

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

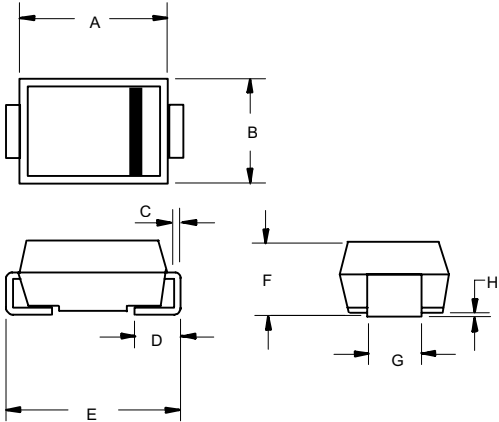
Mechanical Data

- 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

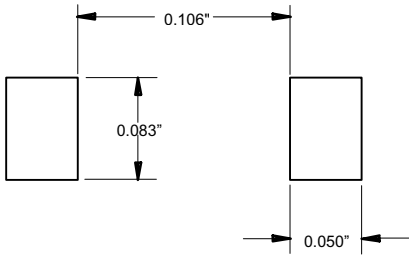
| | | | |
|-----------------------------------|-----------------------------------|-----------------|-----------|
| Maximum Forward Voltage | V _F | 1.5V | (Note: 2) |
| Steady State Power Dissipation | P _d | 3.0W | (Note: 3) |
| Operation and Storage Temperature | T _J , T _{STG} | -55°C to +150°C | |

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 5.0mm² (1oz thick) land areas.
Lead temperature at T_L=75°C

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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 V_z (*) | 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 | DEVICE MARKING |
|-----------------|----------------------------|--------------------------|--|--------------------------|----------------------------|----------------------------------|--------------------------|----------------|
| | VOLTS | mA | OHMS | mA | OHMS | μ A | 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

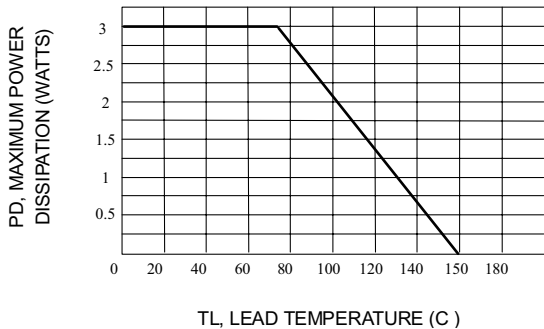


Fig. 1-STEADY STATE POWER DERATING

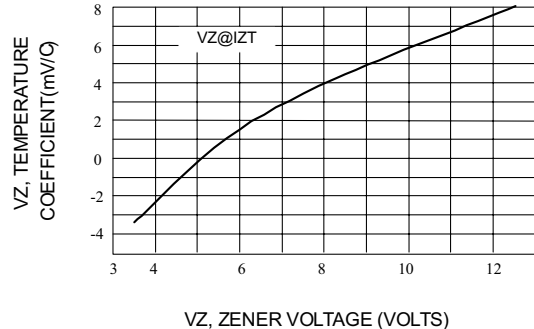


Fig. 2-ZENER VOLTAGE-TO 12 VOLTS

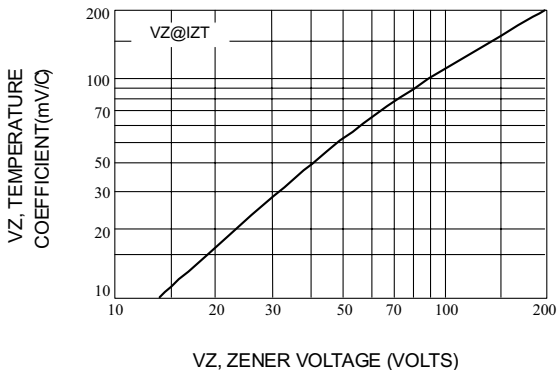


Fig. 3-ZENER VOLTAGE-10 TO 200 VOLTS

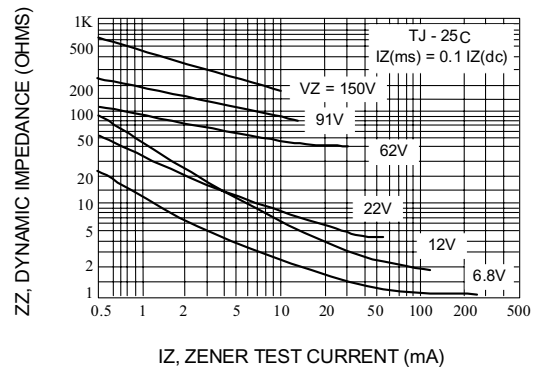


Fig. 4-EFFECT OF ZENER CURRENT

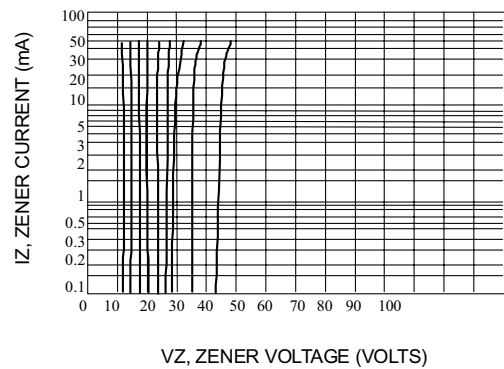
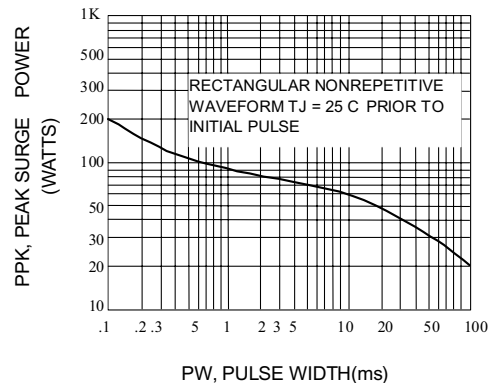
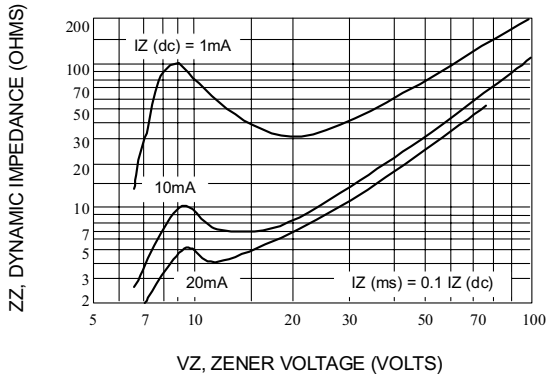


Fig. 7-VZ = 12 THRU 40 VOLTS



Micro Commercial Components

Ordering Information

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

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- Техническая поддержка проекта;
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Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.