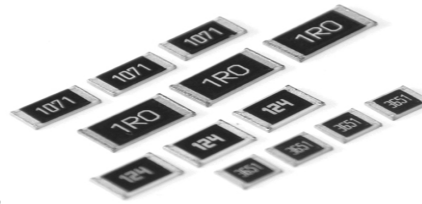


THIN FILM CHIP RESISTORS

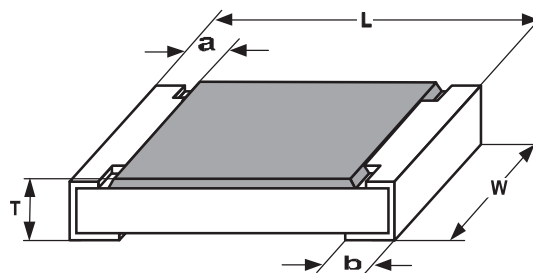
(RMT and RPT SERIES)

Features

1. Low TCR
2. High Precision ($\pm 0.5\%$ up to $\pm 0.01\%$)
3. Low Current noise
4. High Stability
5. RPT Series is enhanced power thin film resistors, higher working voltages and higher temperature capabilities compare to RMT Series.



Dimensional Specifications



| STYLE | Size code | Dimensions : mm | | | | | |
|--------|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | | L | W | T | a | b | |
| RMT-04 | 0402 | 1.00 \pm 0.10 | 0.50 \pm 0.05 | 0.30 \pm 0.05 | 0.25 \pm 0.10 | 0.20 \pm 0.10 | |
| RMT-06 | RPT-06 | 0603 | 1.60 \pm 0.10 | 0.80 \pm 0.10 | 0.45 \pm 0.10 | 0.30 \pm 0.15 | 0.30 \pm 0.15 |
| RMT-10 | RPT-10 | 0805 | 2.00 \pm 0.15 | 1.25 \pm 0.15 | 0.55 \pm 0.10 | 0.30 \pm 0.20 | 0.40 \pm 0.25 |
| RMT-18 | RPT-18 | 1206 | 3.10 \pm 0.15 | 1.55 \pm 0.15 | 0.55 \pm 0.10 | 0.50 \pm 0.20 | 0.40 \pm 0.25 |
| RMT-20 | RPT-20 | 1210 | 3.10 \pm 0.15 | 2.60 \pm 0.15 | 0.55 \pm 0.10 | 0.50 \pm 0.20 | 0.50 \pm 0.25 |
| RMT-22 | RPT-22 | 2010 | 4.90 \pm 0.15 | 2.40 \pm 0.15 | 0.55 \pm 0.10 | 0.60 \pm 0.20 | 0.50 \pm 0.25 |
| RMT-24 | RPT-24 | 2512 | 6.35 \pm 0.15 | 3.20 \pm 0.15 | 0.55 \pm 0.10 | 0.60 \pm 0.20 | 0.50 \pm 0.25 |

Marking



RMT-04(0402)

No Marking



RMT-10(0805)

RMT-18(1206)

RMT-20(1210)

RMT-22(2010)

RMT-24(2512)

1% marking
Value=10K Ω



RMT-06(0603)

marking
Value=10K Ω



Marking Explanation

- 5% tolerance: 3 digits,
first two digits are significant figure
third digit is number of zeros, Letter R is decimal point.
- 1% tolerance: 4 digits, first three digits are significant figure, Letter R is decimal point.
- 0201, 0402 no marking

Electrical Characteristics

RMT Series

| Style | RMT-04 | RMT-06 | RMT-10 | RMT-18 | RMT-20 | RMT-22 | RMT-24 |
|--------------------------|--|--------|--------|--------|--------|--------|--------|
| | | 0402 | 0603 | 0805 | 1206 | 1210 | 2010 |
| Power Rating at 70°C | 1/16W | 1/16W | 1/10W | 1/8W | 1/4W | 1/4W | 1/2W |
| Operating Temp.Range | -55°C ~ +155°C | | | | | | |
| Derated to 0 Load at | + 155°C | | | | | | |
| Maximum Working Voltage | 25V | 50V | 100V | 150V | 150V | 200V | 200V |
| Maximum Overload Voltage | 50V | 100V | 200V | 300V | 300V | 400V | 400V |
| Temperature Coefficient | ±5ppm/°C; ±10ppm/°C; ±15ppm/°C; ±25ppm/°C; ±50ppm/°C | | | | | | |

RPT Series (Thin Film High Power)

| Style | RPT-06 | RPT-10 | RPT-18 | RPT-20 | RPT-22 | RPT-24 |
|--------------------------|--|-----------|-----------|--------|--------|---------|
| | | 0603 | 0805 | 1206 | 1210 | 2010 |
| Power Rating at 70°C | 1/10W,1/6W | 1/8W,1/4W | 1/4W,1/3W | 1/3W | 1/3W | 3/4W,1W |
| Operating Temp.Range | -55°C ~ +155°C | | | | | |
| Derated to 0 Load at | + 155°C | | | | | |
| Maximum Working Voltage | 75V | 150V | 200V | 200V | 200V | 200V |
| Maximum Overload Voltage | 150V | 300V | 400V | 400V | 400V | 400V |
| Temperature Coefficient | ±5ppm/°C; ±10ppm/°C; ±15ppm/°C; ±25ppm/°C; ±50ppm/°C | | | | | |

* Power higher than above resistance range is available, consult with Cinetech engineering before order.



