

SMB2EZ2.7D5 - SMB2EZ330D5

V_Z: 2.7 to 330 V

P_D: 2 W

Surface Mount Zener Diodes

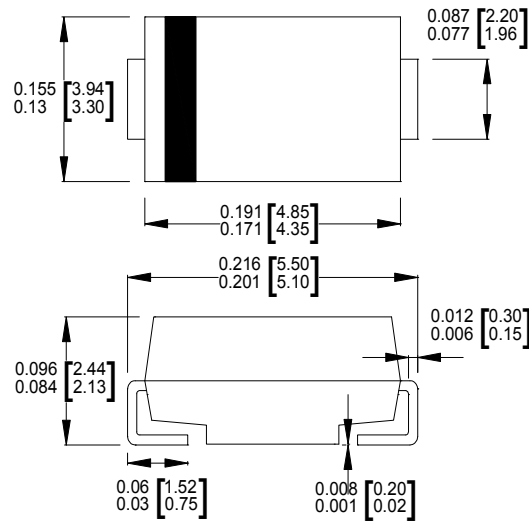
Features

- 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 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

SMB/ DO-214AA



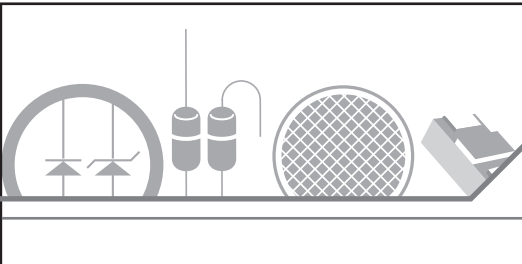
Dimensions : inch [mm]

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

Parameter	Symbol	Value	UNIT
DC power dissipation at T _L = 50 °C ⁽¹⁾	P _D	2	W
Maximum forward voltage at I _F = 200 mA	V _F	1.5	V
Junction temperature range	T _J	- 55 to + 175	°C
Storage temperature range	T _{STG}	- 55 to + 175	°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)

