



Micro Commercial Components



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SMAJ5913B THRU SMAJ5917B

1.5 Watt Zener Diode 3.3 to 4.7 Volts

Features

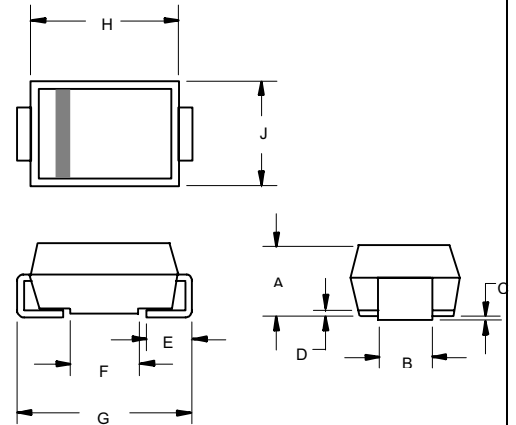
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Low Zener Impedance
- Low Regulation Factor
- V_z – tolerance: $\pm 5\%$
- For Surface Mount Applications
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

Maximum Ratings

- Junction Temperature: 150°C
- Storage Temperature: -65°C to +175°C
- 1.5 Watt DC Power Dissipation ($T_L \leq 75^\circ\text{C}$)
- Thermal Resistance Junction to Lead: 50°C/W
- Thermal Resistance Junction to Ambient: 83°C/W
- Forward Voltage @ 200mA: 1.5 Volts

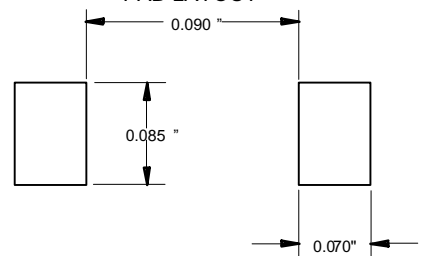
Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.

DO-214AC (SMA)(LEAD FRAME)



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.079	.096	2.00	2.44	
B	.050	.064	1.27	1.63	
C	.002	.008	.05	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.091	1.65	2.32	
G	.189	.220	4.80	5.59	
H	.157	.181	4.00	4.60	
J	.090	.115	2.25	2.92	

SUGGESTED SOLDER PAD LAYOUT



ELECTRICAL CHARACTERISTICS @25°C

MCC PART NUMBER	ZENER VOLTAGE VZ (1)	TEST CURRENT IZT	MAXIMUM DYNAMIC IMPEDANCE ZZT @IZT	KNEE CURRENT IZK	KNEE IMPEDANCE ZZK	MAXIMUM REVERSE CURRENT IR	REVERSE VOLTAGE VR	DEVICE MARKING
	VOLTS	mA	OHMS	mA	OHMS	μA	VOLTS	
SMAJ5913B	3.3	113.6	10	1	500	100	1	13B
SMAJ5914B	3.6	104.2	9	1	500	75	1	14B
SMAJ5915B	3.9	96.1	7.5	1	500	25	1	15B
SMAJ5916B	4.3	87.2	6	1	500	5.0	1	16B
SMAJ5917B	4.7	79.8	5	1	500	5.0	1.5	17B

1) Based on DC-measurement at thermal equilibrium while maintaining the lead temperature(T_L) at 30°C, 9.5mm(3/8) from the diode body.

Characteristics ($T_j=25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter
V_Z	Reverse zener voltage @ I_{ZT}
I_{ZT}	Reverse current
Z_{ZT}	Maximum zener impedance @ I_{ZT}
I_{ZK}	Reverse current
Z_{ZK}	Maximum zener impedance @ I_{ZK}
I_R	Reverse leakage current @ V_R
V_R	Breakdown voltage
I_F	Forward current
V_F	Forward voltage @ I_F

