

SMBJ5918B~SMBJ5956B

ZENER DIODES

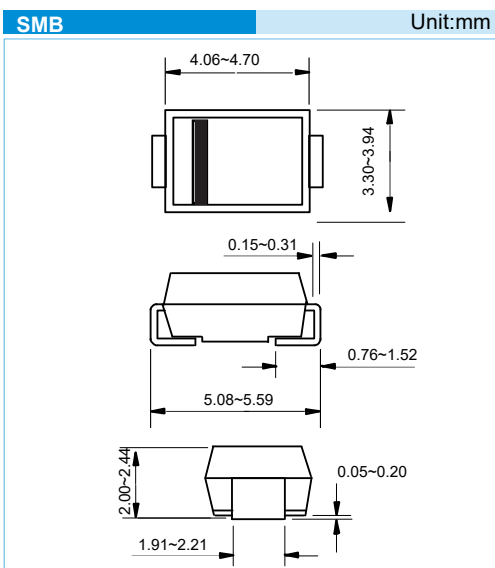
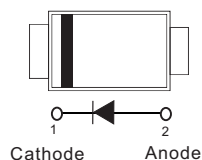
VOLTAGE 5.1 to 200 Volt **POWER** 1.5 Watt

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	1.5	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	83	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~+150	°C

SMBJ5918B~SMBJ5956B

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	
SMBJ5918B	5.1	73.5	4	1	350	5.0	2	18B
SMBJ5919B	5.6	66.9	2	1	250	5.0	3	19B
SMBJ5920B	6.2	60.5	2	1	200	5.0	4	20B
SMBJ5921B	6.8	55.1	2.5	1	200	5.0	5.2	21B
SMBJ5922B	7.5	50	3	0.5	400	5.0	6	22B
SMBJ5923B	8.2	45.7	3.5	0.5	400	5.0	6.5	23B
SMBJ5924B	9.1	41.2	4	0.25	500	5.0	7	24B
SMBJ5925B	10	37.5	4.5	0.25	500	5.0	8	25B
SMBJ5926B	11	34.1	5.5	0.25	550	1.0	8.4	26B
SMBJ5927B	12	31.2	6.5	0.25	550	1.0	9.1	27B
SMBJ5928B	13	28.8	7	0.25	550	1.0	9.9	28B
SMBJ5929B	15	25	9	0.25	600	1.0	11.4	29B
SMBJ5930B	16	23.4	10	0.25	600	1.0	12.2	30B
SMBJ5931B	18	20.8	12	0.25	650	1.0	13.7	31B
SMBJ5932B	20	18.7	14	0.25	650	1.0	15.2	32B
SMBJ5933B	22	17	17.5	0.25	650	1.0	16.7	33B
SMBJ5934B	24	15.6	19	0.25	700	1.0	18.2	34B
SMBJ5935B	27	13.9	23	0.25	700	1.0	20.6	35B
SMBJ5936B	30	12.5	28	0.25	750	1.0	22.8	36B
SMBJ5937B	33	11.4	33	0.25	800	1.0	25.1	37B
SMBJ5938B	36	10.4	38	0.25	850	1.0	27.4	38B
SMBJ5939B	39	9.6	45	0.25	900	1.0	29.7	39B
SMBJ5940B	43	8.7	53	0.25	950	1.0	32.7	40B
SMBJ5941B	47	8	67	0.25	1000	1.0	35.8	41B
SMBJ5942B	51	7.3	70	0.25	1100	1.0	38.8	42B
SMBJ5943B	56	6.7	86	0.25	1300	1.0	42.6	43B
SMBJ5944B	62	6	100	0.25	1500	1.0	47.1	44B
SMBJ5945B	68	5.5	120	0.25	1700	1.0	51.7	45B
SMBJ5946B	75	5	140	0.25	2000	1.0	56	46B
SMBJ5947B	82	4.6	160	0.25	2500	1.0	62.2	47B
SMBJ5948B	91	4.1	200	0.25	3000	1.0	69.2	48B
SMBJ5949B	100	3.7	250	0.25	3100	1.0	76	49B
SMBJ5950B	110	3.4	300	0.25	4000	1.0	83.6	50B
SMBJ5951B	120	3.1	380	0.25	4500	1.0	91.2	51B
SMBJ5952B	130	2.9	450	0.25	5000	1.0	98.8	52B
SMBJ5953B	150	2.5	600	0.25	6000	1.0	114	53B
SMBJ5954B	160	2.3	700	0.25	6500	1.0	121.6	54B
SMBJ5955B	180	2.1	900	0.25	7000	1.0	136.8	55B
SMBJ5956B	200	1.9	1200	0.25	8000	1.0	152	56B

