



V_Z : 3.3 - 240 Volts
P_D : 1.5 Watts



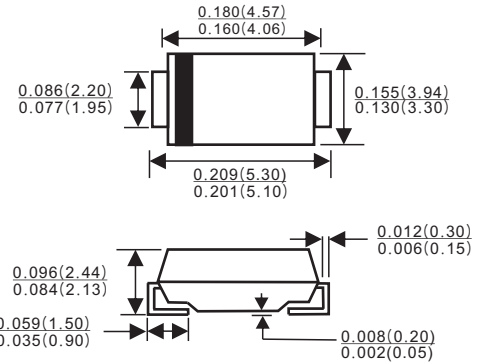
Features

- ✧ Complete Voltage Range 3.3 to 240 Volts
- ✧ High peak reverse power dissipation
- ✧ High reliability
- ✧ Low leakage current

Mechanical Data

- ✧ Case : SMA (DO-214AC) Molded plastic
- ✧ Epoxy : UL94V-O rate flame retardant
- ✧ Lead : Lead formed for Surface mount
- ✧ Polarity : Color band denotes cathode end
- ✧ Mounting position : Any
- ✧ Weight : 0.093 gram

SMB/DO-214AA



Dimensions in inches and(millimeters)

MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified

Rating	Symbol	Value	Unit
DC Power Dissipation at T _L = 75 °C (Note1)	P _D	1.5	Watts
Maximum Forward Voltage at I _F = 200 mA	V _F	1.5	Volts
Junction Temperature Range	T _J	- 55 to + 150	°C
Storage Temperature Range	T _s	- 55 to + 150	°C

Note :

(1) T_L = Lead temperature at 5.0 mm² (0.013 mm thick) copper land areas.



ELECTRICAL CHARACTERISTICS

Rating at = 25 °C ambient temperature unless otherwise specified

Type	Marking	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
		VZ @ IZT	IZT	ZZT @ IZT	ZZK @ IZK	IZK	IR @ VR		
		(V)	(mA)	(Ω)	(Ω)	(mA)	(A)	(V)	
1SMB5913B	913B	3.3	113.6	10	500	1.0	100	1.0	454
1SMB5914B	914B	3.6	104.2	9.0	500	1.0	75	1.0	416
1SMB5915B	915B	3.9	96.1	7.5	500	1.0	25	1.0	384
1SMB5916B	916B	4.3	87.2	6.0	500	1.0	5.0	1.0	348
1SMB5917B	917B	4.7	79.8	5.0	500	1.0	5.0	1.5	319
1SMB5918B	918B	5.1	73.5	4.0	500	1.0	5.0	2.0	294
1SMB5919B	919B	5.6	66.9	2.0	250	1.0	5.0	3.0	267
1SMB5920B	920B	6.2	60.5	2.0	200	1.0	5.0	4.0	241
1SMB5921B	921B	6.8	55.1	2.5	200	1.0	5.0	5.2	220
1SMB5922B	922B	7.5	50.0	3.0	400	0.5	5.0	6.0	200
1SMB5923B	923B	8.2	45.7	3.5	400	0.5	5.0	6.5	182
1SMB5924B	924B	9.1	41.2	4.0	500	0.5	5.0	7.0	164
1SMB5925B	925B	10	37.5	4.5	500	0.25	5.0	8.0	150
1SMB5926B	926B	11	34.1	5.5	550	0.25	5.0	8.4	136
1SMB5927B	927B	12	31.2	6.5	550	0.25	0.0	9.1	125
1SMB5928B	928A	13	28.8	7.0	550	0.25	1.0	9.9	115
1SMB5929B	929B	15	25.0	9.0	600	0.25	1.0	11.4	100
1SMB5930B	930B	16	23.4	10	600	0.25	1.0	12.2	93
1SMB5931B	931B	18	20.8	12	650	0.25	1.0	13.7	83
1SMB5932B	932B	20	18.7	14	650	0.25	1.0	15.2	75
1SMB5933B	933B	22	17.0	17.5	650	0.25	1.0	16.7	68
1SMB5934B	934B	24	15.6	19	700	0.25	1.0	18.2	62
1SMB5935B	935B	27	13.9	23	700	0.25	1.0	20.6	55
1SMB5936B	936B	30	12.5	26	750	0.25	1.0	22.8	50
1SMB5937B	937B	33	11.4	33	800	0.25	1.0	25.1	45
1SMB5938B	938B	36	10.4	38	850	0.25	1.0	27.4	41
1SMB5939B	939B	39	9.6	45	900	0.25	1.0	29.7	38
1SMB5940B	940B	43	8.7	53	950	0.25	1.0	32.7	34
1SMB5941B	941B	47	8.0	67	1000	0.25	1.0	35.8	31
1SMB5942B	942B	51	7.3	70	1100	0.25	1.0	38.8	29
1SMB5943B	943B	56	6.7	86	1300	0.25	1.0	42.6	26
1SMB5944B	944B	62	6.0	100	1500	0.25	1.0	47.1	24
1SMB5945B	945B	68	5.5	120	1700	0.25	1.0	51.7	22
1SMB5946B	946B	75	5.0	140	2000	0.25	1.0	56.0	20
1SMB5947B	947B	82	4.6	160	2500	0.25	1.0	62.2	18
1SMB5948B	948B	91	4.1	200	3000	0.25	1.0	69.2	16
1SMB5949B	949B	100	3.7	250	3100	0.25	1.0	76.0	15
1SMB5950B	950B	110	3.4	300	4000	0.25	1.0	83.6	13
1SMB5951B	951B	120	3.1	380	4500	0.25	1.0	91.2	12
1SMB5952B	952B	130	2.9	450	5000	0.25	1.0	98.8	11
1SMB5953B	953B	150	2.5	600	6000	0.25	1.0	114.0	10
1SMB5954B	954B	160	2.3	700	6500	0.25	1.0	121.6	9.0
1SMB5955B	955B	180	2.1	900	7000	0.25	1.0	136.8	8.0
1SMB5956A	956B	200	1.9	1200	8000	0.25	1.0	152.0	7.0
1SMB5957B	957B	240	1.5	1600	9000	0.25	1.0	182.4	6.0

