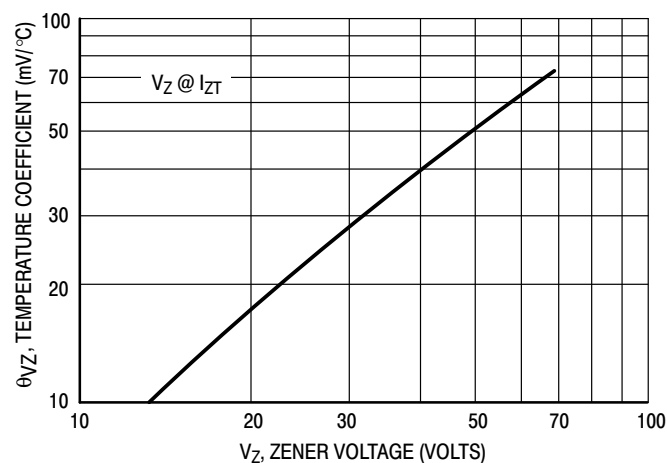


Figure 4. Zener Voltage – 12 to 68 Volts

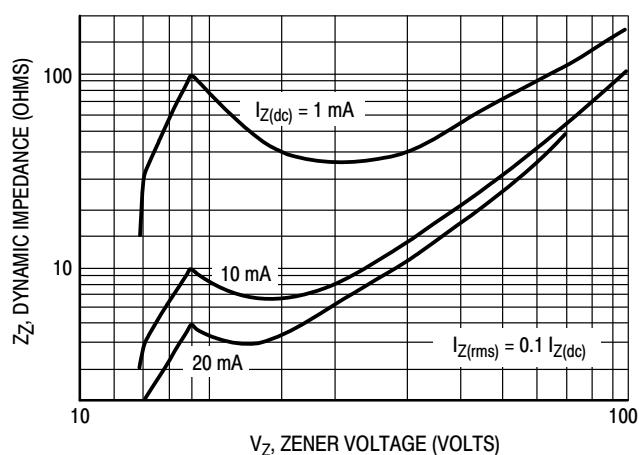


Figure 5. Effect of Zener Voltage

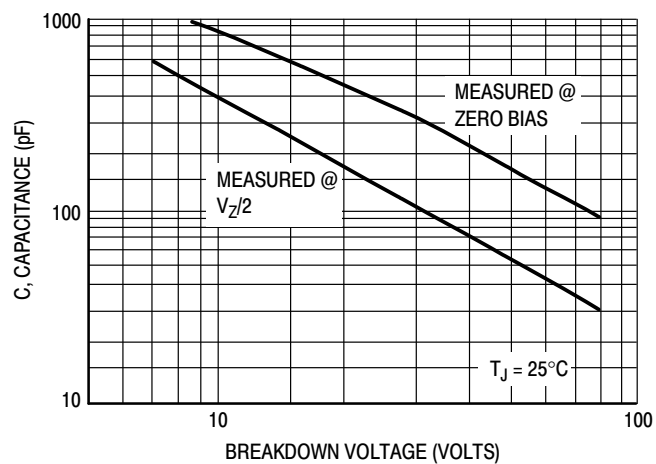


Figure 6. Capacitance Curve

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RATING AND CHARACTERISTIC CURVES

