

TOSHIBA Zener Diode Silicon Epitaxial Type

CRY62~CRZ47

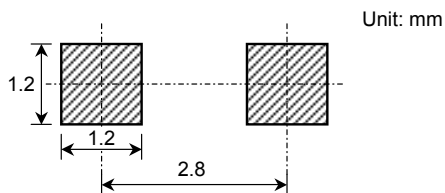
Use in Communication, Automation and
Measurement Equipment
Constant Voltage Regulation
Transient Suppressors

- Average power dissipation: $P = 0.7 \text{ W}$
- Zener voltage: $V_Z = 6.2 \sim 47 \text{ V}$
- Suitable for compact assembly due to small surface-mount package
"S-FLAT™" (Toshiba package name)

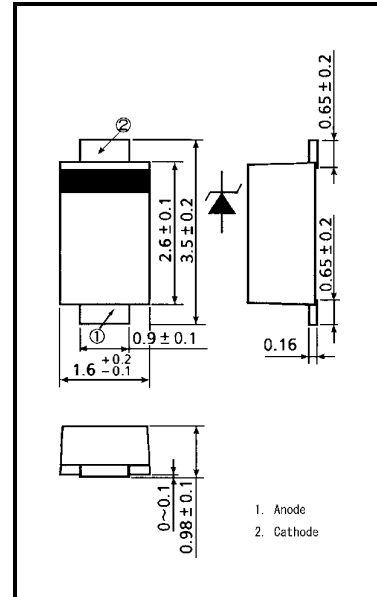
Maximum Ratings ($T_a = 25^\circ\text{C}$)

| Characteristic | Symbol | Rating | Unit |
|---------------------------|-----------|-----------|------|
| Power dissipation | P | 700 | mW |
| Junction temperature | T_j | -40 ~ 150 | °C |
| Storage temperature range | T_{stg} | -40 ~ 150 | °C |

Standard Soldering Pad



Unit: mm



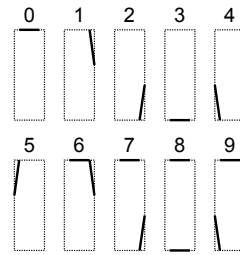
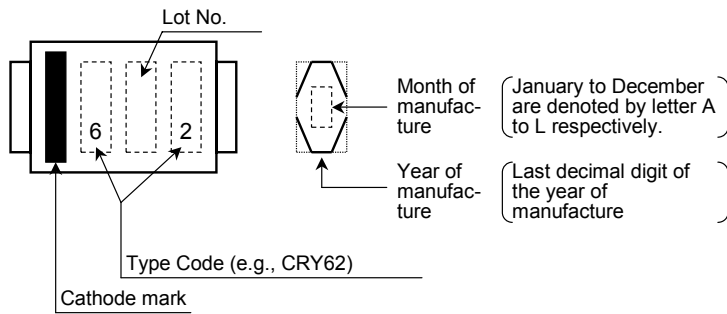
| | |
|---------|--------|
| JEDEC | — |
| JEITA | — |
| TOSHIBA | 3-2A1A |

Weight: 0.013 g (typ.)

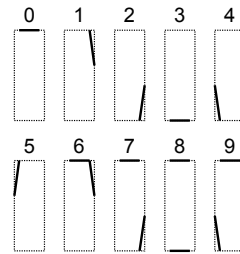
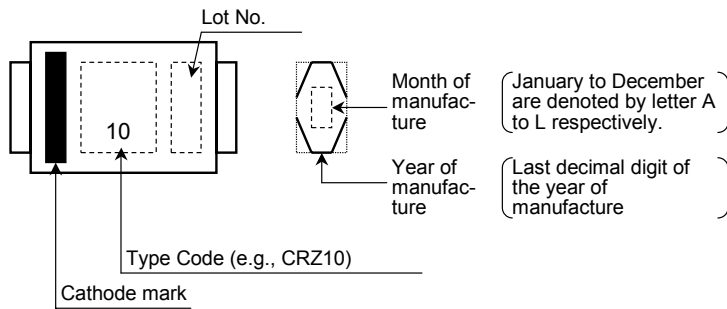
Marking

