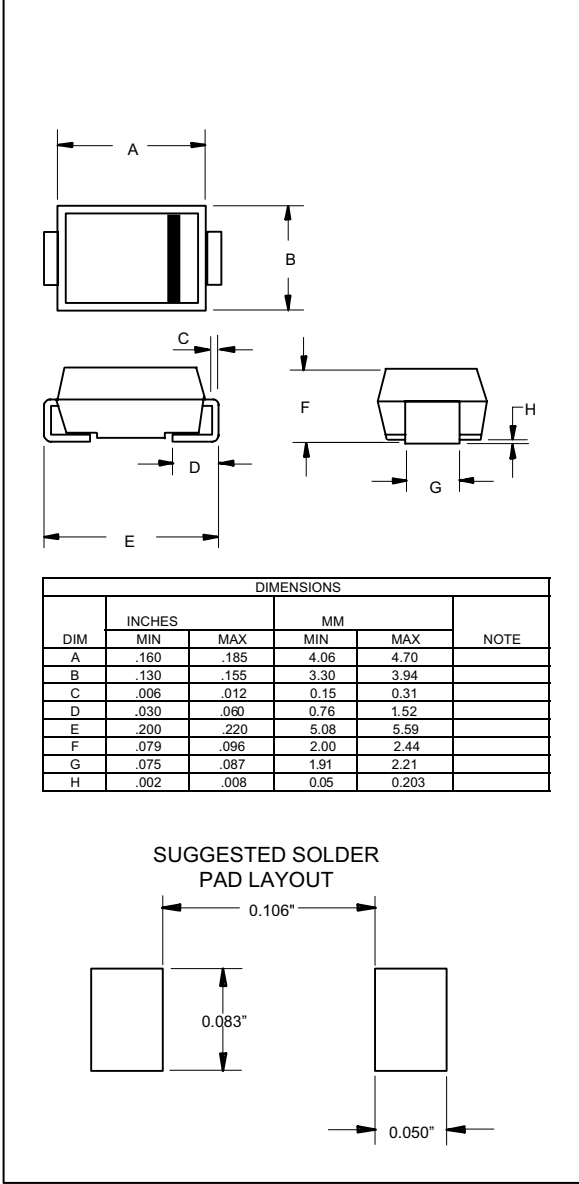


# 3SMBJ5913B THRU 3SMBJ5956B

## 3.0 Watt Surface Mount Silicon Zener Diodes

### DO-214AA (SMB) (LEAD FRAME)



### Features

- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- 3.3 thru 200 Volt Voltage Range
- Low Inductance, Low Profile Mounting
- Glass Passivated Junction
- Available On Tape and Reel
- Halogen free available upon request by adding suffix "-HF"
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

### Mechanical Data

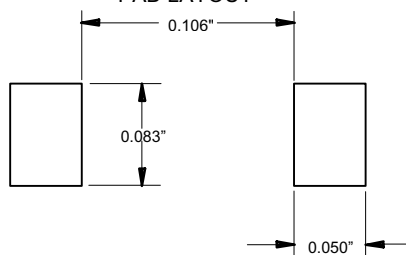
- Terminals solderable per MIL-STD-750, Method 2026
- Polarity is indicated by cathode band.
- Packaging: Standard 12mm Tape (see EIA 481)
- Maximum temperature for soldering: 260°C for 10 seconds.

### 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 Ambient	R <sub>thJA</sub>	42°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

#### SUGGESTED SOLDER PAD LAYOUT



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ELECTRICAL CHARACTERISTICS(TL=30 centigrade unless otherwise noted) (VF=1.5Volts Max @IF=200mAdc for all types).

