

V_Z: 3.3 to 200 V

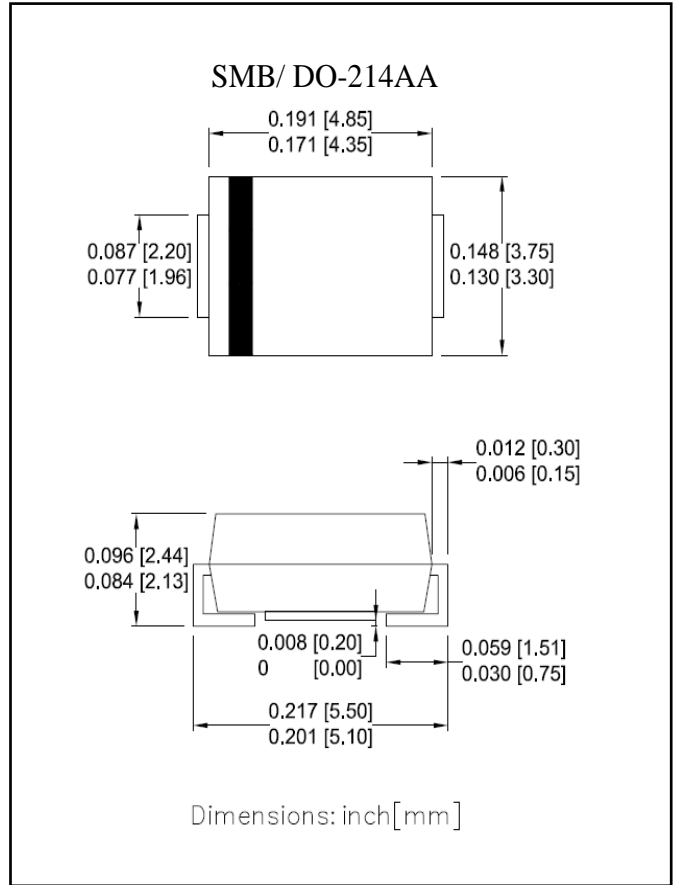
P_D: 3 W

Features

- Glass passivated chip
- Low leakage
- Built-in strain relief
- Low inductance
- High peak reverse power dissipation
- For use in stabilizing and clipping with high power rating
- RoHS compliant

Mechanical Data

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solderable per MIL-STD-750, method 2026 guaranteed
- Polarity: Color band denotes cathode end
- Mounting position: Any



Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	UNIT
DC power dissipation at T _L = 50 °C ⁽¹⁾	P _D	3	W
Maximum forward voltage at I _F = 200 mA	V _F	1.5	V
Junction temperature range	T _J	- 55 to + 150	°C
Storage temperature range	T _{STG}	- 55 to + 150	°C

Note:

