



**THE DATASHEET OF  
3SMBJ5936B-TP**



# 3SMBJ5913B THRU 3SMBJ5943B

## 3.0 Watt Surface Mount Silicon Zener Diodes

### Features

- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- 3.3 thru 56 Volt Voltage Range
- Low Inductance, Low Profile Mounting
- Glass Passivated Junction
- Available on Tape and Reel

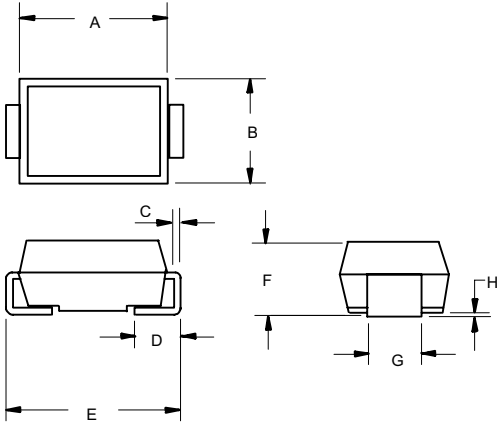
### Mechanical Data

- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL rating 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

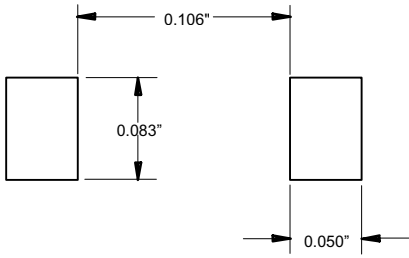
Maximum Forward Voltage	V <sub>F</sub>	1.5V	(Note: 2)
Steady State Power Dissipation	P <sub>d</sub>	3.0W	(Note: 3)
Operation and Storage Temperature	T <sub>J</sub> , T <sub>STG</sub>	-55°C to +150°C	

### 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**



- 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

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ELECTRICAL CHARACTERISTICS(TL=30 centigrade unless otherwise noted) (VF=1.5Volts Max @IF=200mA<sub>dc</sub> for all types).

MCC PART NUMBER	ZENER VOLTAGE V <sub>Z</sub> (*)	TEST CURRENT I <sub>ZT</sub>	MAXIMUM DYNAMIC IMPEDANCE Z <sub>ZT</sub> @ I <sub>ZT</sub>	KNEE CURRENT I <sub>ZK</sub>	KNEE IMPEDANCE Z <sub>ZK</sub>	MAXIMUM REVERSE CURRENT I <sub>R</sub>	REVERSE VOLTAGE V <sub>R</sub>	DEVICE MARKING
	VOLTS	mA	OHMS	mA	OHMS	μA	VOLTS	
3SMBJ5913B	3.3	113.6	10.0	1.0	500	100	1.0	H13B
3SMBJ5914B	3.6	104.2	9.0	1.0	500	75.0	1.0	H14B
3SMBJ5915B	3.9	96.1	7.5	1.0	500	25.0	1.0	H15B
3SMBJ5916B	4.3	87.2	6.0	1.0	500	5.0	1.0	H16B
3SMBJ5917B	4.7	79.8	5.0	1.0	500	5.0	1.5	H17B
3SMBJ5918B	5.1	73.5	4.0	1.0	350	5.0	2.0	H18B
3SMBJ5919B	5.6	66.9	2.0	1.0	250	5.0	3.0	H19B
3SMBJ5920B	6.2	60.5	2.0	1.0	200	5.0	4.0	H20B
3SMBJ5921B	6.8	55.1	2.5	1.0	200	5.0	5.2	H21B
3SMBJ5922B	7.5	50.0	3.0	0.5	400	5.0	6.0	H22B
3SMBJ5923B	8.2	45.7	3.5	0.5	400	5.0	6.5	H23B
3SMBJ5924B	9.1	41.2	4.0	0.5	500	5.0	7.0	H24B
3SMBJ5925B	10	37.5	4.5	0.25	500	5.0	8.0	H25B
3SMBJ5926B	11	34.1	5.5	0.25	550	1.0	8.4	H26B
3SMBJ5927B	12	31.2	6.5	0.25	550	1.0	9.1	H27B
3SMBJ5928B	13	28.8	7.0	0.25	550	1.0	9.9	H28B
3SMBJ5929B	15	25.0	9.0	0.25	600	1.0	11.4	H29B
3SMBJ5930B	16	23.4	10.0	0.25	600	1.0	12.2	H30B
3SMBJ5931B	18	20.8	12.0	0.25	650	1.0	13.7	H31B
3SMBJ5932B	20	18.7	14.0	0.25	650	1.0	15.2	H32B
3SMBJ5933B	22	17.0	17.5	0.25	650	1.0	16.7	H33B
3SMBJ5934B	24	15.6	19.0	0.25	700	1.0	18.2	H34B
3SMBJ5935B	27	13.9	23.0	0.25	700	1.0	20.6	H35B
3SMBJ5936B	30	12.5	28.0	0.25	750	1.0	22.8	H36B
3SMBJ5937B	33	11.4	33.0	0.25	800	1.0	25.1	H37B
3SMBJ5938B	36	10.4	38.0	0.25	850	1.0	27.4	H38B
3SMBJ5939B	39	9.6	45.0	0.25	900	1.0	29.7	H39B
3SMBJ5940B	43	8.7	53.0	0.25	950	1.0	32.7	H40B
3SMBJ5941B	47	8.0	67.0	0.25	1000	1.0	35.8	H41B
3SMBJ5942B	51	7.3	70.0	0.25	1100	1.0	38.8	H42B
3SMBJ5943B	56	6.7	86.0	0.25	1300	1.0	42.6	H43B

