Micro Commercial Components

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SMAJ5925BHE3 THRU SMAJ5956BHE3

1.5 Watt Zener Diode 10 to 200 Volts

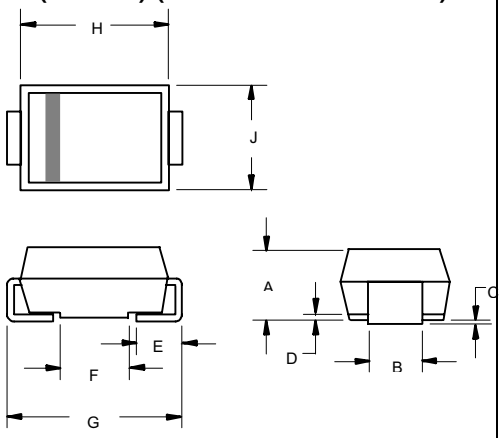
Features

- Lead Free Finish/Rohs Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)
- AEC-Q101 Qualified
- Low Zener Impedance
- Low Regulation Factor
  V_Z – tolerance: ±5%
  For Surface Mount Applications
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free

Maximum Ratings

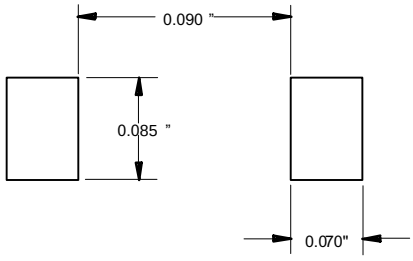
Junction Temperature: 150℃
Storage Temperature: -65℃ to +175℃
1.5 Watt DC Power Dissipation (T_L≦75℃)
Thermal Resistance Junction to Lead: 50℃/W
Thermal Resistance Junction to Ambient: 83℃/W
Forward Voltage @ 200mA: 1.5 Volts

DO-214AC
(SMA)(LEAD FRAME)



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
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



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

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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	
SMAJ5925BHE3	10	37.5	4.5	0.25	500	5	8	25B
SMAJ5926BHE3	11	34.1	5.5	0.25	550	1	8.4	26B
SMAJ5927BHE3	12	31.2	6.5	0.25	550	1	9.1	27B
SMAJ5928BHE3	13	28.8	7	0.25	550	1	9.9	28B
SMAJ5929BHE3	15	25	9	0.25	600	1	11.4	29B
SMAJ5930BHE3	16	23.4	10	0.25	600	1	12.2	30B
SMAJ5931BHE3	18	20.8	12	0.25	650	1	13.7	31B
SMAJ5932BHE3	20	18.7	14	0.25	650	1	15.2	32B
SMAJ5933BHE3	22	17	17.5	0.25	650	1	16.7	33B
SMAJ5934BHE3	24	15.6	19	0.25	700	1	18.2	34B
SMAJ5935BHE3	27	13.9	23	0.25	700	1	20.6	35B
SMAJ5936BHE3	30	12.5	28	0.25	750	1	22.8	36B
SMAJ5937BHE3	33	11.4	33	0.25	800	1	25.1	37B
SMAJ5938BHE3	36	10.4	38	0.25	850	1	27.4	38B
SMAJ5939BHE3	39	9.6	45	0.25	900	1	29.7	39B
SMAJ5940BHE3	43	8.7	53	0.25	950	1	32.7	40B
SMAJ5941BHE3	47	8	67	0.25	1000	1	35.8	41B
SMAJ5942BHE3	51	7.3	70	0.25	1100	1	38.8	42B
SMAJ5943BHE3	56	6.7	86	0.25	1300	1	42.6	43B
SMAJ5944BHE3	62	6	100	0.25	1500	1	47.1	44B
SMAJ5945BHE3	68	5.5	120	0.25	1700	1	51.7	45B
SMAJ5946BHE3	75	5	140	0.25	2000	1	56	46B
SMAJ5947BHE3	82	4.6	160	0.25	2500	1	62.2	47B
SMAJ5948BHE3	91	4.1	200	0.25	3000	1	69.2	48B
SMAJ5949BHE3	100	3.7	250	0.25	3100	1	76	49B
SMAJ5950BHE3	110	3.4	300	0.25	4000	1	83.6	50B
SMAJ5951BHE3	120	3.1	380	0.25	4500	1	91.2	51B
SMAJ5952BHE3	130	2.9	450	0.25	5000	1	98.8	52B
SMAJ5953BHE3	150	2.5	600	0.25	6000	1	114	53B
SMAJ5954BHE3	160	2.3	700	0.25	6500	1	121.6	54B
SMAJ5955BHE3	180	2.1	900	0.25	7000	1	136.8	55B
SMAJ5956BHE3	200	1.9	1200	0.25	8000	1	152	56B