(1) T_L = Lead temperature at 3/8 " (9.5mm) from body

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

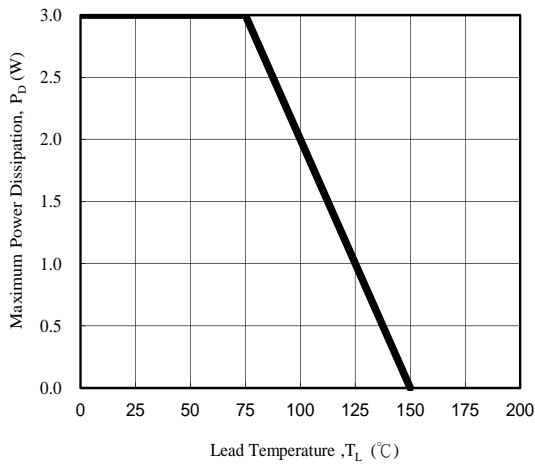


Fig. 1 - Power Temperature Derating Curve

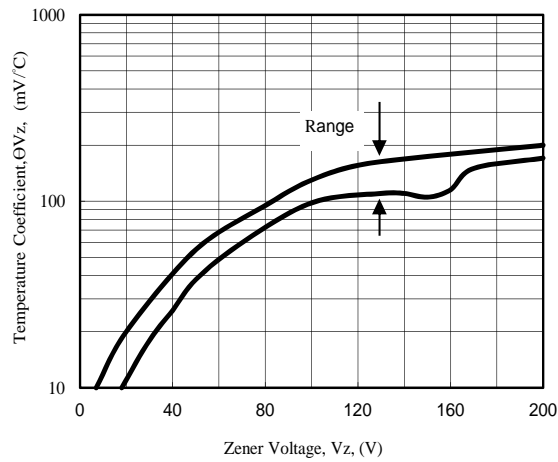


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

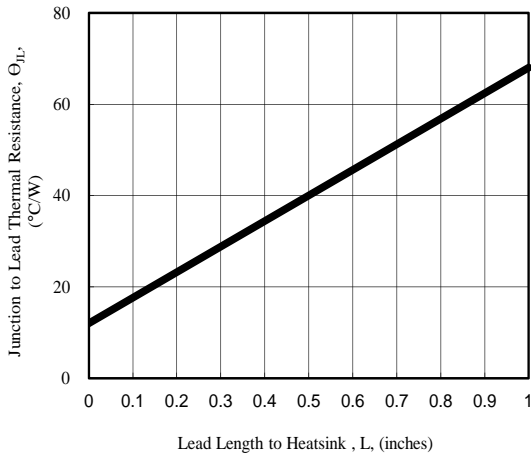


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

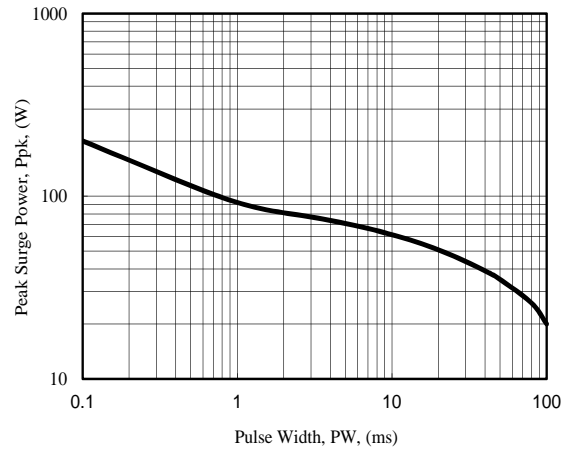


Fig. 4 - Maximum Surge Power

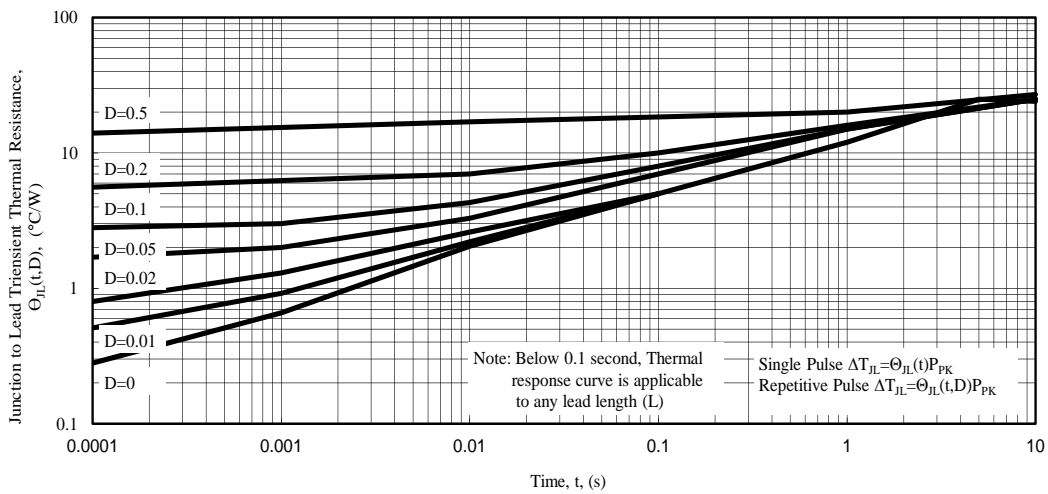


Fig. 5 - Typical Thermal Response L, Lead Length=3/8inch

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)
TSMB3EZ3.3D5	3H0	3.3	113.6	10.0	500	1.00	100.0	1.0	817
TSMB3EZ3.6D5	3H1	3.6	104.2	9.0	500	1.00	75.0	1.0	749
TSMB3EZ3.9D5	3H2	3.9	192.0	4.5	400	1.00	80.0	1.0	691
TSMB3EZ4.3D5	3H3	4.3	174.0	4.5	400	1.00	30.0	1.0	627
TSMB3EZ4.7D5	3H4	4.7	160.0	4.0	500	1.00	20.0	1.0	573
TSMB3EZ5.1D5	3H5	5.1	147.0	3.5	550	1.00	5.0	1.0	528
TSMB3EZ5.6D5	3H6	5.6	134.0	2.5	600	1.00	5.0	2.0	481
TSMB3EZ6.2D5	3A0	6.2	121.0	1.5	700	1.00	5.0	3.0	435
TSMB3EZ6.8D5	3A1	6.8	110.0	2.0	700	1.00	5.0	4.0	393
TSMB3EZ7.5D5	3A2	7.5	100.0	2.0	700	0.50	5.0	5.0	360
TSMB3EZ8.2D5	3A3	8.2	91.0	2.3	700	0.50	5.0	6.0	330
TSMB3EZ9.1D5	3A4	9.1	82.0	2.5	700	0.50	3.0	7.0	297
TSMB3EZ10D5	3A5	10.0	75.0	3.5	700	0.25	3.0	7.6	270
TSMB3EZ11D5	3A6	11.0	68.0	4.0	700	0.25	1.0	8.4	225
TSMB3EZ12D5	3A7	12.0	63.0	4.5	700	0.25	1.0	9.1	246
TSMB3EZ13D5	3A8	13.0	58.0	4.5	700	0.25	0.5	9.9	208
TSMB3EZ14D5	3A9	14.0	53.0	5.0	700	0.25	0.5	10.6	193
TSMB3EZ15D5	3B0	15.0	50.0	5.5	700	0.25	0.5	11.4	180
TSMB3EZ16D5	3B1	16.0	47.0	5.5	700	0.25	0.5	12.2	169
TSMB3EZ17D5	3B2	17.0	44.0	6.0	750	0.25	0.5	13.0	159
TSMB3EZ18D5	3B3	18.0	42.0	6.0	750	0.25	0.5	13.7	150
