



Micro Commercial Components



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# SMB3EZ5.6D5 THRU SMB3EZ200D5

## Features

- Lead Free Finish/Rohs Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)
- Glass Passivated Junction
- Excellent Clamping Capability
- Built-in Strain Relief
- Low Inductance
- Halogen free available upon request by adding suffix "-HF"

## Mechanical Data

- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- TERMINALS : Solder plated, solderable per MIL-STD-750, method 2026
- POLARITY : Color band denotes positive end (cathode)

### Maximum Ratings @ 25°C Unless Otherwise Specified

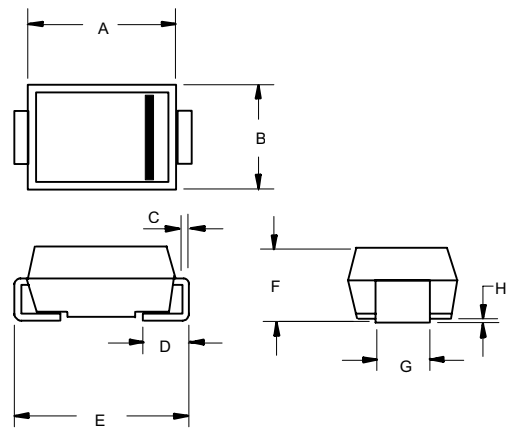
DC Power Dissipation (Note2) at $T_L=50^{\circ}\text{C}$	$P_D$	3	Watts
Maximum forward voltage at $I_F=200\text{mA}$	$V_F$	1.5	Vdc
Junction and Storage Temperature Range	$T_J, T_{STG}$	$-55^{\circ}\text{C}$ to $+150^{\circ}\text{C}$	

#### NOTES:

1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.
2.  $T_L$ =Lead temperature at 3/8"(9.5mm)from body

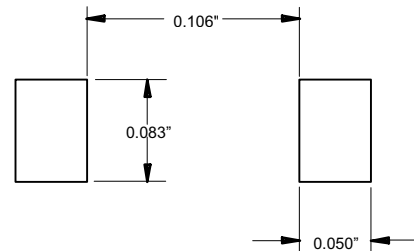
## 3 W Glass Passivated Junction Silicon Zener Diode 5.6-200 Volts

### DO-214AA (SMB) (LEAD FRAME)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.160	.185	4.06	4.70	
B	.130	.155	3.30	3.94	
C	.006	.012	0.15	0.31	
D	.030	.060	0.76	1.52	
E	.200	.220	5.08	5.59	
F	.079	.096	2.00	2.44	
G	.075	.087	1.91	2.21	
H	.002	.008	0.05	0.203	