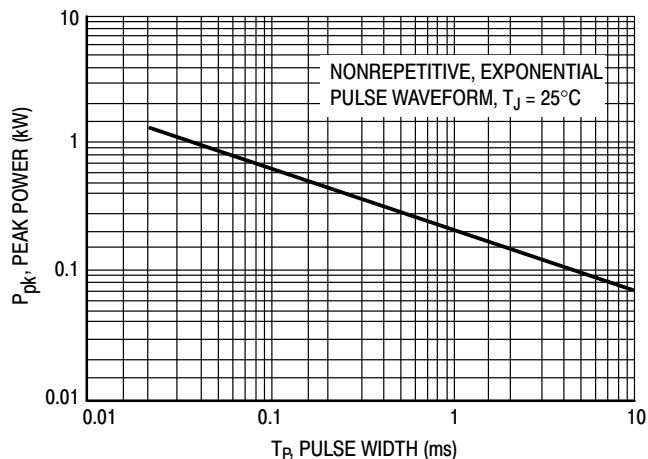


Figure 7. Typical Pulse Rating Curve

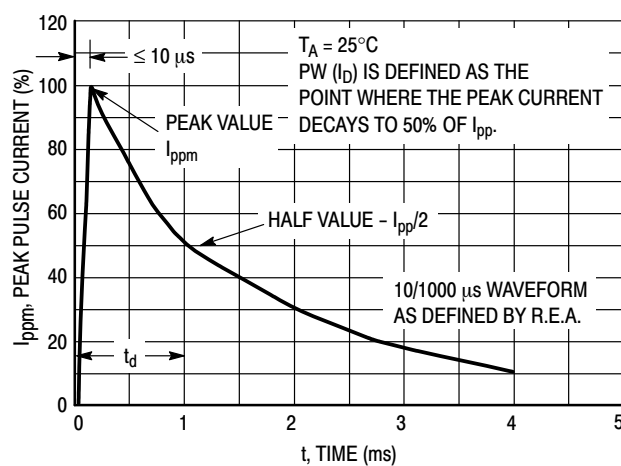


Figure 8. Pulse Waveform

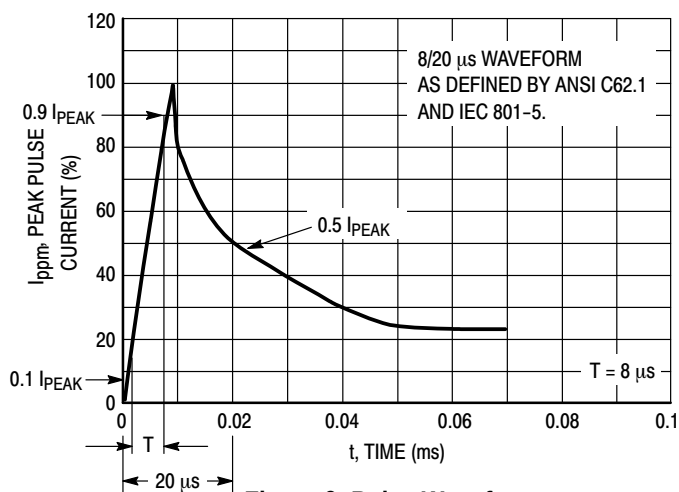


Figure 9. Pulse Waveform

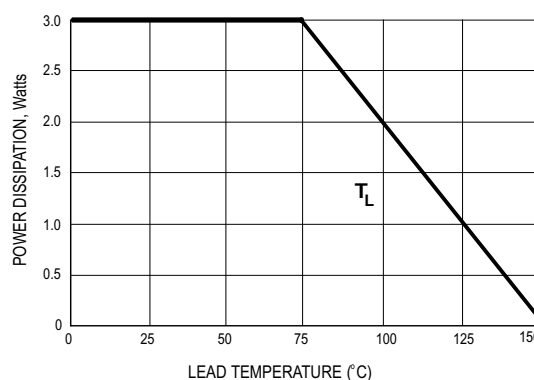


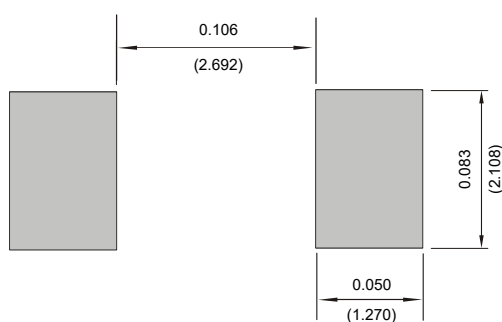
Figure 10. Steady state power derating

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MOUNTING PAD LAYOUT

SMB / DO-214AA

Unit:Inch(mm)



ORDER INFORMATION

• Packing information

Part Number	Case	Reel Size	QUANTITY
SMBJ5918B3~SMBJ5956B3	SMB	13 Inch	3000