

CRT Series Datasheet

Over Temperature Protector Resistors
Power | Fuse

APPLICATIONS

- Industrial
- Consumer & Electronics
- Power & Energy
- Computer & Peripherals

FEATURES

All welded construction

UL1412 qualified

Cement coated resistor

Withstand up to 2[KV] surge voltage

RoHS and REACH Compliant

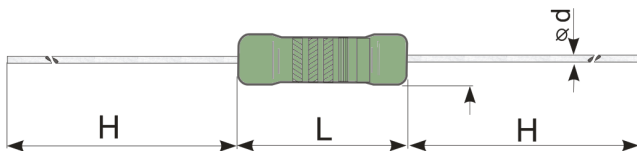
ORDERING CODE - Example

| CRT | 100 | J | T | - | 52- | 10R | AA |
|------|----------------------|--------------------|----------------------------------|-----------------|--|---------|---------------|
| Type | Power rating | Tol. | Pack-Code | Fusing marking | Forming type | R Value | Special |
| | 100 = 1W 200 = 2W | F = ±1% J = ±5% | T = Tape (ammo pack) R = Reel | - Base on spec. | 52- Inner Taping dimension 73- Inner taping dimension | | AA = Standard |

ELECTRICAL SPECIFICATIONS

| Type | | CRT100 | CRT200 |
|--|--------------------|---|-------------|
| Nominal Power Rating P_{25} | [W] | 1 | 2 |
| Resistance Range | [Ω] | 1R ... 100R | 1R ... 200R |
| E-Series (preferred) | | (Other values upon request) E24 (Other upon request) | |
| Tolerances | ±[%] | F = 1% ; J = 5% | |
| Temperature Coefficient | [ppm/°C] | ±300 (Standard) ±5000 (Only for NiFe alloy wire types) | |
| Temperature Fusing Range | [°C] | +187 ... +221 | |
| Max. working voltage | [V] _{RMS} | $\sqrt{P_{70} \times R}$ | |
| Dielectric withstanding voltage IEC115-1 clause 4.7 (1[min]) | [V] _{RMS} | 500 | |
| Insulation resistance IEC60115-1 clause 4.6 | [MΩ] | > 100 | |

DIMENSIONS [mm]



| Type | L | Ø D | H | Ø d |
|--------|-----------|----------|---------|-----------|
| CRT100 | 10,5 ±1,0 | 4,2 ±0,3 | 25 ±2,0 | 0,6 ±0,05 |
| CRT200 | 10,5 ±1,0 | 4,5 +0,5 | 25 ±2,0 | 0,6 ±0,05 |

CRT Series Datasheet

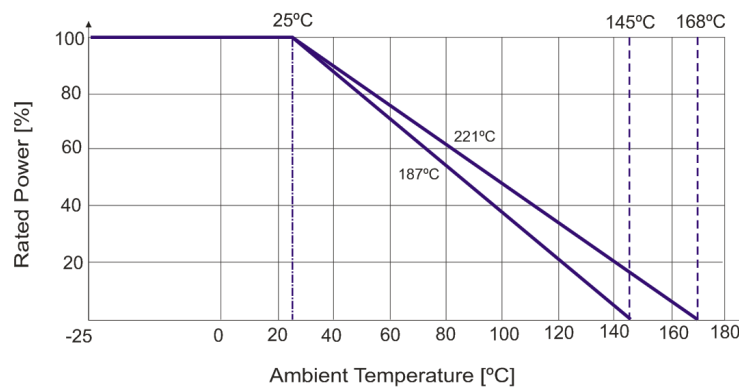
PERFORMANCE DATA

| | | |
|---|------|--|
| Surge voltage withstanding <i>IEC61000-4-5</i> <i>1.2/50 μs (20 pulses, 60[s])</i> | ±[%] | 5,0 |
| Endurance <i>IEC60115-1 clause 4.25</i> <i>(P₂₅, @ 25[°C], 1000[h])</i> | ±[%] | 5,0 |
| Short Time Overload <i>IEC60115-1 clause 4.13</i> <i>(U=2*√P₇₀*R, 5[s])</i> | ±[%] | 2,0 |
| Resistance to soldering heat <i>IEC60115-1 clause 4.18</i> <i>(255^{±2}[°C], 2^{±0.5}[s]), 2.5~3.5[mm].</i> | ±[%] | 1,0 |
| Terminal strength <i>60[s]</i> | [N] | 10 |
| Marking <i>IEC60062</i> | | Colour code (5th band for Fuse characteristics) |

FUSE CHARACTERISTICS

| Fusing Protector Mark | Fuse Standard Current [A] | Functioning Temperature [°C] | Color code ring |
|----------------------------|---------------------------|------------------------------|-----------------|
| - (based on spec) | 2A | 221 +30 / -20 | Brown |
| K | 3A | 221 +30 / -20 | Black |
| L | 2A | 187 +30 / -20 | Red |
| M | 3A | 187 +30 / -20 | Orange |
| Short-circuit test Voltage | | 250V | |