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

SMBJ5918B~SMBJ5956B

RATING AND CHARACTERISTIC CURVES

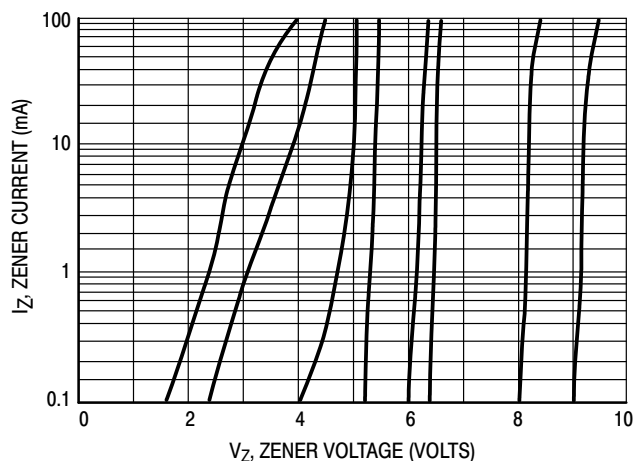


Figure 1. V_Z – 5.1 thru 10 Volts

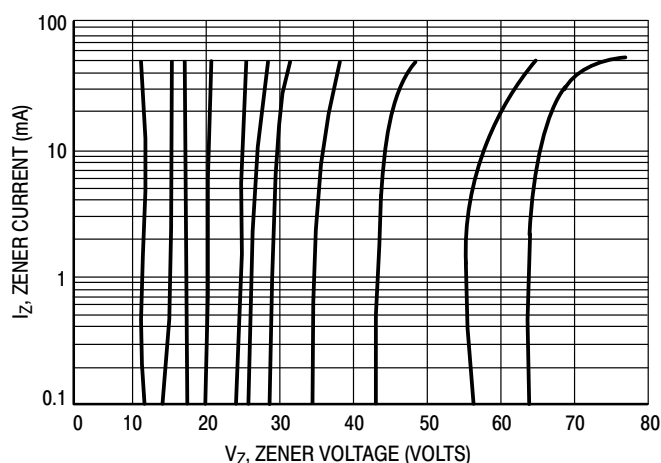


Figure 2. V_Z = 12 thru 68 Volts

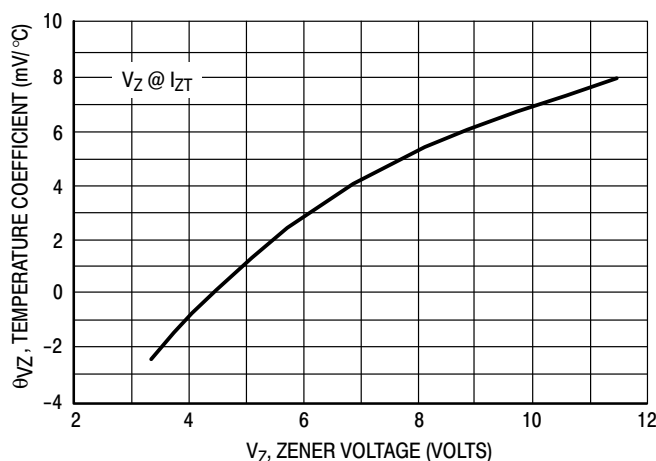


Figure 3. Zener Voltage – 5.1 to 12 Volts

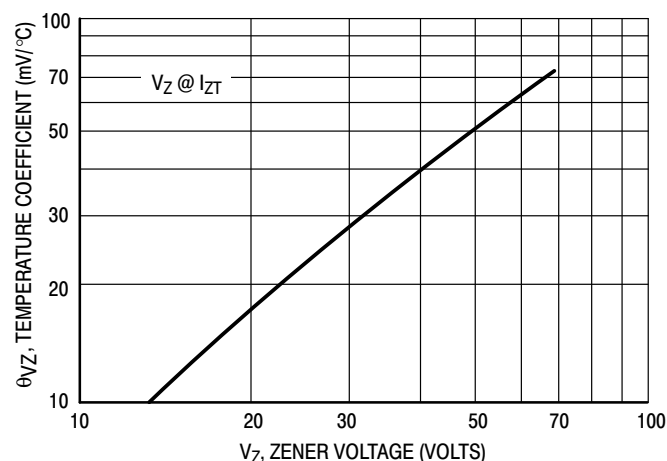