Note :

(1) Suffix " A " indicates ± 10% tolerance, suffix " B " indicates ± 5.0% tolerance.



RATING AND TYPICAL CHARACTERISTIC CURVES ($T_A = 25^\circ\text{C}$)

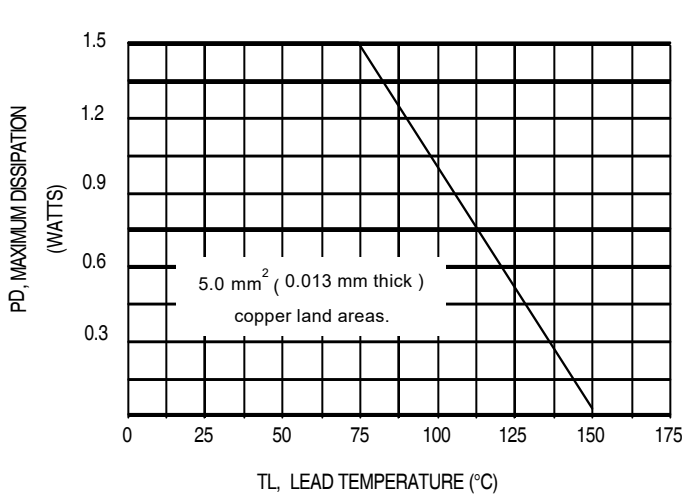


Figure 1. POWER TEMPERATURE DERATING CURVE

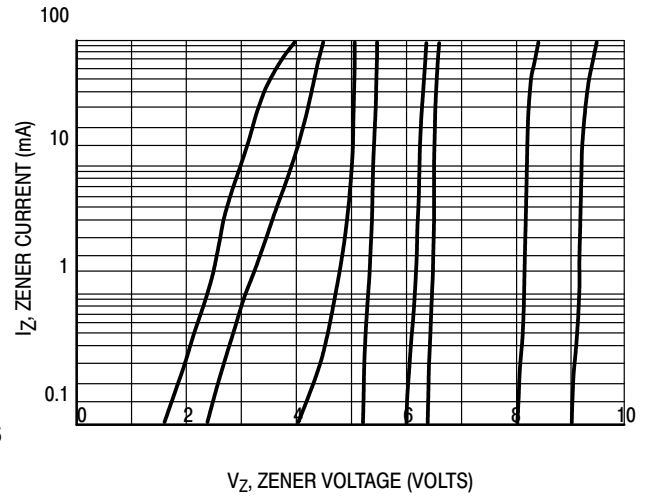


Figure 2. V_Z - 3.3 thru 10 Volts

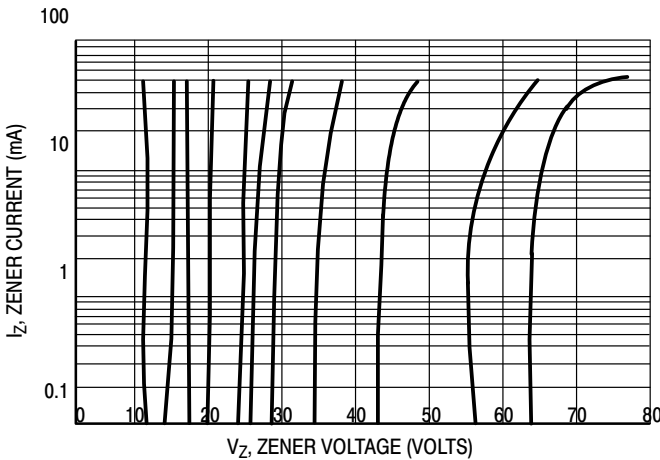