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

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Characteristics (T_j=25℃ unless otherwise specified)

Symbol	Parameter
Vz	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

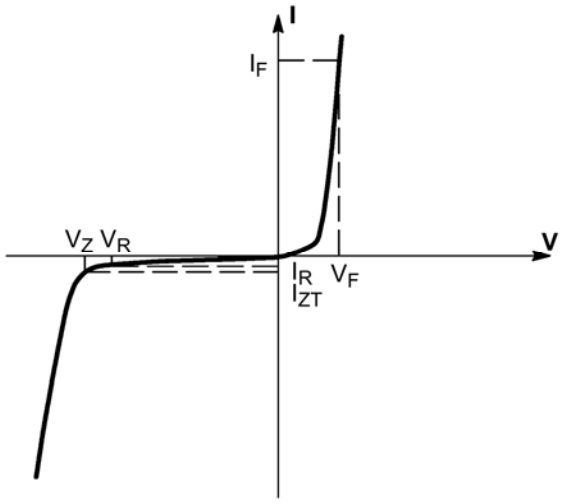


Figure 1. Zener voltage regulator

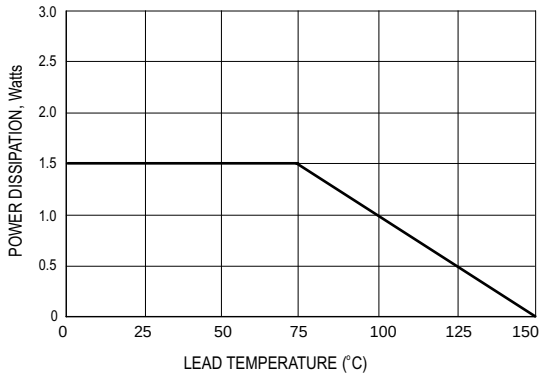


Figure 2. Steady state power derating

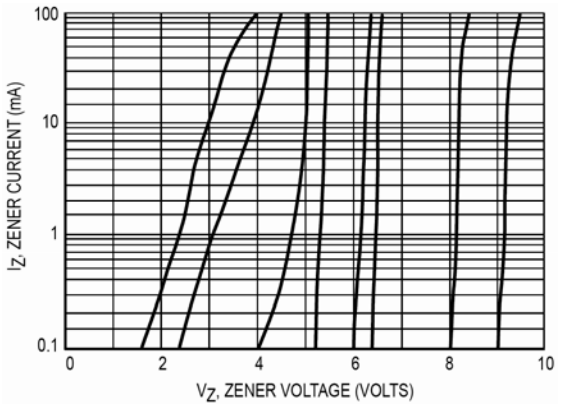


Figure 3. Vz – 10 volts

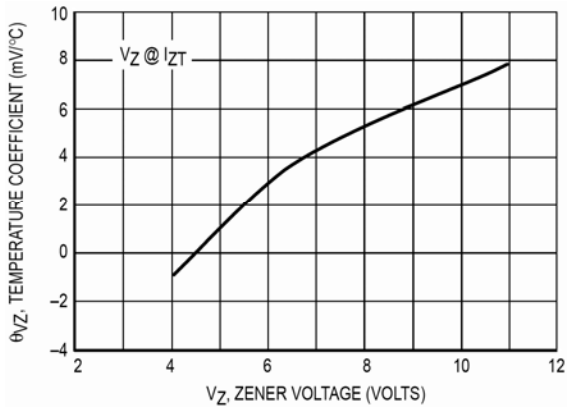


Figure 4. Zener voltage – 10 to 12 volts

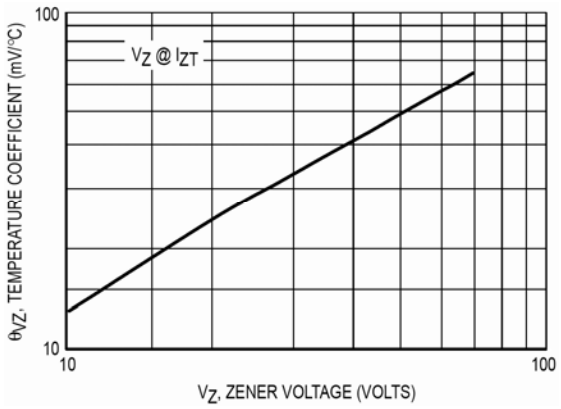