#### SUGGESTED SOLDER PAD LAYOUT



**Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)**

Part Number	Device Marking Code	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
		V <sub>Z</sub> @ I <sub>ZT</sub>	I <sub>ZT</sub>	Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>ZK</sub>	I <sub>ZK</sub>	I <sub>R</sub> @ V <sub>R</sub>		I <sub>ZM</sub>
		(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
SMB3EZ5.6D5	3H6	5.6	134.0	2.5	600	1.00	5.0	2.0	481
SMB3EZ6.2D5	3A0	6.2	121.0	1.5	700	1.00	5.0	3.0	435
SMB3EZ6.8D5	3A1	6.8	110.0	2.0	700	1.00	5.0	4.0	393
SMB3EZ7.5D5	3A2	7.5	100.0	2.0	700	0.50	5.0	5.0	360
SMB3EZ8.2D5	3A3	8.2	91.0	2.3	700	0.50	5.0	6.0	330
SMB3EZ9.1D5	3A4	9.1	82.0	2.5	700	0.50	3.0	7.0	297
SMB3EZ10D5	3A5	10.0	75.0	3.5	700	0.25	3.0	7.6	270
SMB3EZ11D5	3A6	11.0	68.0	4.0	700	0.25	1.0	8.4	225
SMB3EZ12D5	3A7	12.0	63.0	4.5	700	0.25	1.0	9.1	246
SMB3EZ13D5	3A8	13.0	58.0	4.5	700	0.25	0.5	9.9	208
SMB3EZ14D5	3A9	14.0	53.0	5.0	700	0.25	0.5	10.6	193
SMB3EZ15D5	3B0	15.0	50.0	5.5	700	0.25	0.5	11.4	180
SMB3EZ16D5	3B1	16.0	47.0	5.5	700	0.25	0.5	12.2	169
SMB3EZ17D5	3B2	17.0	44.0	6.0	750	0.25	0.5	13.0	159
SMB3EZ18D5	3B3	18.0	42.0	6.0	750	0.25	0.5	13.7	150
SMB3EZ19D5	3B4	19.0	40.0	7.0	750	0.25	0.5	14.4	142
SMB3EZ20D5	3B5	20.0	37.0	7.0	750	0.25	0.5	15.2	135
SMB3EZ22D5	3B6	22.0	34.0	8.0	750	0.25	0.5	16.7	123
SMB3EZ24D5	3B7	24.0	31.0	9.0	750	0.25	0.5	18.2	112
SMB3EZ27D5	3B8	27.0	28.0	10.0	750	0.25	0.5	20.6	100
SMB3EZ28D5	3B9	28.0	27.0	12.0	750	0.25	0.5	21.0	96
SMB3EZ30D5	3C0	30.0	25.0	16.0	1000	0.25	0.5	22.5	90
SMB3EZ33D5	3C1	33.0	23.0	20.0	1000	0.25	0.5	25.1	82
SMB3EZ36D5	3C2	36.0	21.0	22.0	1000	0.25	0.5	27.4	75
SMB3EZ39D5	3C3	39.0	19.0	28.0	1000	0.25	0.5	29.7	69
SMB3EZ43D5	3C4	43.0	17.0	33.0	1500	0.25	0.5	32.7	63
SMB3EZ47D5	3C5	47.0	16.0	38.0	1500	0.25	0.5	35.6	57
SMB3EZ51D5	3C6	51.0	15.0	45.0	1500	0.25	0.5	38.8	53
SMB3EZ56D5	3C7	56.0	13.0	50.0	2000	0.25	0.5	42.6	48
SMB3EZ62D5	3C8	62.0	12.0	55.0	2000	0.25	0.5	47.1	44
SMB3EZ68D5	3C9	68.0	11.0	70.0	2000	0.25	0.5	51.7	40
SMB3EZ75D5	3F0	75.0	10.0	85.0	2000	0.25	0.5	56.0	36
SMB3EZ82D5	3F1	82.0	9.1	95.0	3000	0.25	0.5	62.2	33
SMB3EZ91D5	3F2	91.0	8.2	115	3000	0.25	0.5	69.2	30
SMB3EZ100D5	3F3	100	7.5	160	3000	0.25	0.5	76.0	27
SMB3EZ110D5	3F4	110	6.8	225	4000	0.25	0.5	83.6	25
SMB3EZ120D5	3F5	120	6.3	300	4500	0.25	0.5	91.2	22
SMB3EZ130D5	3F6	130	5.8	375	5000	0.25	0.5	98.8	21
SMB3EZ140D5	3F7	140	5.3	475	5000	0.25	0.5	106.4	19
SMB3EZ150D5	3F8	150	5.0	550	6000	0.25	0.5	114.0	18
SMB3EZ160D5	3F9	160	4.7	625	6500	0.25	0.5	121.6	17
SMB3EZ170D5	3G1	170	4.4	650	7000	0.25	0.5	130.4	16
SMB3EZ180D5	3G2	180	4.2	700	7000	0.25	0.5	136.8	15
SMB3EZ190D5	3G3	190	4.0	800	8000	0.25	0.5	144.8	14
SMB3EZ200D5	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 ± 5 %
- (2) The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I<sub>ZT</sub> per JEDEC method