Following Indicates the Date of Manufacture

CRY62~CRY91

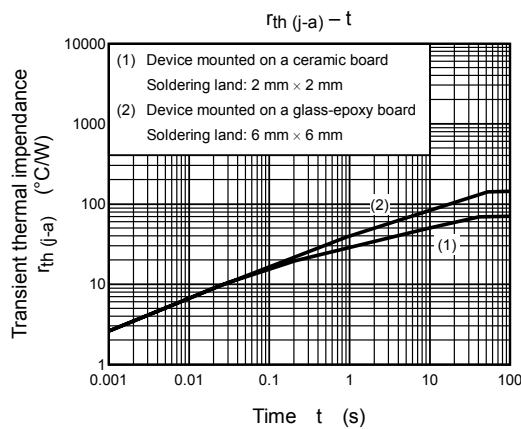
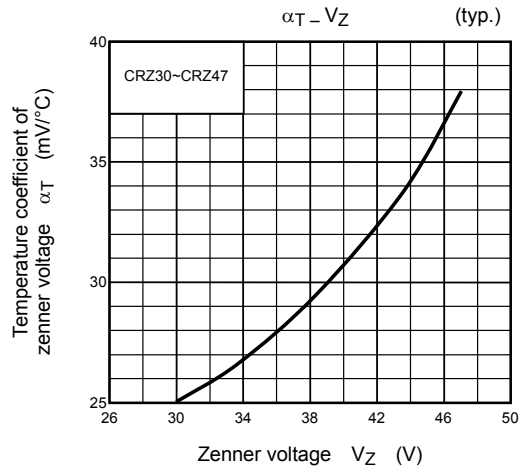
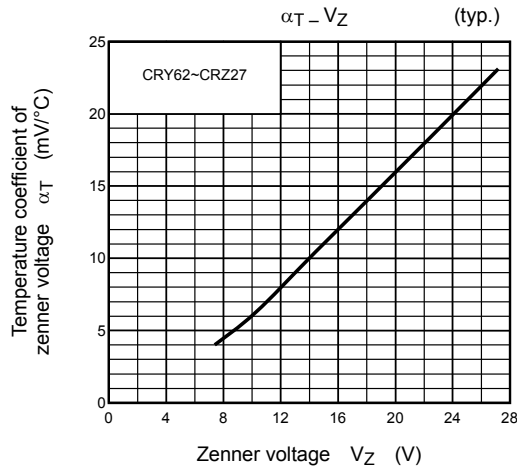
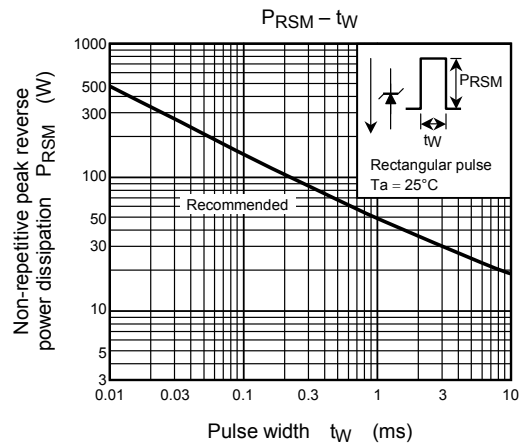
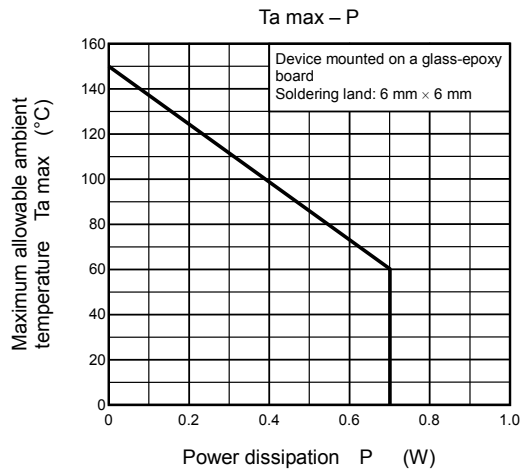