Figure 4. Zener Voltage – 12 to 68 Volts

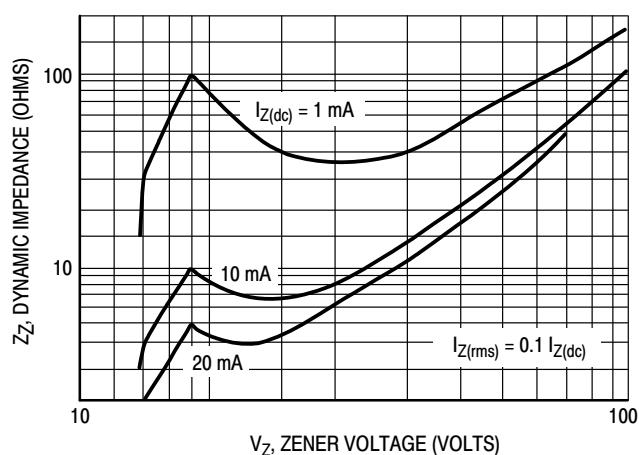


Figure 5. Effect of Zener Voltage

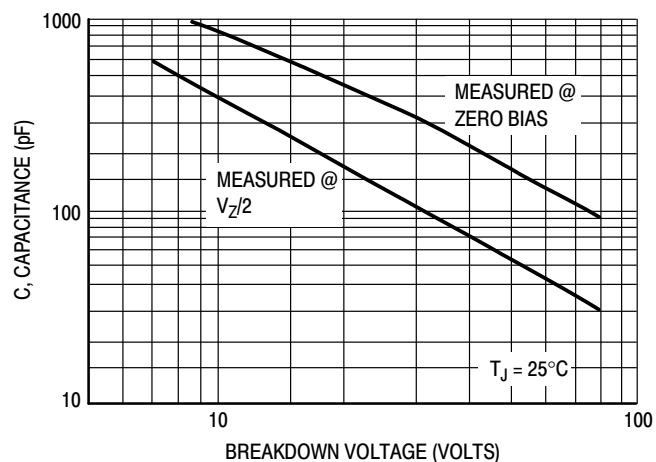


Figure 6. Capacitance Curve

SMBJ5918B~SMBJ5956B

RATING AND CHARACTERISTIC CURVES

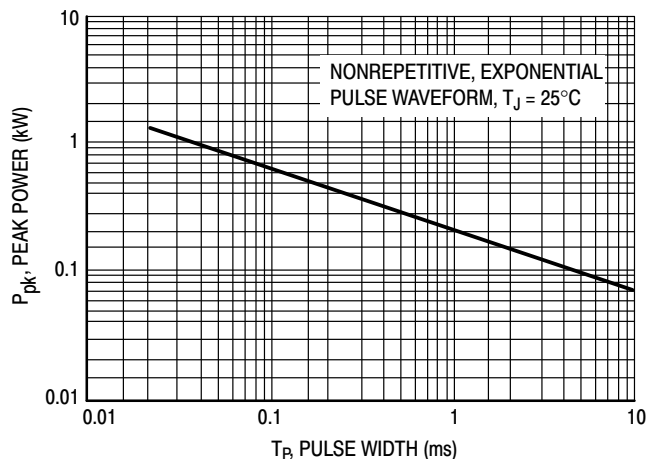


Figure 7. Typical Pulse Rating Curve

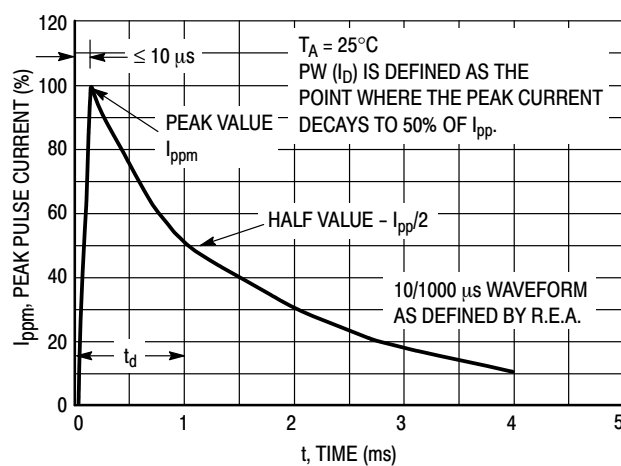


Figure 8. Pulse Waveform

