

# 3SMAJ5913B THRU 3SMAJ5943B

## 3.0 Watt Surface Mount Silicon Zener Diodes

### Features

- Surface Mount Application
- 3.3V thru 56 Volt Voltage Range
- Low Inductance , Low Profile Mounting
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Glass Passivated Junction
- High specified maximum current (IZM) when adequately heat sinking

### Mechanical Data

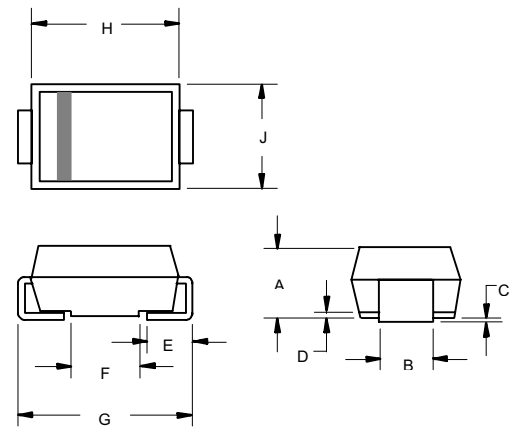
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Terminals solderable per MIL-STD-750, Method 2026
- Polarity is indicated by cathode band.
- Packaging: Standard 12mm Tape (see EIA 481)
- Maximum temperature for soldering: 260 °C for 10 seconds.

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

Maximum Forward Voltage	V <sub>F</sub>	1.5V	(Note: 2)
Steady State Power Dissipation	P <sub>d</sub>	3.0W	(Note: 3)
Operation and Storage Temperature	T <sub>J</sub> , T <sub>STG</sub>	-55°C to +150°C	
Thermal Resistance Junction to Lead	R <sub>thJL</sub>	25°C/W	

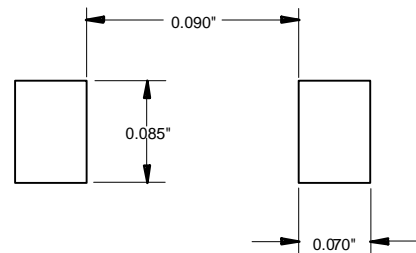
- Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.  
 2. Forward Current @ 200mA.  
 3. Mounted on 5.0mm<sup>2</sup> (1oz thick) land areas.  
 Lead temperature at T<sub>L</sub>=75°C

### DO-214AC (SMA) (LEAD FRAME)



DIM	DIMENSIONS				NOTE
	INCHES		MM		
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



3SMAJ5913B thru 3SMAJ5943B

ELECTRICAL CHARACTERISTICS ( $T_L=30C$  unless otherwise noted) ( $V_F=1.5Volts$  Max @  $I_F=200mA$ dc for all types.)