TSMB3EZ19D5	3B4	19.0	40.0	7.0	750	0.25	0.5	14.4	142
TSMB3EZ20D5	3B5	20.0	37.0	7.0	750	0.25	0.5	15.2	135
TSMB3EZ22D5	3B6	22.0	34.0	8.0	750	0.25	0.5	16.7	123
TSMB3EZ24D5	3B7	24.0	31.0	9.0	750	0.25	0.5	18.2	112
TSMB3EZ27D5	3B8	27.0	28.0	10.0	750	0.25	0.5	20.6	100
TSMB3EZ28D5	3B9	28.0	27.0	12.0	750	0.25	0.5	21.0	96
TSMB3EZ30D5	3C0	30.0	25.0	16.0	1000	0.25	0.5	22.5	90
TSMB3EZ33D5	3C1	33.0	23.0	20.0	1000	0.25	0.5	25.1	82
TSMB3EZ36D5	3C2	36.0	21.0	22.0	1000	0.25	0.5	27.4	75
TSMB3EZ39D5	3C3	39.0	19.0	28.0	1000	0.25	0.5	29.7	69
TSMB3EZ43D5	3C4	43.0	17.0	33.0	1500	0.25	0.5	32.7	63
TSMB3EZ47D5	3C5	47.0	16.0	38.0	1500	0.25	0.5	35.6	57
TSMB3EZ51D5	3C6	51.0	15.0	45.0	1500	0.25	0.5	38.8	53
TSMB3EZ56D5	3C7	56.0	13.0	50.0	2000	0.25	0.5	42.6	48
TSMB3EZ62D5	3C8	62.0	12.0	55.0	2000	0.25	0.5	47.1	44
TSMB3EZ68D5	3C9	68.0	11.0	70.0	2000	0.25	0.5	51.7	40
TSMB3EZ75D5	3F0	75.0	10.0	85.0	2000	0.25	0.5	56.0	36
TSMB3EZ82D5	3F1	82.0	9.1	95.0	3000	0.25	0.5	62.2	33
TSMB3EZ91D5	3F2	91.0	8.2	115	3000	0.25	0.5	69.2	30
TSMB3EZ100D5	3F3	100	7.5	160	3000	0.25	0.5	76.0	27
TSMB3EZ110D5	3F4	110	6.8	225	4000	0.25	0.5	83.6	25
TSMB3EZ120D5	3F5	120	6.3	300	4500	0.25	0.5	91.2	22
TSMB3EZ130D5	3F6	130	5.8	375	5000	0.25	0.5	98.8	21
TSMB3EZ140D5	3F7	140	5.3	475	5000	0.25	0.5	106.4	19
TSMB3EZ150D5	3F8	150	5.0	550	6000	0.25	0.5	114.0	18

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)
TSMB3EZ160D5	3F9	160	4.7	625	6500	0.25	0.5	121.6	17
TSMB3EZ170D5	3G1	170	4.4	650	7000	0.25	0.5	130.4	16
TSMB3EZ180D5	3G2	180	4.2	700	7000	0.25	0.5	136.8	15
TSMB3EZ190D5	3G3	190	4.0	800	8000	0.25	0.5	144.8	14
TSMB3EZ200D5	3G4	200	3.7	875	8000	0.25	0.5	152.0	13

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