

# 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

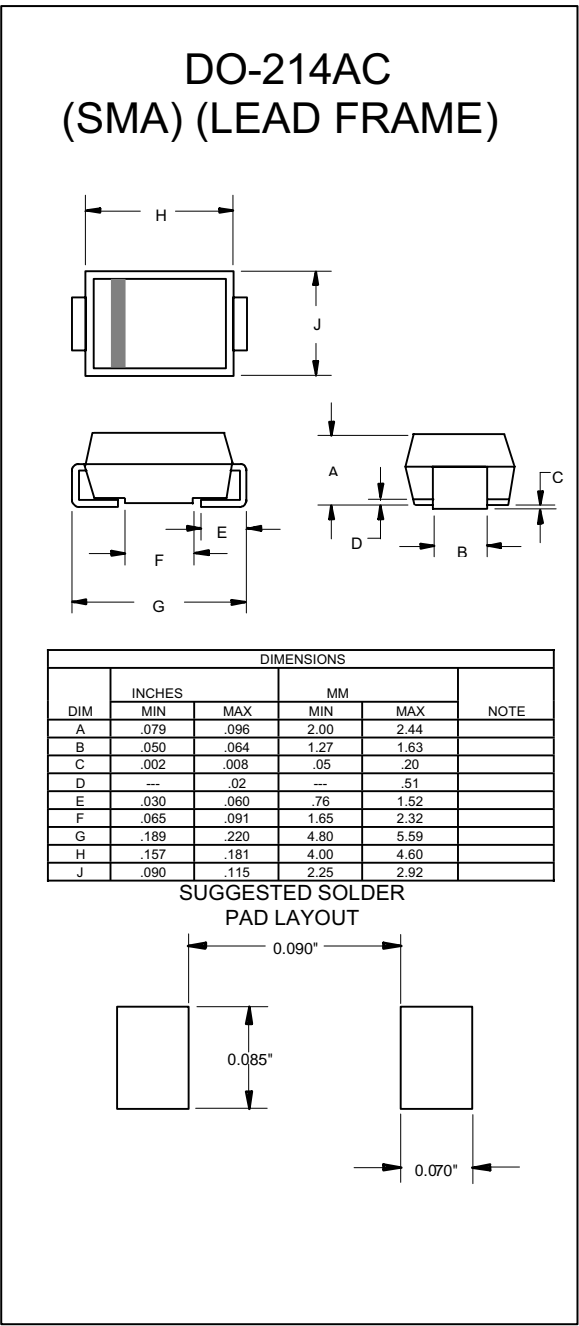
### Mechanical Data

- 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



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

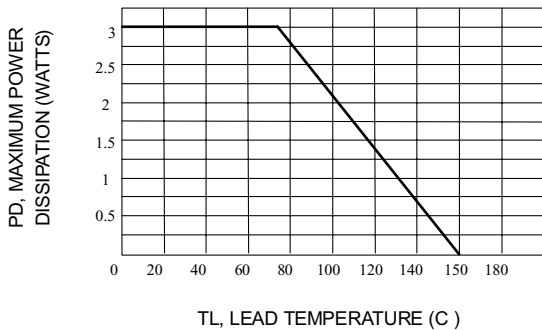


Fig. 1-STEADY STATE POWER DERATING

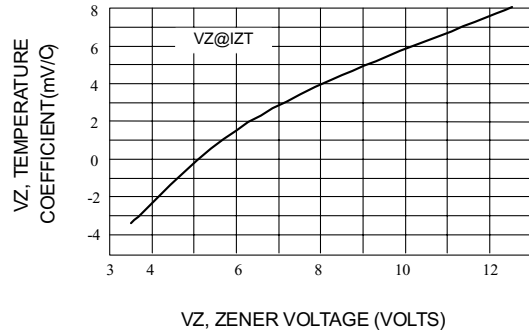


Fig. 2-ZENER VOLTAGE- 3 TO 12 VOLTS

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

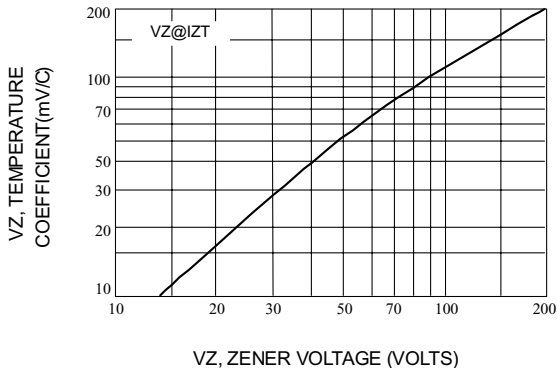


Fig. 3-ZENER VOLTAGE-10 TO 200 VOLTS

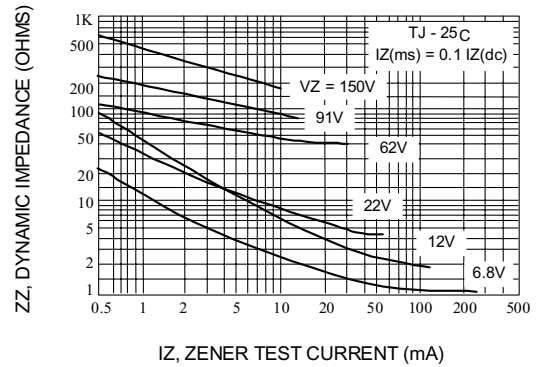


Fig. 4-EFFECT OF ZENER CURRENT

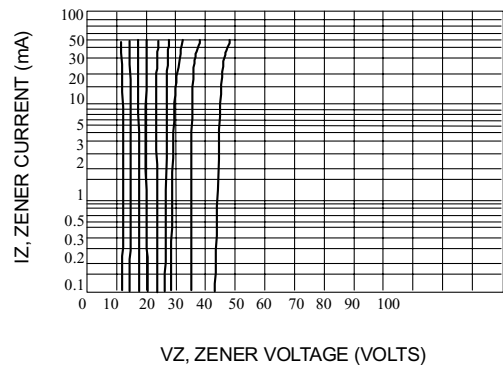