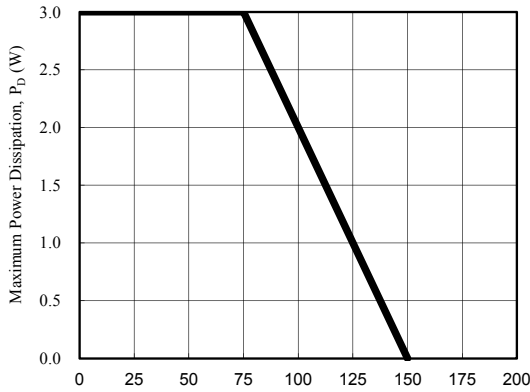


Fig. 1 - Power Temperature Derating Curve

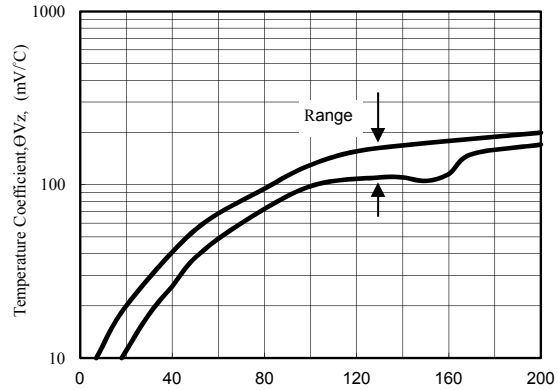


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

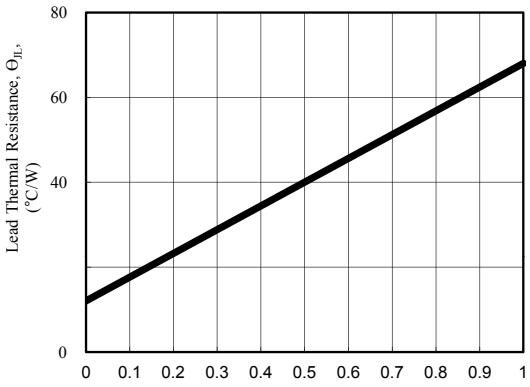


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

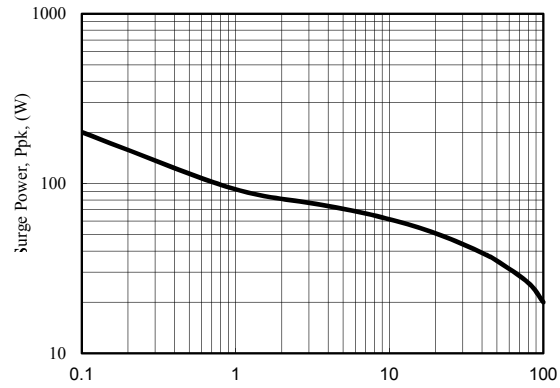


Fig. 4 - Maximum Surge Power

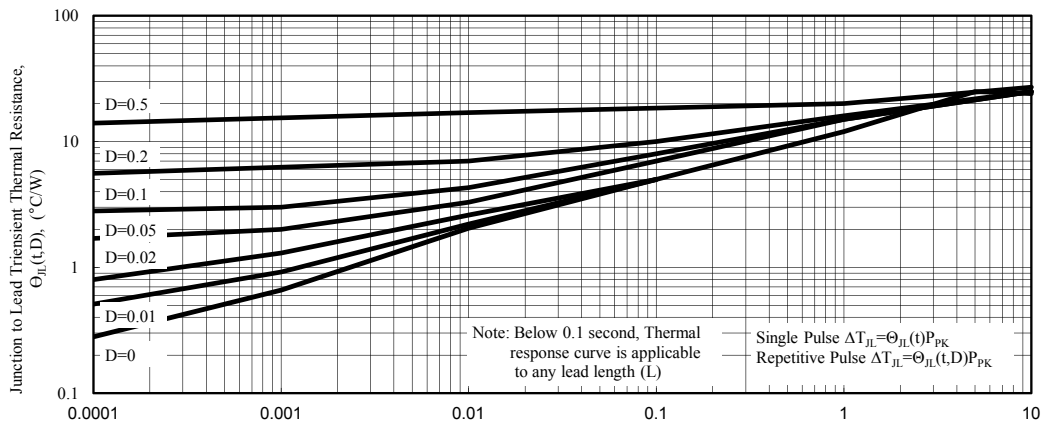


Fig. 5 - Typical Thermal Response L, Lead Length=3/8inch



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### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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