MCC PART NUMBER	ZENER VOLTAGE VZ (*)	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	
3SMBJ5913B	3.3	113.6	10	1	500	100	1	H13B
3SMBJ5914B	3.6	104.2	9	1	500	75	1	H14B
3SMBJ5915B	3.9	96.1	7.5	1	500	25	1	H15B
3SMBJ5916B	4.3	87.2	6	1	500	5	1	H16B
3SMBJ5917B	4.7	79.8	5	1	500	5	1.5	H17B
3SMBJ5918B	5.1	73.5	4	1	350	5	2	H18B
3SMBJ5919B	5.6	66.9	2	1	250	5	3	H19B
3SMBJ5920B	6.2	60.5	2	1	200	5	4	H20B
3SMBJ5921B	6.8	55.1	2.5	1	200	5	5.2	H21B
3SMBJ5922B	7.5	50	3	0.5	400	5	6	H22B
3SMBJ5923B	8.2	45.7	3.5	0.5	400	5	6.5	H23B
3SMBJ5924B	9.1	41.2	4	0.5	500	5	7	H24B
3SMBJ5925B	10	37.5	4.5	0.25	500	5	8	H25B
3SMBJ5926B	11	34.1	5.5	0.25	550	1	8.4	H26B
3SMBJ5927B	12	31.2	6.5	0.25	550	1	9.1	H27B
3SMBJ5928B	13	28.8	7	0.25	550	1	9.9	H28B
3SMBJ5929B	15	25	9	0.25	600	1	11.4	H29B
3SMBJ5930B	16	23.4	10	0.25	600	1	12.2	H30B
3SMBJ5931B	18	20.8	12	0.25	650	1	13.7	H31B
3SMBJ5932B	20	18.7	14	0.25	650	1	15.2	H32B
3SMBJ5933B	22	17	17.5	0.25	650	1	16.7	H33B
3SMBJ5934B	24	15.6	19	0.25	700	1	18.2	H34B
3SMBJ5935B	27	13.9	23	0.25	700	1	20.6	H35B
3SMBJ5936B	30	12.5	28	0.25	750	1	22.8	H36B
3SMBJ5937B	33	11.4	33	0.25	800	1	25.1	H37B
3SMBJ5938B	36	10.4	38	0.25	850	1	27.4	H38B
3SMBJ5939B	39	9.6	45	0.25	900	1	29.7	H39B
3SMBJ5940B	43	8.7	53	0.25	950	1	32.7	H40B
3SMBJ5941B	47	8	67	0.25	1000	1	35.8	H41B
3SMBJ5942B	51	7.3	70	0.25	1100	1	38.8	H42B
3SMBJ5943B	56	6.7	86	0.25	1300	1	42.6	H43B
3SMBJ5944B	62	6	100	0.25	1500	1	47.1	H44B
3SMBJ5945B	68	5.5	120	0.25	1700	1	51.7	H45B
3SMBJ5946B	75	5	140	0.25	2000	1	56	H46B
3SMBJ5947B	82	4.6	160	0.25	2500	1	62.2	H47B
3SMBJ5948B	91	4.1	200	0.25	3000	1	69.2	H48B
3SMBJ5949B	100	3.7	250	0.25	3100	1	76	H49B
3SMBJ5950B	110	3.4	300	0.25	4000	1	83.6	H50B
3SMBJ5951B	120	3.1	380	0.25	4500	1	91.2	H51B
3SMBJ5952B	130	2.9	450	0.25	5000	1	98.8	H52B
3SMBJ5953B	150	2.5	600	0.25	6000	1	114	H53B
3SMBJ5954B	160	2.3	700	0.25	6500	1	121.6	H54B
3SMBJ5955B	180	2.1	900	0.25	7000	1	136.8	H55B
3SMBJ5956B	200	1.9	1200	0.25	8000	1	152	H56B