MCC PART NUMBER	ZENER VOLTAGE $V_Z(1)$	TEST CURRENT $I_{ZT}$	MAXIMUM DYNAMIC IMPEDANCE $Z_{ZT}$ @ $I_{ZT}$	KNEE CURRENT $I_{ZK}$	KNEE IMPEDANCE $Z_{ZK}$	MAXIMUM REVERSE CURRENT $I_R$	REVERSE VOLTAGE $V_R$	Maximum DC Zener Current $I_{ZM}$ mAdc	DEVICE MARKING
	VOLTS	mA	OHMS	mA	OHMS	$\mu A$	VOLTS	mA	
3SMAJ5913B	3.3	113.6	10.0	1.0	500	100	1.0	908	H 13B
3SMAJ5914B	3.6	104.2	9.0	1.0	500	75	1.0	832	H 14B
3SMAJ5915B	3.9	96.1	7.5	1.0	500	25	1.0	768	H 15B
3SMAJ5916B	4.3	87.2	6.0	1.0	500	5.0	1.0	696	H 16B
3SMAJ5917B	4.7	79.8	5.0	1.0	500	5.0	1.5	638	H 17B
3SMAJ5918B	5.1	73.5	4.0	1.0	350	5.0	2.0	588	H 18B
3SMAJ5919B	5.6	66.9	2.0	1.0	250	5.0	3.0	534	H 19B
3SMAJ5920B	6.2	60.5	2.0	1.0	200	5.0	4.0	482	H 20B
3SMAJ5921B	6.8	55.1	2.5	1.0	200	5.0	5.2	440	H 21B
3SMAJ5922B	7.5	50.0	3.0	0.5	400	5.0	6.0	400	H 22B
3SMAJ5923B	8.2	45.7	3.5	0.5	400	5.0	6.5	364	H 23B
3SMAJ5924B	9.1	41.2	4.0	0.5	500	5.0	7.0	328	H 24B
3SMAJ5925B	10	37.5	4.5	0.25	500	5.0	8.0	300	H 25B
3SMAJ5926B	11	34.1	5.5	0.25	550	1.0	8.4	272	H 26B
3SMAJ5927B	12	31.2	6.5	0.25	550	1.0	9.1	250	H 27B
3SMAJ5928B	13	28.8	7.0	0.25	550	1.0	9.9	230	H 28B
3SMAJ5929B	15	25.0	9.0	0.25	600	1.0	11.4	200	H 29B
3SMAJ5930B	16	23.4	10.0	0.25	600	1.0	12.2	186	H 30B
3SMAJ5931B	18	20.8	12.0	0.25	650	1.0	13.7	166	H 31B
3SMAJ5932B	20	18.7	14.0	0.25	650	1.0	15.2	150	H 32B
3SMAJ5933B	22	17.0	17.5	0.25	650	1.0	16.7	136	H 33B
3SMAJ5934B	24	15.6	19.0	0.25	700	1.0	18.2	124	H 34B
3SMAJ5935B	27	13.9	23.0	0.25	700	1.0	20.6	110	H 35B
3SMAJ5936B	30	12.5	28.0	0.25	750	1.0	22.8	100	H 36B
3SMAJ5937B	33	11.4	33.0	0.25	800	1.0	25.1	90	H 37B
3SMAJ5938B	36	10.4	38.0	0.25	850	1.0	27.4	82	H 38B
3SMAJ5939B	39	9.6	45.0	0.25	900	1.0	29.7	76	H 39B
3SMAJ5940B	43	8.7	53.0	0.25	950	1.0	32.7	68	H 40B
3SMAJ5941B	47	8.0	67.0	0.25	1000	1.0	35.8	62	H 41B
3SMAJ5942B	51	7.3	70.0	0.25	1100	1.0	38.8	58	H 42B
3SMAJ5943B	56	6.7	86.0	0.25	1300	1.0	42.6	52	H 43B

Note 1: TOLERANCE AND VOLTAGE DESIGNATION - The type numbers listed indicate a tolerance of +/- 5%.

