

V_Z : 5.6 to 200 V

P_D : 1.5 W

Features

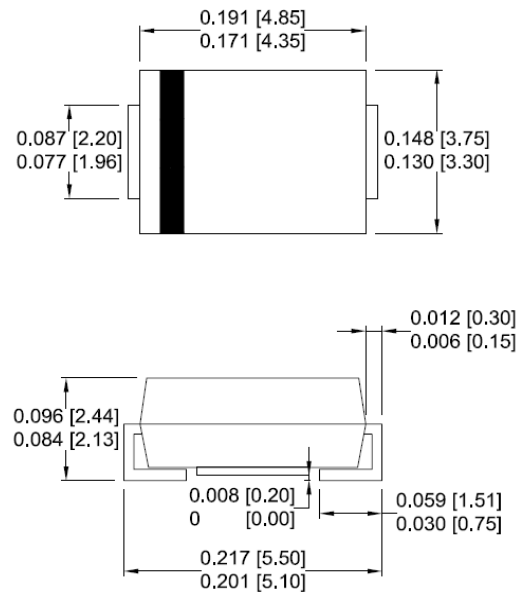
- Glass passivated chip
- Low leakage
- Built-in strain relief
- Low inductance
- High peak reverse power dissipation
- Lead (Pb)-free component
- For use in stabilizing and clipping circuits with high power rating

Mechanical Data

- Case: 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

Surface Mount Zener Diodes

SMB/ DO-214AA



Dimensions: inch[mm]

Maximum Ratings($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
DC power dissipation at $T_L = 75^{\circ}\text{C}$	P_D	1.5	W
Maximum forward voltage at $I_F = 200\text{ mA}$	V_F	1.5	V
Junction temperature range	T_J	- 55 to + 175	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	- 55 to + 175	$^{\circ}\text{C}$