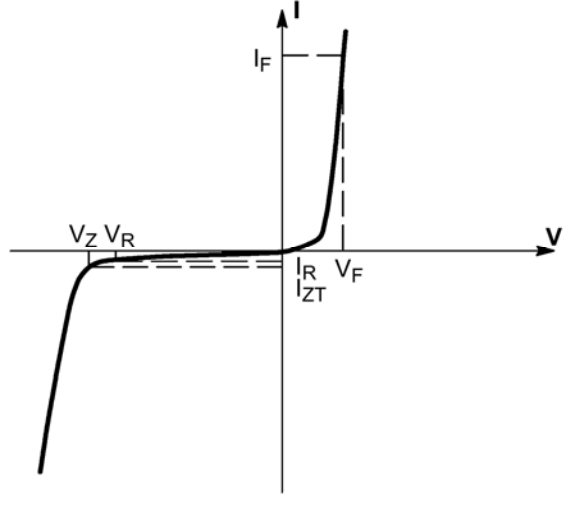


Figure 1. Zener voltage regulator

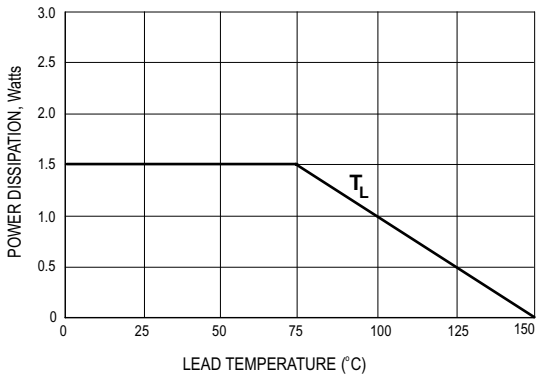


Figure 2. Steady state power derating

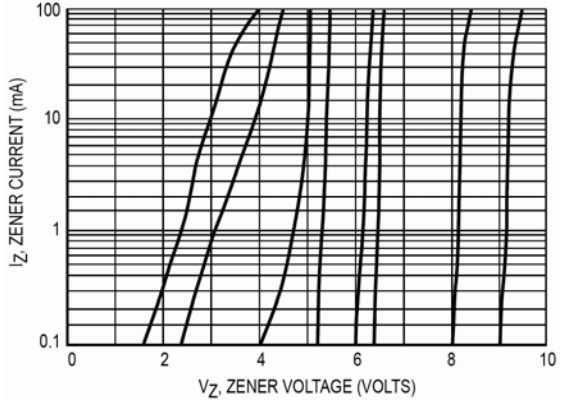


Figure 3. V_Z - 3.3 thru 4.7 volts

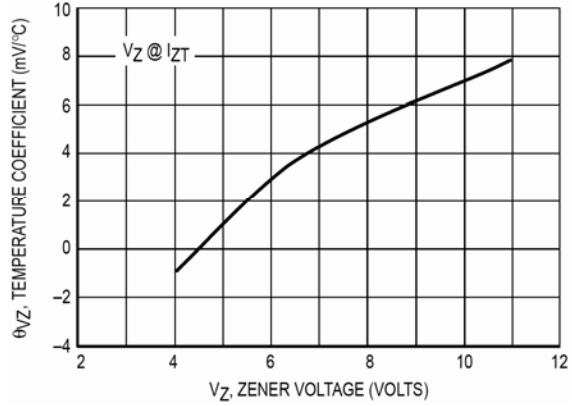


Figure 4. Zener voltage - 3.3 to 4.7 volts

Characteristics ($T_J=25^\circ\text{C}$ unless otherwise specified)



Figure 6. Effect of zener voltage



Figure 7. Capacitance curve

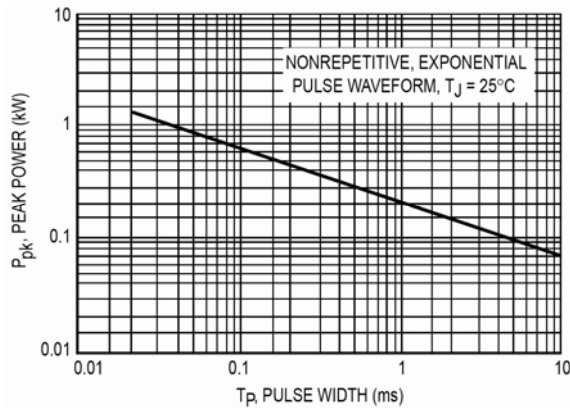


Figure 8. Typical pulse rating curve

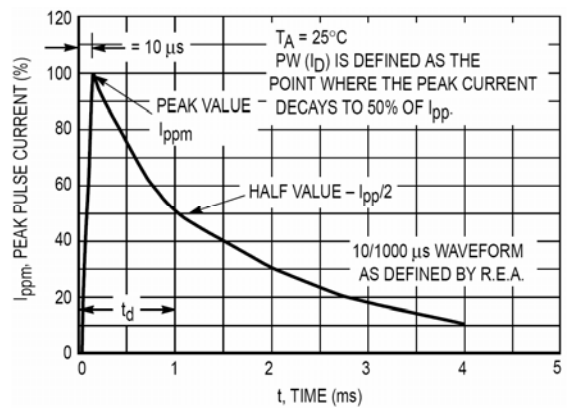


Figure 9. Pulse waveform

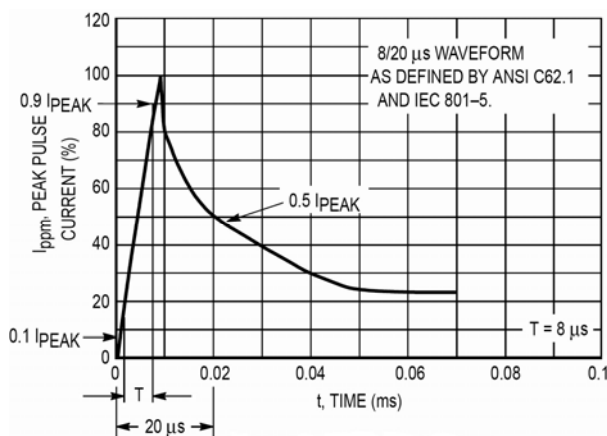


Figure 10. Pulse waveform



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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 7.5Kpcs/Reel

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

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