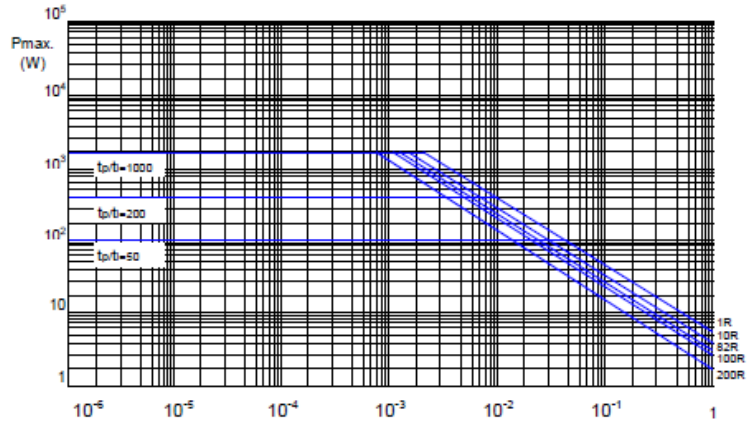
DERATING CURVE



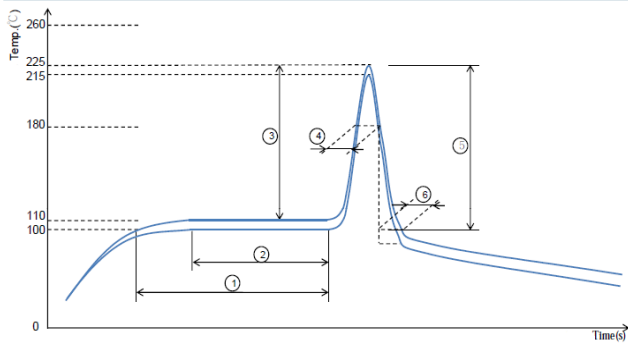
CRT Series Datasheet

PULSE PERFORMANCE

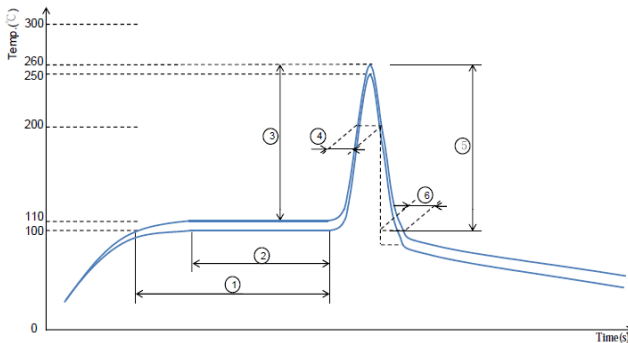
CRT200



SOLDERING PROFILE



| Thermal Fuse [°C] | Preheat time [s] | Preheat ΔT [°C] | Dip time [s] | Temperature dropping time [s] |
|-------------------|----------------------|-------------------------|--------------|-------------------------------|
| 187 | ① < 150 ② \leq 100 | ③ \leq 150 | ④ \leq 4 | ⑥ \leq 4 |

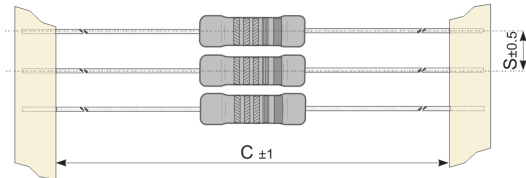


| Thermal Fuse [°C] | Preheat time [s] | Preheat ΔT [°C] | Dip time [s] | Temperature dropping time [s] |
|-------------------|----------------------|-------------------------|--------------|-------------------------------|
| 221 | ① < 150 ② \leq 100 | ③ \leq 150 | ④ \leq 4 | ⑥ \leq 4 |

CRT Series Datasheet

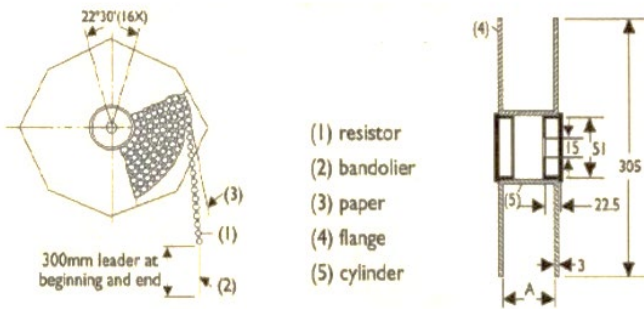
PACKAGING

The standard packaging for CRT dimensions below.



| Type | Pack Code | SPQ | Forming Type (Inner taping Dim.) | C | s |
|--------|------------------------|------|-------------------------------------|----|---|
| CRT100 | T (Taped Ammo pack) | 1000 | 52- | 52 | 5 |
| CRT200 | | | 52- | 52 | 5 |

Tape in Reel:



| Type | Pack Code | Pieces | Across Flange (A) |
|--------|----------------------|--------|----------------------|
| CRT100 | R = Taped in Reel | 2500 | 66.5 |
| CRT200 | | 2000 | 66.5 |