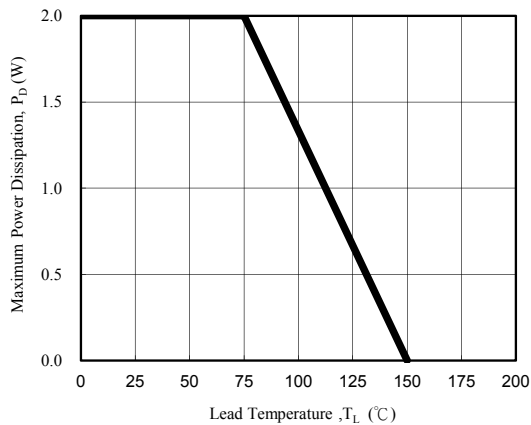


Fig. 1 - Power Temperature Derating Curve

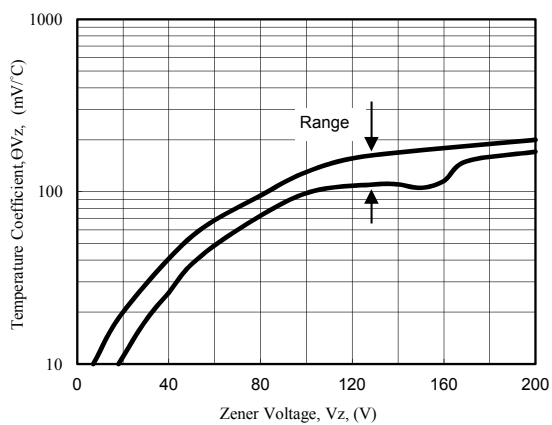


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

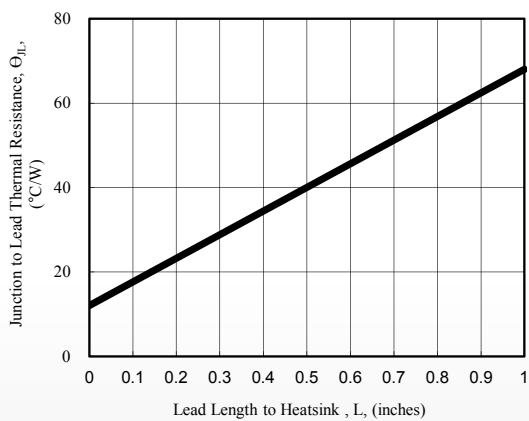


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

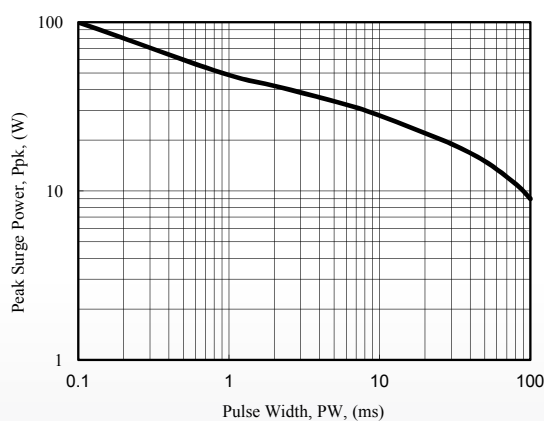


Fig. 4 - Maximum Surge Power

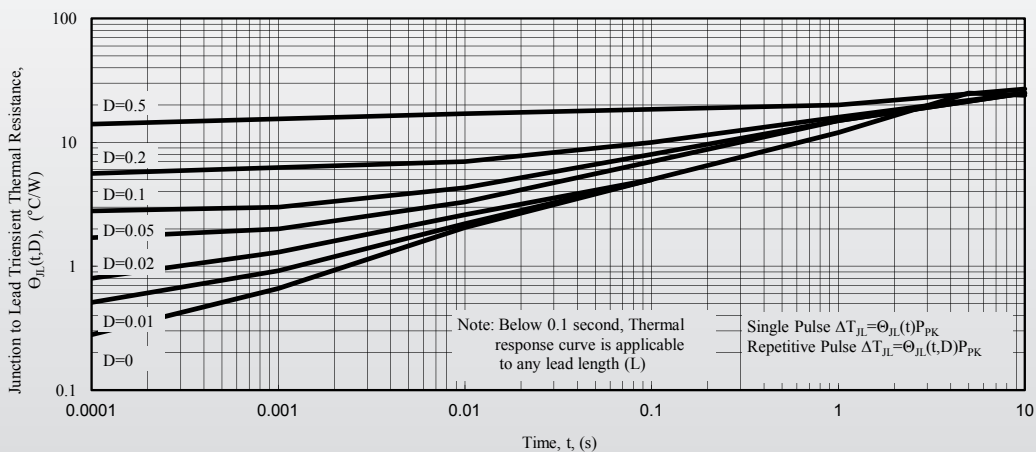
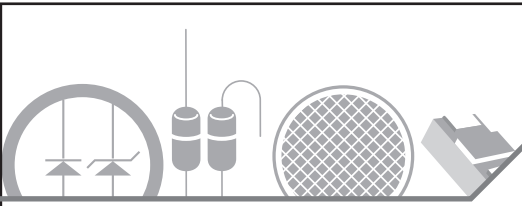


Fig. 5 - Typical Thermal Response L, Lead Length=3/8inch

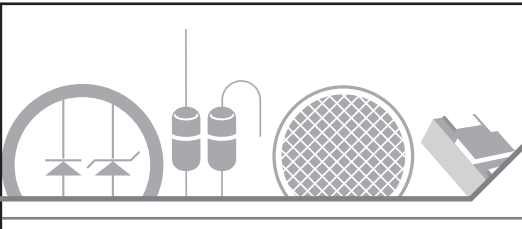


Electrical Characteristics($T_A=25^{\circ}\text{C}$ unless otherwise noted)