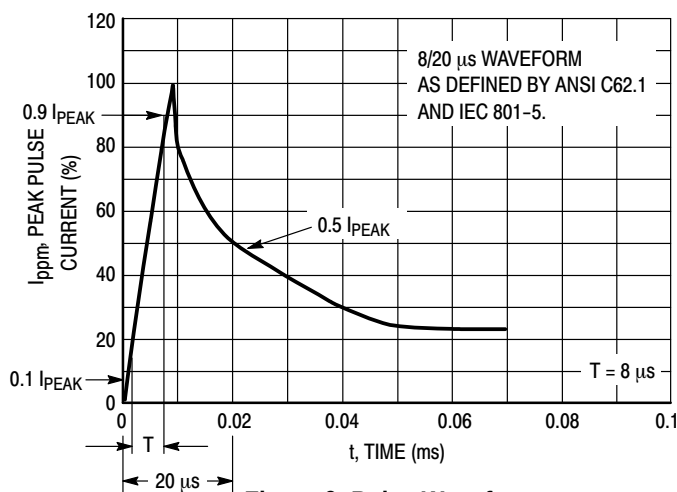


Figure 9. Pulse Waveform

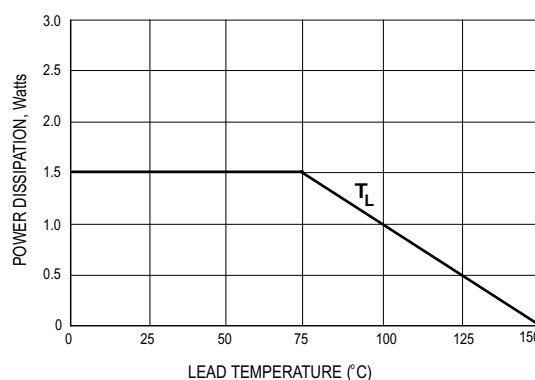


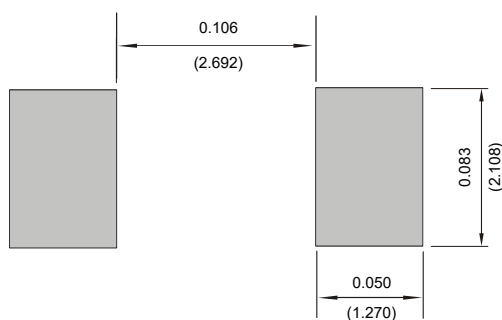
Figure 10. Steady state power derating

SMBJ5918B~SMBJ5956B

MOUNTING PAD LAYOUT

SMB / DO-214AA

Unit:Inch(mm)



ORDER INFORMATION

• Packing information

Part Number	Case	Reel Size	QUANTITY
SMBJ5918B~SMBJ5956B	SMB	13 Inch	3000