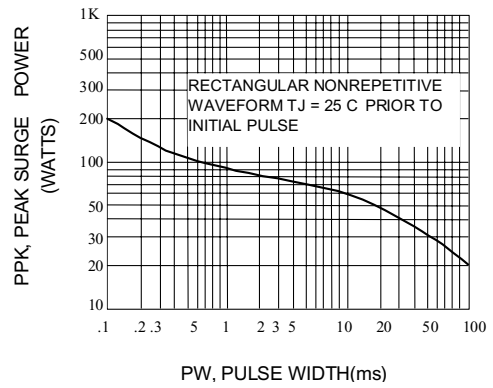
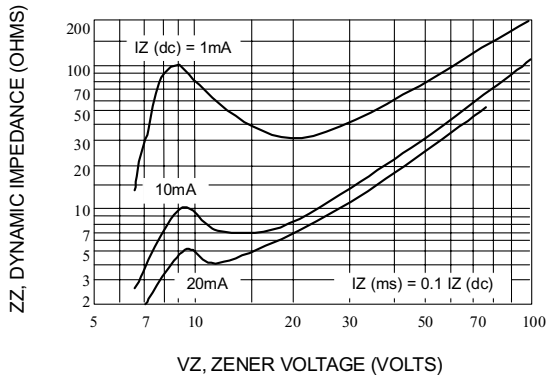


Fig. 7-VZ = 12 THRU 40 VOLTS



Micro Commercial Components

Ordering Information :

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

**\*\*\*IMPORTANT NOTICE\*\*\***

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . **Micro Commercial Components Corp .** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp .** and all the companies whose products are represented on our website, harmless against all damages.

**\*\*\*LIFE SUPPORT\*\*\***

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

**\*\*\*CUSTOMER AWARENESS\*\*\***

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.