Figure 5. Zener voltage – 14 to 43 volts

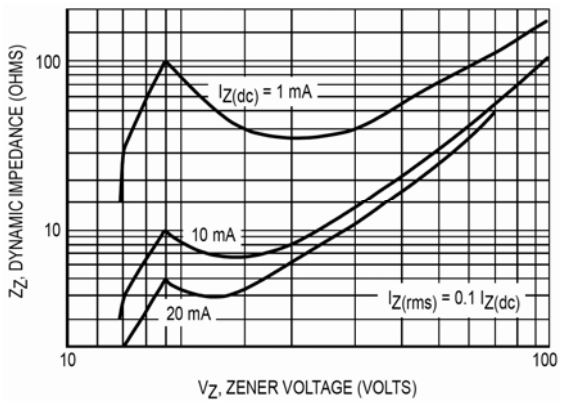


Figure 6. Effect of zener voltage

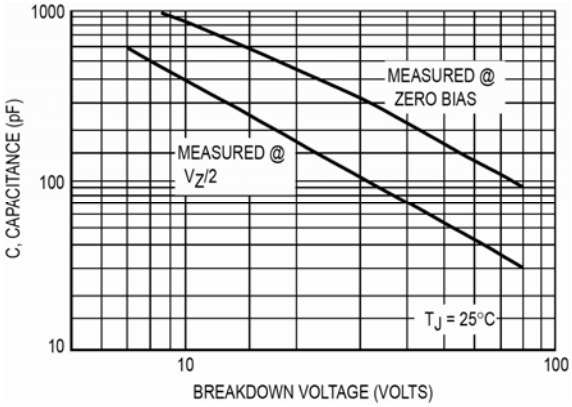


Figure 7. Capacitance curve

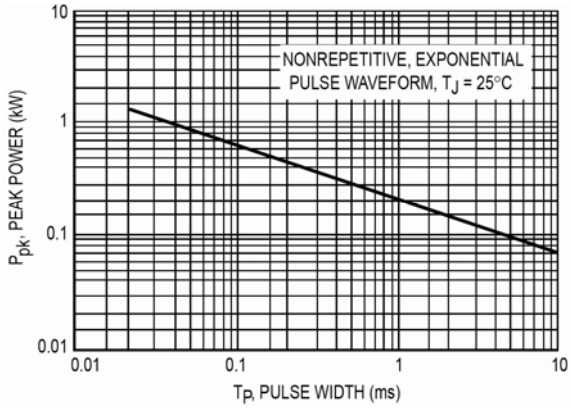


Figure 8. Typical pulse rating curve

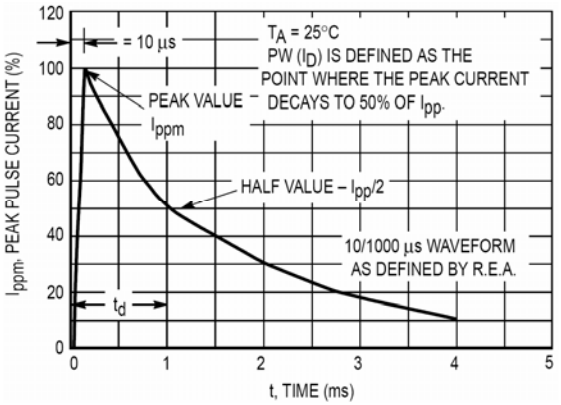


Figure 9. Pulse waveform

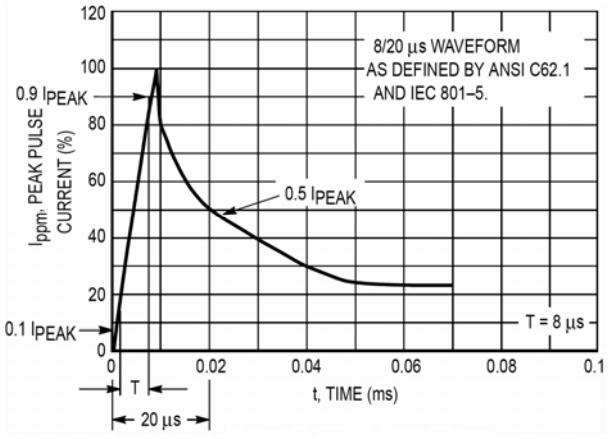


Figure 10. Pulse waveform

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Ordering Information :

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

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