Ratings and Characteristics Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

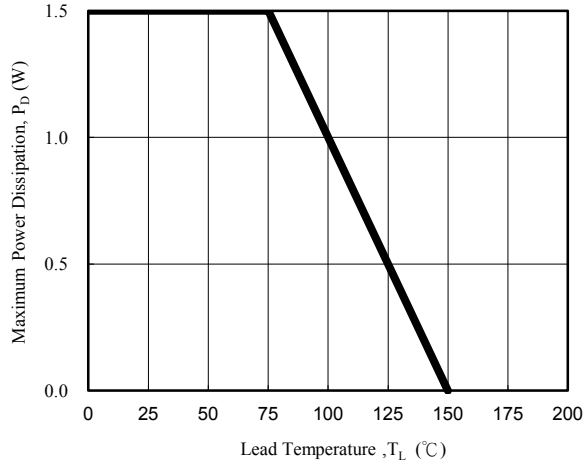


Fig. 1 - Power Temperature Derating Curve

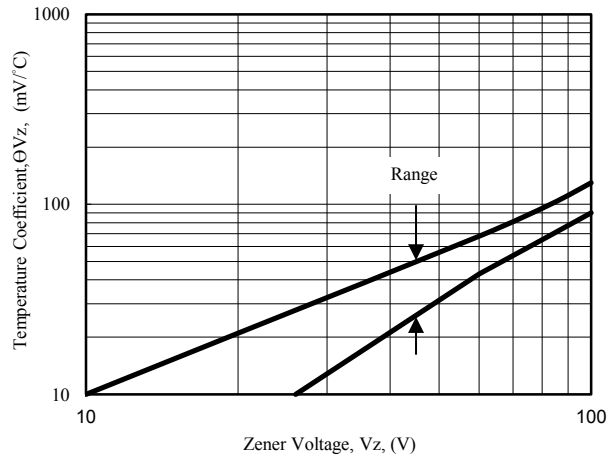


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

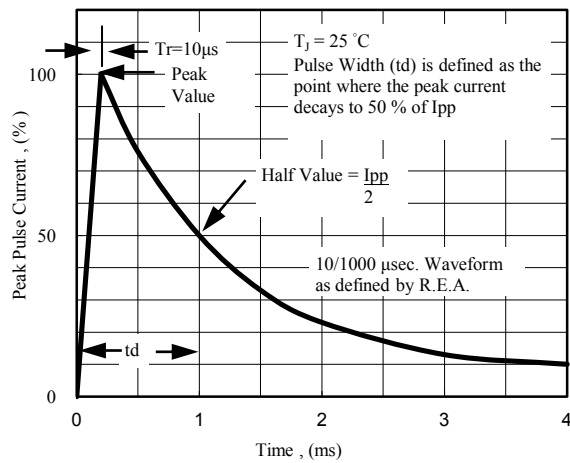


Fig. 3 - Pulse Waveform

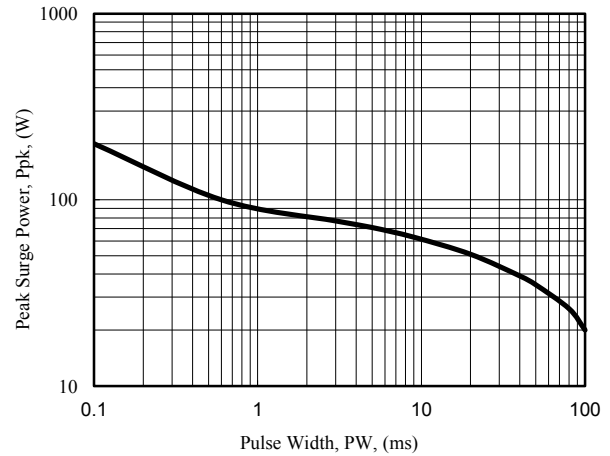


Fig. 4 - Maximum Surge Power

Electrical Characteristics($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Part Number	Device Marking Code	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
		$V_Z @ I_{ZT}$	I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	I_{ZK}	$I_R @ V_R$		I_{ZM}
		(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
SMB5919B	919B	5.6	66.9	2.0	250	1.00	5.0	3.0	267
SMB5920B	920B	6.2	60.5	2.0	200	1.00	2.5	4.0	240
SMB5921B	921B	6.8	55.1	2.5	200	1.00	2.5	5.2	220
SMB5922B	922B	7.5	50.0	3.0	400	0.50	2.5	6.0	200
SMB5923B	923B	8.2	45.7	3.5	400	0.50	2.5	6.5	182
SMB5924B	924B	9.1	41.2	4.0	500	0.50	2.5	7.0	164
SMB5925B	925B	10.0	37.5	4.5	500	0.25	2.5	8.0	150
SMB5926B	926B	11.0	34.1	5.5	550	0.25	0.5	8.4	136
SMB5927B	927B	12.0	31.2	6.5	550	0.25	0.5	9.1	125
SMB5928B	928B	13.0	28.8	7.0	550	0.25	0.5	9.9	115
SMB5929B	929B	15.0	25.0	9.0	600	0.25	0.5	11.4	100
SMB5930B	930B	16.0	23.4	10.0	600	0.25	0.5	12.2	93
SMB5931B	931B	18.0	20.8	12.0	650	0.25	0.5	13.7	83
SMB5932B	932B	20.0	18.7	14.0	650	0.25	0.5	15.2	75
SMB5933B	933B	22.0	17.0	17.5	650	0.25	0.5	16.7	68
SMB5934B	934B	24.0	15.6	19.0	700	0.25	0.5	18.2	62
SMB5935B	935B	27.0	13.9	23.0	700	0.25	0.5	20.6	55
SMB5936B	936B	30.0	12.5	26.0	750	0.25	0.5	22.8	50
SMB5937B	937B	33.0	11.4	33.0	800	0.25	0.5	25.1	45
SMB5938B	938B	36.0	10.4	38.0	850	0.25	0.5	27.4	41
SMB5939B	939B	39.0	9.6	45.0	900	0.25	0.5	29.7	38
SMB5940B	940B	43.0	8.7	53.0	950	0.25	0.5	32.7	34
SMB5941B	941B	47.0	8.0	67.0	1000	0.25	0.5	35.8	31
SMB5942B	942B	51.0	7.3	70.0	1100	0.25	0.5	38.8	29
SMB5943B	943B	56.0	6.7	86.0	1300	0.25	0.5	42.6	26
SMB5944B	944B	62.0	6.0	100.0	1500	0.25	0.5	47.1	24
SMB5945B	945B	68.0	5.5	120.0	1700	0.25	0.5	51.7	22
SMB5946B	946B	75.0	5.0	140.0	2000	0.25	0.5	56.0	20
SMB5947B	947B	82.0	4.6	160.0	2500	0.25	0.5	62.2	18
SMB5948B	948B	91.0	4.1	200.0	3000	0.25	0.5	69.2	16
SMB5949B	949B	100.0	3.7	250.0	3100	0.25	0.5	76.0	15
SMB5950B	950B	110.0	3.4	300.0	4000	0.25	0.5	83.6	13
SMB5951B	951B	120.0	3.1	380.0	4500	0.25	0.5	91.2	12
SMB5952B	952B	130.0	2.9	450.0	5000	0.25	0.5	98.8	11
SMB5953B	953B	150.0	2.5	600.0	6000	0.25	0.5	114.0	10
SMB5954B	954B	160.0	2.3	700.0	6500	0.25	0.5	121.6	9
SMB5955B	955B	180.0	2.1	900.0	7000	0.25	0.5	136.8	8
SMB5956B	956B	200.0	1.9	1200.0	8000	0.25	0.5	152.0	7

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 IZT per JEDEC Method