CRZ10~CRZ47



Electrical Characteristics (Ta = 25°C)

| Product No. | Zener Voltage | | | Measurement Current I_Z (mA) | Zener Impedance | | Temperature Coefficient of Zener Voltage α_T (mV / °C) | | Forward Voltage | | Reverse Current | |
|-------------|---------------|------|------|--------------------------------|--------------------|--------------------------------|---|-----|-----------------|-------------------------------|------------------|-------------------------------|
| | V_Z (V) | | | | r_d (Ω) | Measurement Current I_Z (mA) | Typ. | Max | V_F (V) | Measurement Current I_F (A) | I_R (μ A) | Measurement Voltage V_R (V) |
| | Min | Typ. | Max | Max | Max | | | | | | | |
| CRY62 | 5.6 | 6.2 | 6.8 | 10 | 60 | 10 | 2 | 3 | 1.0 | 0.2 | 10 | 3.0 |
| CRY68 | 6.2 | 6.8 | 7.4 | 10 | 60 | 10 | 3 | 4 | 1.0 | 0.2 | 10 | 3.0 |
| CRY75 | 6.8 | 7.5 | 8.3 | 10 | 30 | 10 | 4 | 5 | 1.0 | 0.2 | 10 | 4.5 |
| CRY82 | 7.4 | 8.2 | 9.0 | 10 | 30 | 10 | 4 | 6 | 1.0 | 0.2 | 10 | 4.9 |
| CRY91 | 8.2 | 9.1 | 10.0 | 10 | 30 | 10 | 5 | 8 | 1.0 | 0.2 | 10 | 5.5 |
| CRZ10 | 9.0 | 10.0 | 11.0 | 10 | 30 | 10 | 6 | 9 | 1.0 | 0.2 | 10 | 6.0 |
| CRZ11 | 9.9 | 11.0 | 12.1 | 10 | 30 | 10 | 7 | 11 | 1.0 | 0.2 | 10 | 7.0 |
| CRZ12 | 10.8 | 12.0 | 13.2 | 10 | 30 | 10 | 8 | 13 | 1.0 | 0.2 | 10 | 8.0 |
| CRZ13 | 11.7 | 13.0 | 14.3 | 10 | 30 | 10 | 9 | 14 | 1.0 | 0.2 | 10 | 9.0 |
| CRZ15 | 13.5 | 15.0 | 16.5 | 10 | 30 | 10 | 11 | 17 | 1.0 | 0.2 | 10 | 10.0 |
| CRZ16 | 14.4 | 16.0 | 17.6 | 10 | 30 | 10 | 12 | 19 | 1.0 | 0.2 | 10 | 11.0 |
| CRZ18 | 16.2 | 18.0 | 19.8 | 10 | 30 | 10 | 14 | 23 | 1.0 | 0.2 | 10 | 13.0 |
| CRZ20 | 18.0 | 20.0 | 22.0 | 10 | 30 | 10 | 16 | 26 | 1.0 | 0.2 | 10 | 14.0 |
| CRZ22 | 19.8 | 22.0 | 24.2 | 10 | 30 | 10 | 18 | 28 | 1.0 | 0.2 | 10 | 16.0 |
| CRZ24 | 21.6 | 24.0 | 26.4 | 10 | 30 | 10 | 20 | 32 | 1.0 | 0.2 | 10 | 17.0 |
| CRZ27 | 24.3 | 27.0 | 29.7 | 10 | 30 | 10 | 23 | 36 | 1.0 | 0.2 | 10 | 19.0 |
| CRZ30 | 27.0 | 30.0 | 33.0 | 10 | 30 | 10 | 25 | 40 | 1.0 | 0.2 | 10 | 21.0 |
| CRZ33 | 29.7 | 33.0 | 36.3 | 10 | 30 | 10 | 26 | 41 | 1.0 | 0.2 | 10 | 26.4 |
| CRZ36 | 32.4 | 36.0 | 39.6 | 9 | 30 | 9 | 28 | 45 | 1.0 | 0.2 | 10 | 28.8 |
| CRZ39 | 35.1 | 39.0 | 42.9 | 8 | 35 | 8 | 30 | 48 | 1.0 | 0.2 | 10 | 31.2 |
| CRZ43 | 38.7 | 43.0 | 47.3 | 7 | 40 | 7 | 33 | 53 | 1.0 | 0.2 | 10 | 34.4 |
| CRZ47 | 42.3 | 47.0 | 51.7 | 6 | 65 | 6 | 38 | 60 | 1.0 | 0.2 | 10 | 37.6 |



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