\* TOLERANCE AND VOLTAGE DESIGNATION Tolerance designation - The type numbers listed indicate a tolerance of +/-5%

#### RATING AND CHARACTERISTICS CURVES

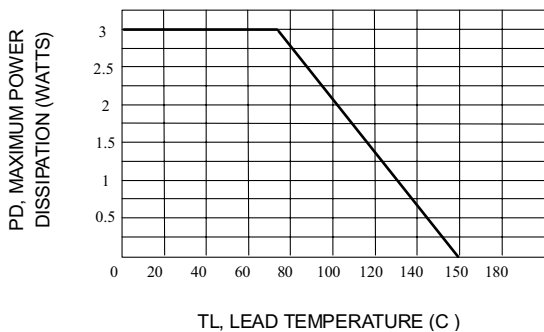


Fig. 1-STEADY STATE POWER DERATING

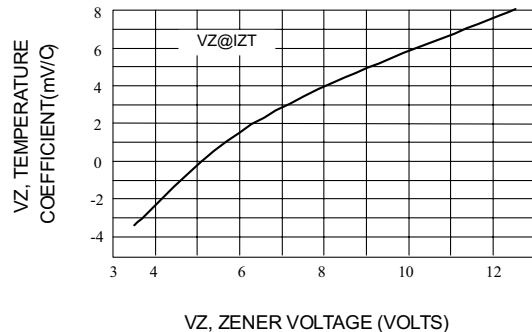


Fig. 2-ZENER VOLTAGE-TO 12 VOLTS

RATING AND CHARACTERISTICS CURVES  
 3SMBJ5913B THRU 3SMBJ5943B

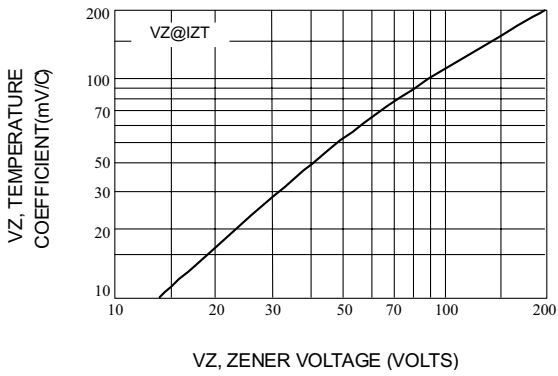


Fig. 3-ZENER VOLTAGE-10 TO 200 VOLTS

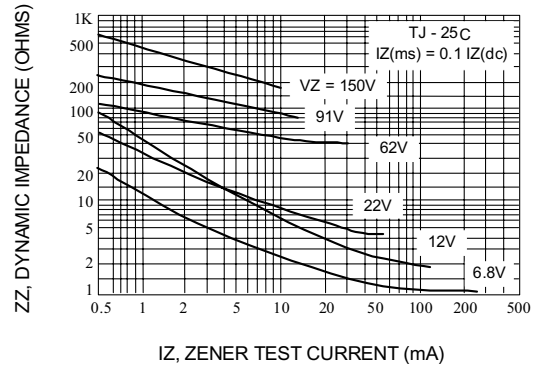


Fig. 4-EFFECT OF ZENER CURRENT

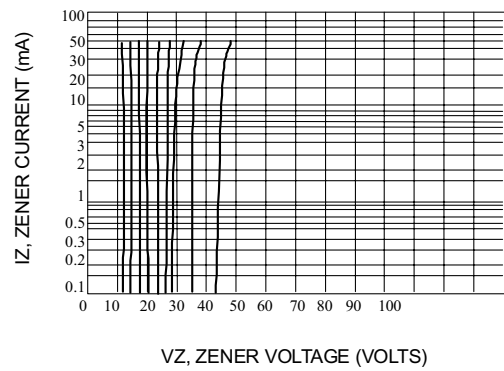
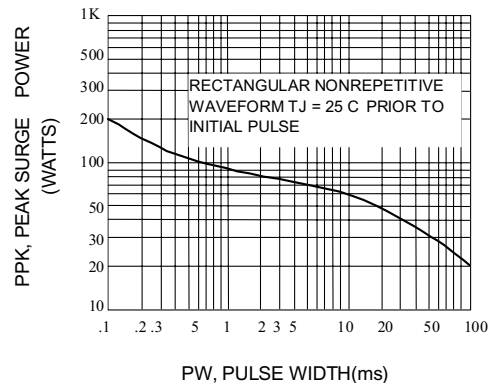
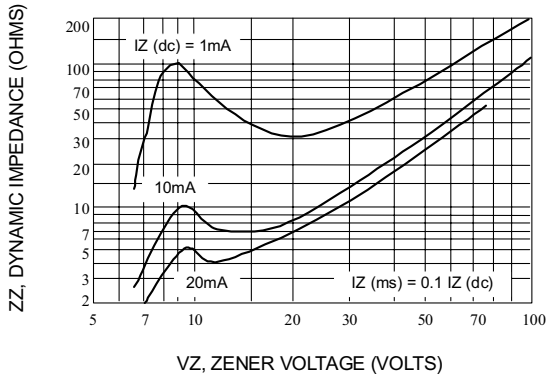


Fig. 7-VZ = 12 THRU 40 VOLTS



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## Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;3Kpcs/Reel

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