Environmental Characteristics

| PERFORMANCE TEST | TEST METOHD | RATING |
|-----------------------------------|---|-----------------|
| Temperature Coefficient (by Type) | MIL-STD-202F,Method 304 -55°C to +125°C | ± 5 - 50 ppm/°C |
| Thermal Shock | MIL-STD-202F,Method 107 5 cycles, -65°C to +155°C | ± (0.5%+0.05Ω) |
| Low Temperature Operation | MIL-R-55342D,Para.4.7.4 One hour at-65°C followed by 45 minutes RCWV | ± (0.5%+0.05Ω) |
| Short Time Overload | MIL-R-55342D,Para.4.7.5 2.5 times RCWV for 5 seconds | ± (0.5%+0.05Ω) |
| High Temperature Exposure | MIL-R-55342D,Para.4.7.6 125°C to 100 hours | ± (0.5%+0.05Ω) |
| Resistance to Soldering Heat | MIL-R-55342D,Para.4.7.7 Soldered to test board at 260°C for 10 seconds | ± (0.5%+0.05Ω) |
| Moisture Resistance | MIL-STD-202F,Method 106 10 cycles. Total 240 hours | ± (0.5%+0.05Ω) |
| Life | MIL-STD-202F,Method 108A 1000 hours at 70°C RWV intermittent | ± (0.5%+0.05Ω) |
| Solderability | MIL-STD-202F,Method 208 230°C for 5 seconds | 95%min.coverage |
| Bending Strength | Unit mounted in center of 90mm board lengthh, deflected for 5mm in either direction for 10 seconds | ± (0.5%+0.05Ω) |

Available Resistance Range

| Type | Resistance Tolerance | Resistance Range | TCR ppm/°C |
|----------------------------|----------------------|------------------|------------|
| RMT-04 0402 | ±0.01% | 49.9Ω - 4.99K | ±5 |
| | ±0.05%, ±0.01% | 49.9Ω - 12K | ±10, ±15 |
| | ±0.5%,±0.25%, ±0.1% | 10Ω - 200K | ±25, ±50 |
| | ±0.1% | 49.9Ω - 69.8K | ±10,±15 |
| RMT-06 (RPT-06) 0603 | ±0.01% | 24.9Ω - 15K | ±5 |
| | | 24.9Ω - 100K | ±10, ±15 |
| | ±0.05% | 4.7Ω - 332K | ±10, ±15 |
| | | 4.7Ω - 332K | ±25, ±50 |
| | ±0.5%,±0.25%, ±0.1% | 4.7Ω - 1M | ±25, ±50 |
| ±0.1% | 4.7Ω - 332K | ±10, ±15 | |
| RMT-10 (RPT-10) 0805 | ±0.01% | 24.9Ω - 30K | ±5 |
| | | 24.9Ω - 200K | ±10, ±15 |
| | ±0.05% | 4.7Ω - 511K | ±10, ±15 |
| | | 4.7Ω - 511K | ±25, ±50 |
| | ±0.5%,±0.25%, ±0.1% | 4.7Ω - 1M | ±25, ±50 |
| ±0.1% | 4.7Ω - 1M | ±10, ±15 | |



Available Resistance Range

| Type | Resistance Tolerance | Resistance Range | TCR ppm/°C |
|----------------------------|----------------------|------------------|------------|
| RMT-18 (RPT-18) 1206 | ±0.01% | 24.9Ω - 49.9K | ±5 |
| | | 24.9Ω - 499K | ±10, ±15 |
| | ±0.05% | 4.7Ω - 1M | ±10, ±15 |
| | | 4.7Ω - 1M | ±25, ±50 |
| | | 4.7Ω - 1M | ±25, ±50 |
| ±0.1% | 4.7Ω - 1M | ±10, ±15 | |
| RMT-20 (RPT-20) 1210 | ±0.01% | 24.9Ω - 49.9K | ±5 |
| | | 24.9Ω - 499K | ±10, ±15 |
| | ±0.05% | 4.7Ω - 1M | ±10, ±15 |
| | | 4.7Ω - 1M | ±25, ±50 |
| | | 4.7Ω - 1M | ±25, ±50 |
| ±0.1% | 4.7Ω - 1M | ±10, ±15 | |
| RMT-22 (RPT-22) 2010 | ±0.01% | 24.9Ω - 49.9K | ±5 |
| | | 24.9Ω - 499K | ±10, ±15 |
| | ±0.05% | 4.7Ω - 1M | ±10, ±15 |
| | | 4.7Ω - 1M | ±25, ±50 |
| | | 4.7Ω - 1M | ±25, ±50 |
| ±0.1% | 4.7Ω - 1M | ±10, ±15 | |
| RMT-24 2512 | ±0.01% | 24.9Ω - 100K | ±5 |
| | | 24.9Ω - 499K | ±10, ±15 |
| | ±0.05% | 4.7Ω - 1M | ±10, ±15 |
| | | 4.7Ω - 1M | ±25, ±50 |
| | | 4.7Ω - 1M | ±25, ±50 |
| ±0.1% | 4.7Ω - 1M | ±10, ±15 | |
| RPT-24 2512 | ±0.5%, ±0.25%, ±0.1% | 4.7Ω - 100Ω | ±25, ±50 |

* TCR beyond above resistance range is available, please consult with Cinetech

Parts Number System

| RMT-06 | 1002 | D | R | E |
|--------------------------------------|--|--|---|---|
| Type | Resistance Value | Tolerance | Packaging codes | TCR |
| RMT-06 (0603) RPT-06 (0603) | Please refer to marking explanation | F=1% D=±0.5% B=±0.1% C=±0.25% A=±0.05% T=±0.01% | R=Paper tape reel K=Embossed plastic tape reel Please refer to packaging explanation | S=± 5ppm/°C T=±10ppm/°C H=±15ppm/°C E=±25ppm/°C C=±50ppm/°C |

* For Extra high power we will add "V" on RPT-06 for exsample RPT-06V, RPT-10V.

