

SZ503J - SZ50D0

SURFACE MOUNT SILICON ZENER DIODES

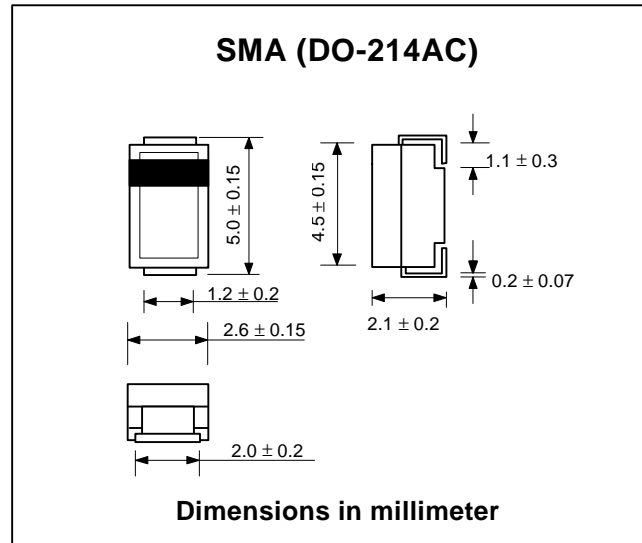
V_Z : 3.9 - 200 Volts
P_D : 3 Watts

FEATURES :

- * Complete Voltage Range 3.9 to 200 Volts
- * High peak reverse power dissipation
- * High reliability
- * Low leakage current
- * **Pb / RoHS Free**

MECHANICAL DATA

- * Case : SMA (DO-214AC) Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Lead : Lead formed for Surface mount
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.064 gram



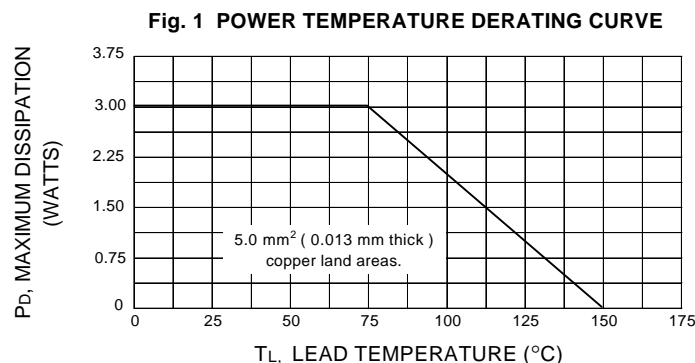
MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified

| Rating | Symbol | Value | Unit |
|--|----------------|---------------|------|
| DC Power Dissipation at T _L = 75 °C (Note1) | P _D | 3.0 | W |
| Maximum Forward Voltage at I _F = 200 mA | V _F | 1.5 | V |
| Junction Temperature Range | T _J | - 55 to + 150 | °C |
| Storage Temperature Range | T _s | - 55 to + 150 | °C |

Note :

(1) T_L = Lead temperature at 5.0 mm² (0.013 mm thick) copper land areas.



ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

| TYPE | Nominal Zener Voltage | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Maximum DC Zener Current |
|--------|----------------------------------|-----------------|-----------------------------------|-----------------------------------|-----------------|---------------------------------|-------|--------------------------|
| | V _Z @ I _{ZT} | I _{ZT} | Z _{ZT} @ I _{ZT} | Z _{ZK} @ I _{ZK} | I _{ZK} | I _R @ V _R | | I _{ZM} |
| | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | (mA) |
| SZ503J | 3.9 | 192 | 4.5 | 400 | 1.0 | 80 | 1.0 | 630 |
| SZ504D | 4.3 | 174 | 4.5 | 400 | 1.0 | 50 | 1.0 | 590 |
| SZ504H | 4.7 | 160 | 4.0 | 500 | 1.0 | 50 | 1.0 | 550 |
| SZ505B | 5.1 | 147 | 3.5 | 550 | 1.0 | 50 | 1.0 | 520 |
| SZ505G | 5.6 | 134 | 2.5 | 600 | 1.0 | 50 | 2.0 | 480 |
| SZ506C | 6.2 | 121 | 1.5 | 700 | 1.0 | 50 | 3.0 | 435 |
| SZ506I | 6.8 | 110 | 2.0 | 700 | 1.0 | 50 | 4.0 | 393 |
| SZ507F | 7.5 | 100 | 2.0 | 700 | 0.5 | 50 | 5.0 | 360 |
| SZ508C | 8.2 | 91 | 2.3 | 700 | 0.5 | 50 | 6.0 | 330 |
| SZ509B | 9.1 | 82 | 2.5 | 700 | 0.5 | 50 | 7.0 | 297 |
| SZ5010 | 10 | 75 | 3.5 | 700 | 0.3 | 50 | 7.6 | 270 |
| SZ5011 | 11 | 68 | 4.0 | 700 | 0.25 | 50 | 8.4 | 225 |
| SZ5012 | 12 | 63 | 4.5 | 700 | 0.25 | 1.0 | 9.1 | 246 |
| SZ5013 | 13 | 58 | 4.5 | 700 | 0.25 | 0.5 | 9.1 | 208 |
| SZ5014 | 14 | 53 | 5.0 | 700 | 0.25 | 0.5 | 10.6 | 193 |
| SZ5015 | 15 | 50 | 5.5 | 700 | 0.25 | 0.5 | 11.4 | 180 |
| SZ5016 | 16 | 47 | 5.5 | 700 | 0.25 | 0.5 | 12.2 | 169 |
| SZ5017 | 17 | 44 | 6.0 | 750 | 0.25 | 0.5 | 13.0 | 159 |
| SZ5018 | 18 | 42 | 6.0 | 750 | 0.25 | 0.5 | 13.7 | 150 |
| SZ5019 | 19 | 40 | 7.0 | 750 | 0.25 | 0.5 | 14.4 | 142 |
| SZ5020 | 20 | 37 | 7.0 | 750 | 0.25 | 0.5 | 15.2 | 135 |
| SZ5022 | 22 | 34 | 8.0 | 750 | 0.25 | 0.5 | 16.7 | 123 |
| SZ5024 | 24 | 31 | 9.0 | 750 | 0.25 | 0.5 | 18.2 | 112 |
| SZ5027 | 27 | 28 | 10 | 750 | 0.25 | 0.5 | 20.6 | 100 |
| SZ5028 | 28 | 27 | 12 | 750 | 0.25 | 0.5 | 21.0 | 96 |
| SZ5030 | 30 | 25 | 16 | 1000 | 0.25 | 0.5 | 22.5 | 90 |
| SZ5033 | 33 | 23 | 20 | 1000 | 0.25 | 0.5 | 25.1 | 82 |
| SZ5036 | 36 | 21 | 22 | 1000 | 0.25 | 0.5 | 27.4 | 75 |
| SZ5039 | 39 | 19 | 28 | 1000 | 0.25 | 0.5 | 29.7 | 69 |
| SZ5043 | 43 | 17 | 33 | 1500 | 0.25 | 0.5 | 32.7 | 63 |
| SZ5047 | 47 | 16 | 38 | 1500 | 0.25 | 0.5 | 35.6 | 57 |
| SZ5051 | 51 | 15 | 45 | 1500 | 0.25 | 0.5 | 38.8 | 53 |
| SZ5056 | 56 | 13 | 50 | 2000 | 0.25 | 0.5 | 42.6 | 48 |
| SZ5062 | 62 | 12 | 55 | 2000 | 0.25 | 0.5 | 47.1 | 44 |
| SZ5068 | 68 | 11 | 70 | 2000 | 0.25 | 0.5 | 51.7 | 40 |
| SZ5075 | 75 | 10 | 85 | 2000 | 0.25 | 0.5 | 56.0 | 36 |
| SZ5082 | 82 | 9.1 | 95 | 3000 | 0.25 | 0.5 | 62.2 | 33 |
| SZ5091 | 91 | 8.2 | 115 | 3000 | 0.25 | 0.5 | 69.2 | 30 |
| SZ50B0 | 100 | 7.5 | 160 | 3000 | 0.25 | 0.5 | 76.0 | 27 |
| SZ50B1 | 110 | 6.8 | 225 | 4000 | 0.25 | 0.5 | 83.6 | 25 |
| SZ50B2 | 120 | 6.3 | 300 | 4500 | 0.25 | 0.5 | 91.2 | 22 |
| SZ50B3 | 130 | 5.8 | 375 | 5000 | 0.25 | 0.5 | 98.8 | 21 |
| SZ50B4 | 140 | 5.3 | 475 | 5000 | 0.25 | 0.5 | 106.4 | 19 |
| SZ50B5 | 150 | 5.0 | 550 | 6000 | 0.25 | 0.5 | 114.0 | 18 |
| SZ50B6 | 160 | 4.7 | 625 | 6500 | 0.25 | 0.5 | 121.6 | 17 |
| SZ50B7 | 170 | 4.4 | 650 | 7000 | 0.25 | 0.5 | 130.4 | 16 |
| SZ50B8 | 180 | 4.2 | 700 | 7000 | 0.25 | 0.5 | 136.8 | 15 |
| SZ50B9 | 190 | 4.0 | 800 | 8000 | 0.25 | 0.5 | 144.8 | 14 |
| SZ50D0 | 200 | 3.7 | 875 | 8000 | 0.25 | 0.5 | 152.0 | 13 |

Note :

- (1) The type number listed have a standard tolerance on the nominal zener voltage of ± 10%, altered the fourth number of type from " 0 " for ± 10% tolerance to be " 5 " for ± 5% tolerance.
- (2) " SZ " will be omitted in marking on the diode.