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# SZ15D2 - SZ15E8

# SURFACE MOUNT SILICON ZENER DIODES

## $V_Z$ : 220 - 380 Volts
## $P_D$ : 1 Watt

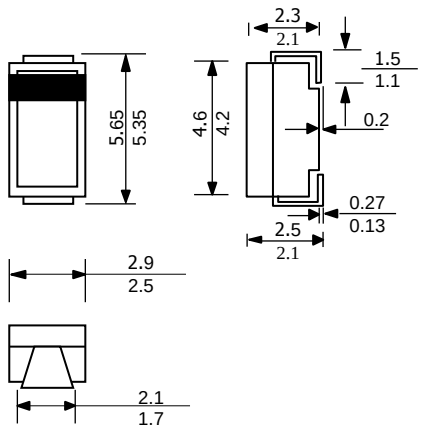
### FEATURES :

* Complete Voltage Range 220 to 380 Volts
* High peak reverse power dissipation
* High reliability
* Low leakage current
* Pb / RoHS Free

### MECHANICAL DATA

* Case : SMA Molded plastic
* Epoxy : UL94V-0 rate flame retardant
* Polarity : Color band denotes cathode end
* Mounting position : Any
* Weight : 0.060 gram (Approximately)

**SMA**




**Dimensions in millimeters**

### MAXIMUM RATINGS ( Rating at 25 °C ambient temperature unless otherwise specified)

| Rating | Symbol | Value | Unit |
|---|---|---|---|
| DC Power Dissipation at $T_L$ = 75 °C (Note1) | $P_D$ | 1.0 | W |
| Maximum Forward Voltage at $I_F$ = 200 mA | $V_F$ | 2.0 | V |
| Junction Temperature Range | $T_J$ | - 55 to + 150 | °C |
| Storage Temperature Range | $T_{STG}$ | - 55 to + 150 | °C |

### ELECTRICAL CHARACTERISTICS (Ta = 25 °C unless otherwise specified)

| Type | Nominal Zener Voltage | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Maximum DC Zener Current | Maximum Surge Current |
|---|---|---|---|---|---|---|---|---|---|
| | $V_Z$ @ $I_{ZT}$ | $I_{ZT}$ | $Z_{ZT}$ @ $I_{ZT}$ | $Z_{ZK}$ @ $I_{ZK}$ | $I_{ZK}$ | $I_R$ @ $V_R$ | | $I_{ZM}$ | $I_{RM}$(3) |
| (Note 2) | (V) | (mA) | (Ω ) | (Ω ) | (mA) | (μA) | (V) | (mA) | (mApk) |
| **SZ15D2** | 220 | 1.00 | 1600 | 8000 | 0.25 | 5.0 | 167.2 | 4.0 | 20.0 |
| **SZ15D4** | 240 | 0.93 | 1800 | 8500 | 0.25 | 5.0 | 182.4 | 3.8 | 18.5 |
| **SZ15D5** | 250 | 0.90 | 2000 | 9000 | 0.25 | 5.0 | 190 | 3.6 | 18.0 |
| **SZ15D7** | 270 | 0.82 | 2100 | 9000 | 0.25 | 5.0 | 205 | 3.3 | 16.5 |
| **SZ15E0** | 300 | 0.75 | 2300 | 9500 | 0.25 | 5.0 | 228 | 3.0 | 15.0 |
| **SZ15E3** | 330 | 0.70 | 2500 | 9500 | 0.25 | 5.0 | 250 | 2.8 | 13.0 |
| **SZ15E8** | 380 | 0.60 | 2700 | 9500 | 0.25 | 5.0 | 288 | 2.4 | 12.0 |

**Notes :**

(1) P.C.B. Mounted on 0.31x0.31x0.08" (8x8x2mm) copper areas pads.

(2) The type number listed have a standard tolerance on the nominal zener voltage of ±5%, altered the fourth number of type from " 5 " for ±5% tolerance to be " 0 " for ±10% tolerance.

(3) Surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on $I_{ZT}$ per JEDEC Method.

(4) " SZ " will be omitted in marking on the diode.



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