RATING AND CHARACTERISTICS CURVES

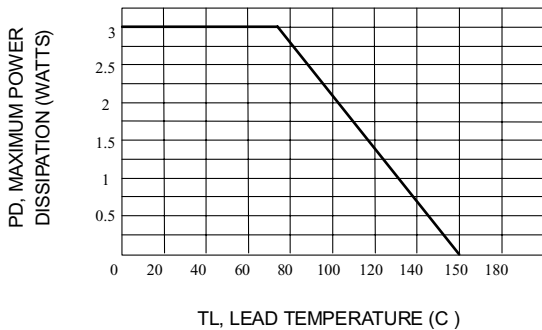


Fig. 1-STEADY STATE POWER DERATING

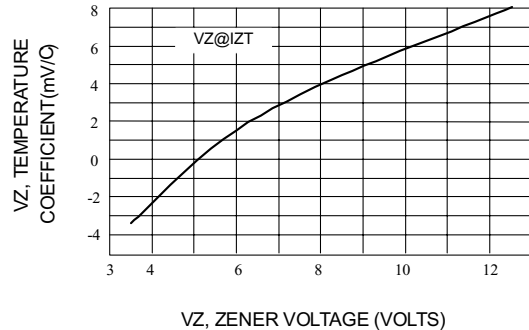


Fig. 2-ZENER VOLTAGE- 3 TO 12 VOLTS

RATING AND CHARACTERISTICS CURVES  
**3SMAJ5913B thru 3SMAJ5943B**

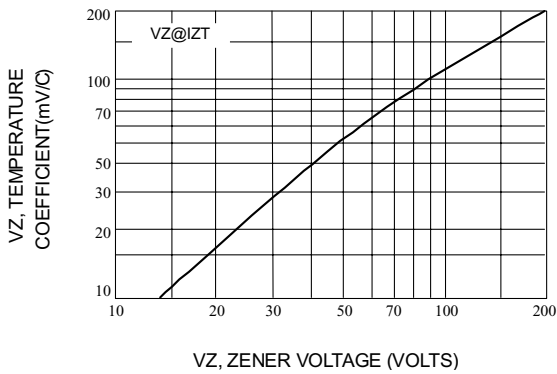


Fig. 3-ZENER VOLTAGE-10 TO 200 VOLTS

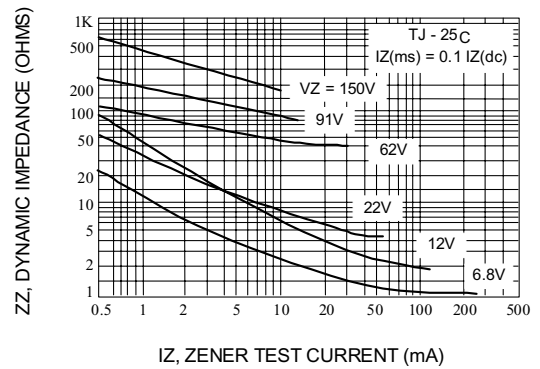


Fig. 4-EFFECT OF ZENER CURRENT

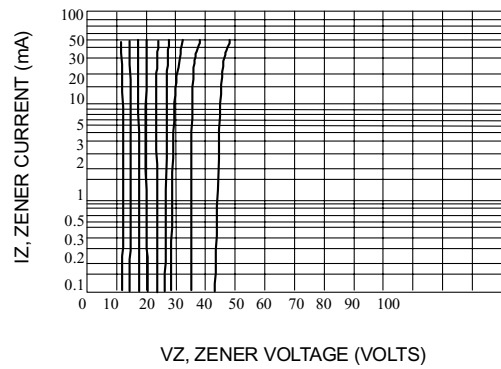
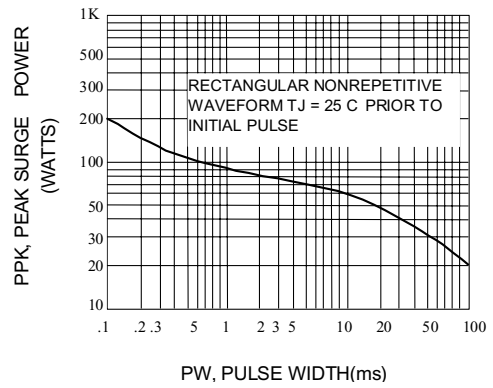
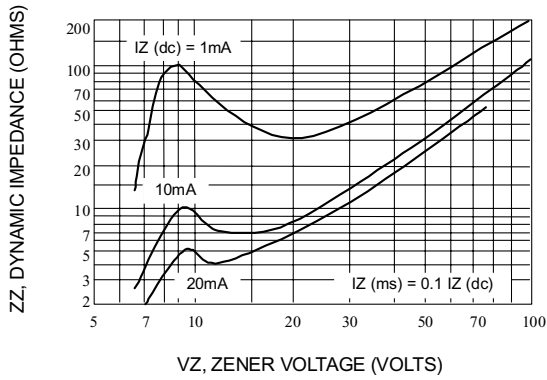


Fig. 7-VZ = 12 THRU 40 VOLTS



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Ordering Information :

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

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