Figure 3. $V_Z = 12$ thru 68 Volts

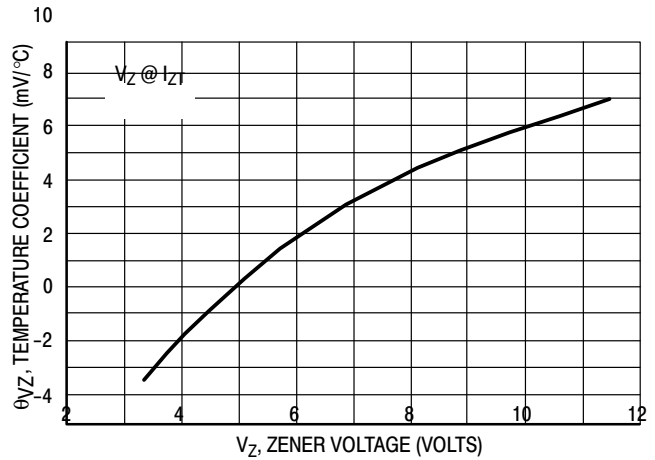


Figure 4. Zener Voltage - 3.3 to 12 Volts

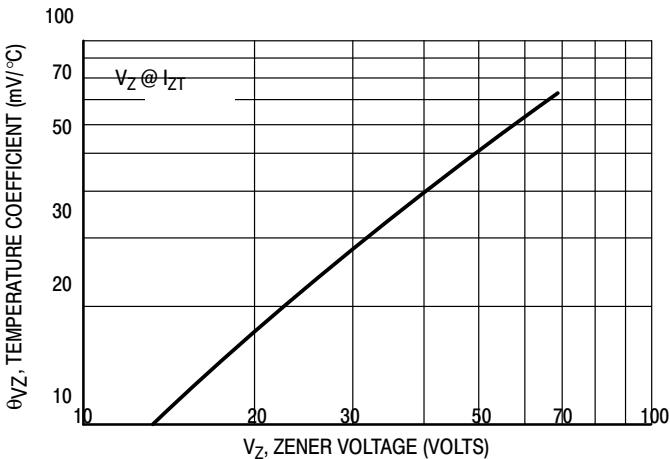


Figure 5. Zener Voltage - 12 to 68 Volts

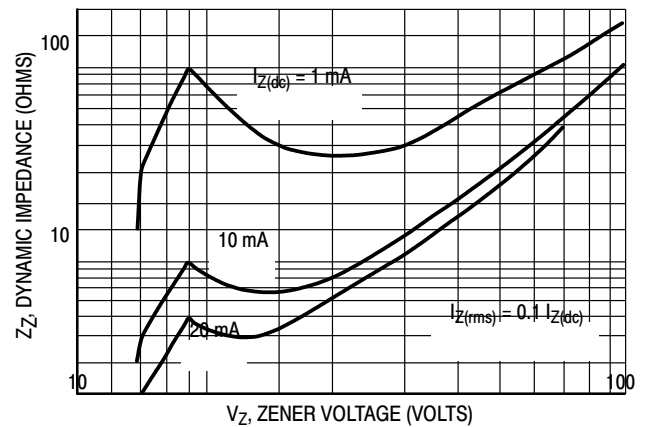


Figure 6. Effect of Zener Voltage



RATING AND TYPICAL CHARACTERISTIC CURVES ($T_A = 25^\circ\text{C}$)