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)
SMB2EZ2.7D5	2H0	2.7	80.0	10.0	400	1.00	100	1.0	670
SMB2EZ3.0D5	2H1	3.0	160.0	8.0	400	1.00	100	1.0	603
SMB2EZ3.3D5	2H2	3.3	145.0	8.0	400	1.00	80	1.0	548
SMB2EZ3.6D5	2H3	3.6	139.0	5.0	400	1.00	80	1.0	502
SMB2EZ3.9D5	2H4	3.9	128.0	5.0	400	1.00	30	1.0	464
SMB2EZ4.3D5	2H5	4.3	116.0	4.5	400	1.00	20	1.0	421
SMB2EZ4.7D5	2H6	4.7	106.0	4.5	550	1.00	5.0	1.0	385
SMB2EZ5.1D5	2H7	5.1	98.0	3.5	600	1.00	5.0	1.0	354
SMB2EZ5.6D5	2H8	5.6	89.5	2.5	500	1.00	5.0	2.0	323
SMB2EZ6.2D5	2A0	6.2	80.5	1.5	700	1.00	5.0	3.0	292
SMB2EZ6.8D5	2A1	6.8	73.5	2.0	700	1.00	5.0	4.0	266
SMB2EZ7.5D5	2A2	7.5	66.5	2.0	700	0.50	5.0	5.0	242
SMB2EZ8.2D5	2A3	8.2	61.0	2.3	700	0.50	5.0	6.0	220
SMB2EZ9.1D5	2A4	9.1	55.0	2.5	700	0.50	3.0	7.0	200
SMB2EZ10D5	2A5	10	50.0	3.5	700	0.25	3.0	7.6	182
SMB2EZ11D5	2A6	11	45.5	4.0	700	0.25	1.0	8.4	166
SMB2EZ12D5	2A7	12	41.5	4.5	700	0.25	1.0	9.1	152
SMB2EZ13D5	2A8	13	38.5	5.0	700	0.25	0.5	9.9	138
SMB2EZ14D5	2A9	14	35.7	5.5	700	0.25	0.5	10.6	130
SMB2EZ15D5	2B0	15	33.4	7.0	700	0.25	0.5	11.4	122
SMB2EZ16D5	2B1	16	31.2	8.0	700	0.25	0.5	12.2	114
SMB2EZ17D5	2B2	17	29.4	9.0	750	0.25	0.5	13.0	107
SMB2EZ18D5	2B3	18	27.8	10.0	750	0.25	0.5	13.7	100
SMB2EZ19D5	2B4	19	26.3	11.0	750	0.25	0.5	14.4	95
SMB2EZ20D5	2B5	20	25.0	11.0	750	0.25	0.5	15.2	90
SMB2EZ22D5	2B6	22	22.8	12.0	750	0.25	0.5	16.7	82
SMB2EZ24D5	2B7	24	20.8	13.0	750	0.25	0.5	18.2	76
SMB2EZ27D5	2B8	27	18.5	18.0	750	0.25	0.5	20.6	68
SMB2EZ30D5	2B9	30	16.6	20.0	1000	0.25	0.5	22.5	60
SMB2EZ33D5	2C0	33	15.1	23.0	1000	0.25	0.5	25.1	55
SMB2EZ36D5	2C1	36	13.9	25.0	1000	0.25	0.5	27.4	50
SMB2EZ39D5	2C2	39	12.8	30.0	1000	0.25	0.5	29.7	47
SMB2EZ43D5	2C3	43	11.6	35.0	1500	0.25	0.5	32.7	43
SMB2EZ47D5	2C4	47	10.6	40.0	1500	0.25	0.5	35.8	39
SMB2EZ51D5	2C5	51	9.8	48.0	1500	0.25	0.5	38.8	36
SMB2EZ56D5	2C6	56	9.0	55.0	2000	0.25	0.5	42.6	32
SMB2EZ62D5	2C7	62	8.1	60.0	2000	0.25	0.5	47.1	29
SMB2EZ68D5	2C8	68	7.4	75.0	2000	0.25	0.5	51.7	27
SMB2EZ75D5	2C9	75	6.7	90.0	2000	0.25	0.5	56.0	24
SMB2EZ82D5	2F0	82	6.1	100	3000	0.25	0.5	62.2	22
SMB2EZ91D5	2F1	91	5.5	125	3000	0.25	0.5	69.2	20
SMB2EZ100D5	2F2	100	5.0	175	3000	0.25	0.5	76.0	18.0
SMB2EZ110D5	2F3	110	4.5	250	4000	0.25	0.5	83.6	17.0
SMB2EZ120D5	2F4	120	4.2	325	4500	0.25	0.5	91.2	15.0

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



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)
SMB2EZ130D5	2F5	130	3.8	400	5000	0.25	0.5	98.8	14.0
SMB2EZ140D5	2F6	140	3.6	500	5500	0.25	0.5	106.4	13.0
SMB2EZ150D5	2F7	150	3.3	575	6000	0.25	0.5	114.0	12.0
SMB2EZ160D5	2F8	160	3.1	650	6500	0.25	0.5	121.6	11.0
SMB2EZ170D5	2F9	170	2.9	675	7000	0.25	0.5	130.4	11.0
SMB2EZ180D5	2G1	180	2.8	725	7000	0.25	0.5	136.8	10.0
SMB2EZ190D5	2G2	190	2.6	825	8000	0.25	0.5	144.8	10.0
SMB2EZ200D5	2G3	200	2.5	1900	9990	0.25	0.5	152.0	9.0
SMB2EZ220D5	2G4	220	2.0	2000	8500	0.25	0.5	167.0	8.0
SMB2EZ270D5	2G5	270	1.6	2200	8500	0.25	0.5	205.0	6.7
SMB2EZ300D5	2G6	300	1.5	2200	9000	0.25	0.5	228.0	5.9
SMB2EZ330D5	2G7	330	1.4	2300	9000	0.25	0.5	250.0	5.4