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

## RATING AND CHARACTERISTICS CURVES

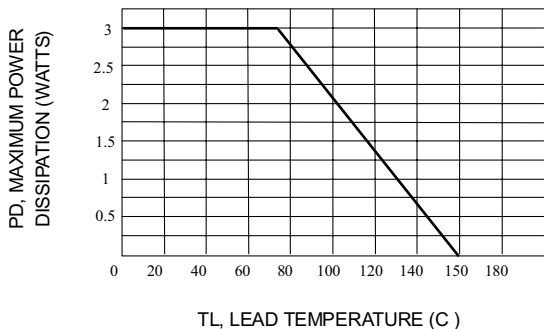


Fig. 1-STEADY STATE POWER DERATING

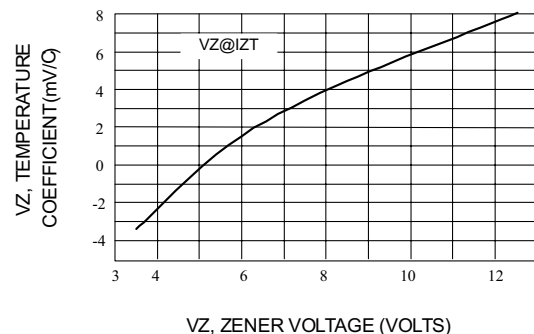


Fig. 2-ZENER VOLTAGE-TO 12 VOLTS

RATING AND CHARACTERISTICS CURVES  
 3SMBJ5913B THRU 3SMBJ5956B

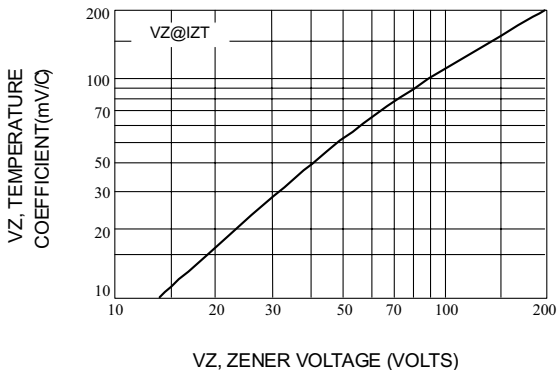


Fig. 3-ZENER VOLTAGE-10 TO 200 VOLTS

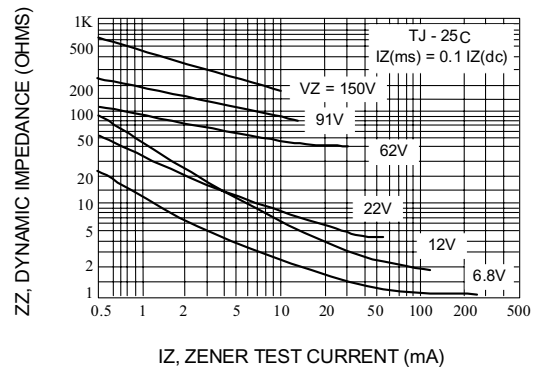


Fig. 4-EFFECT OF ZENER CURRENT

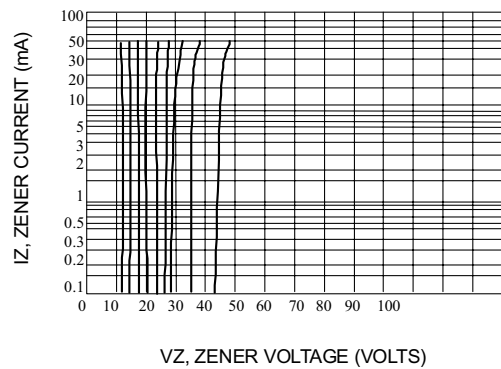
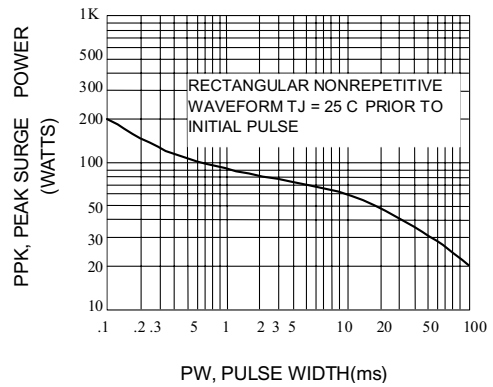
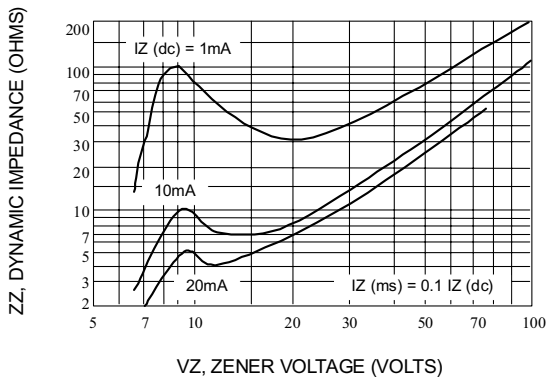


Fig. 7-VZ = 12 THRU 40 VOLTS



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## Ordering Information

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

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

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