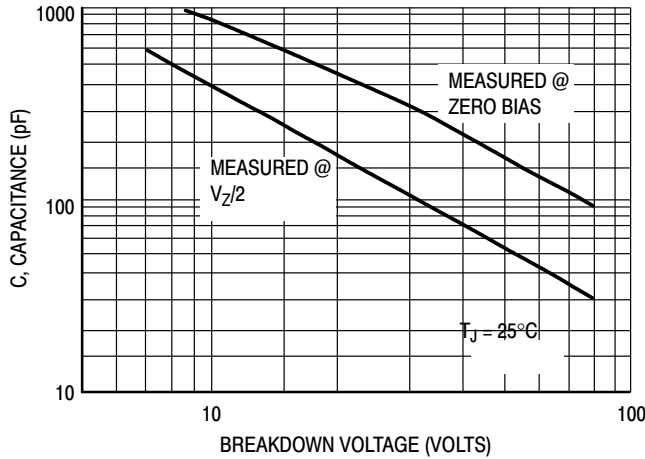


Figure 7. Capacitance Curve

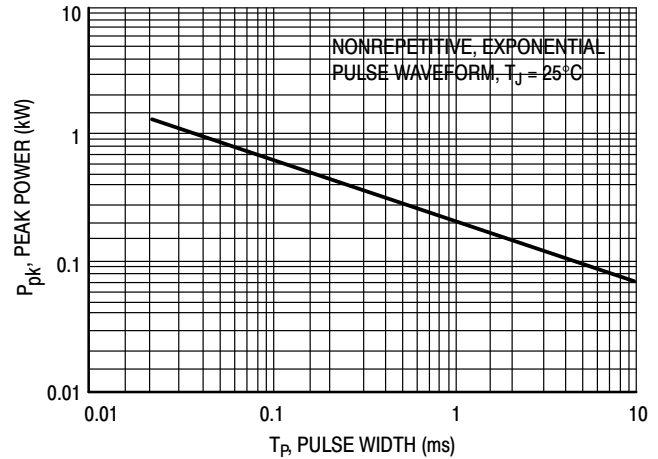


Figure 8. Typical Pulse Rating Curve

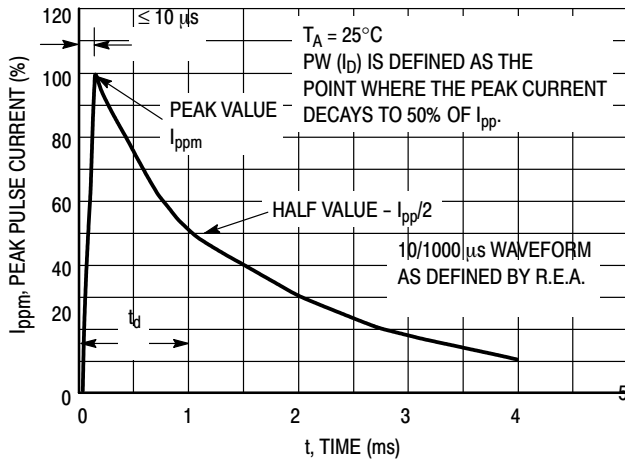


Figure 9. Pulse Waveform

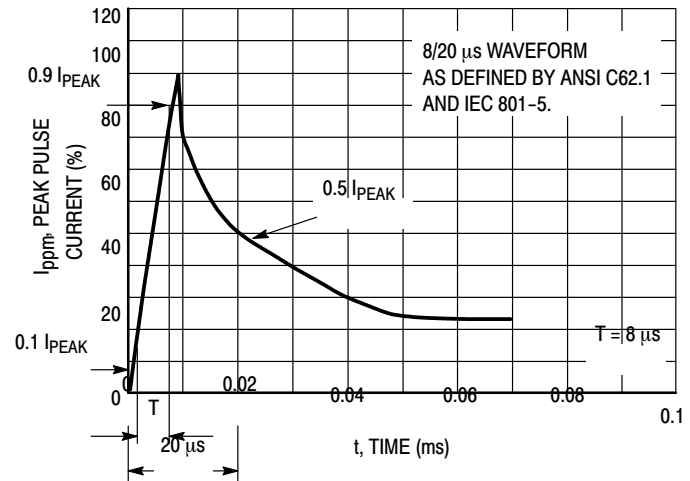


Figure 10. Pulse Waveform

PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMB	3000/REEL	48000	36X35.8X36.5	12.00	11.00