

CTTFR Series

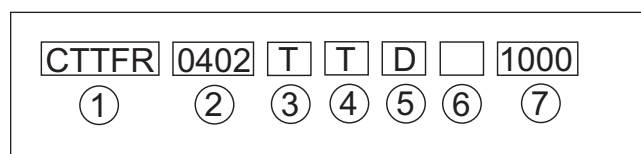
FEATURES

- Thin Film Passivated NiCr Resistor
- Very Tight Tolerance from $\pm 0.01\%$ ~1%
- Extremely Low TCR from ± 5 ~ ± 50 PPM/ $^{\circ}\text{C}$
- Wide R-Value Range

APPLICATIONS

- Medical Equipment
- Testing / Measurement Equipment
- Consumer Product
- Printer Equipment
- Automatic Equipment Controller
- Converters
- Communication Device, Cell phone, GPS, PDA

PART NUMBERING



1. Product Type

Product Type	Thin Film Precision Chip Resistor
CTTFR	

2. Dimensions (LxW)

EIA	Dimensions(LxW)
0402	1.00x0.50mm
0603	1.60x0.80mm
0805	2.00x1.25mm
1206	3.00x1.50mm

3. Resistance Tolerance

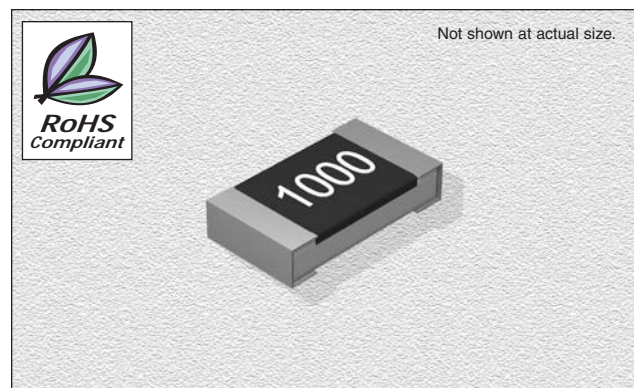
Codes	Resistance Tolerance
T	$\pm 0.01\%$
B	$\pm 0.10\%$
C	$\pm 0.25\%$
D	$\pm 0.50\%$
F	$\pm 1.00\%$

4. Packaging

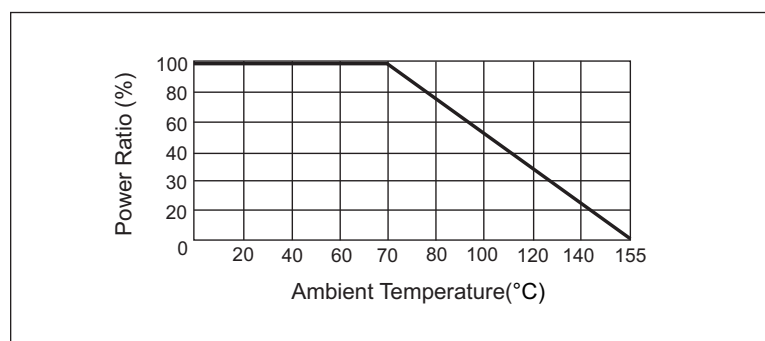
Codes	Type
T	Tape & Reel
B	Bulk

Tape & Reel QTY's

CTTFR0402 = 10,000pcs
 CTTFR0603 = 5,000pcs
 CTTFR0805 = 5,000pcs
 CTTFR1206 = 5,000pcs



DERATING CURVE



5. TCR

Codes	Type
S	± 5 PPM/ $^{\circ}\text{C}$
B	± 10 PPM/ $^{\circ}\text{C}$
N	± 15 PPM/ $^{\circ}\text{C}$
C	± 25 PPM/ $^{\circ}\text{C}$
D	± 50 PPM/ $^{\circ}\text{C}$

6. High Power Rating

Codes	Power Rating
	Standard / Special
V	1/4W
W	1/8W
X	1/10W
Y	1/16W

7. Resistance

Codes	Type
1000	100 Ω
2201	2200 Ω
1002	10000 Ω
4992	49900 Ω
1003	100000 Ω

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PHYSICAL DIMENSIONS

Type	L	W	T	D1	D2
CTTFR0402	1.00±0.05	0.50±0.05	0.30±0.05	0.20±0.10	0.20±0.10
CTTFR0603	1.55±0.10	0.80±0.10	0.45±0.10	0.30±0.20	0.30±0.20
CTTFR0805	2.00±0.15	1.25±0.15	0.55±0.10	0.30±0.20	0.40±0.25
CTTFR1206	3.05±0.15	1.55±0.15	0.55±0.10	0.42±0.20	0.35±0.25

Unit: mm

STANDARD ELECTRICAL SPECIFICATIONS

Type	Power Rating at 70°C	Operating Temp. Range	Max. Operating Voltage	Max. Overloading Voltage	Resistance Tolerance (±)	Resistance Range	TCR (±PPM/°C)
CTTFR0402	1/16W	-55°C to +155°C	25V	50V	0.01%, 0.05%, 0.1%, 0.25%, 0.5%	50Ω-2KΩ	5
					0.01%, 0.05%, 0.1%, 0.25%, 0.5%	50Ω-12KΩ	10, 15
					0.01%, 0.05%	50Ω-12KΩ	25, 50
					0.1%, 0.25%, 0.5%, 1%	10Ω-100KΩ	25, 50
CTTFR0603	1/16W	-55°C to +155°C	50V	100V	0.01%, 0.05%, 0.1%, 0.25%, 0.5%	50Ω-8KΩ	5
					0.01%, 0.05%, 0.1%, 0.25%, 0.5%	25Ω-100KΩ	10, 15
					0.01%	25Ω-100KΩ	25, 50
					0.05%	4.7Ω-150KΩ	25, 50
					0.1%, 0.25%, 0.5%, 1%	4.7Ω-402KΩ	25, 50
0.25%, 0.5%, 1%	2Ω-4.6Ω	25, 50					
CTTFR0805	1/10W	-55°C to +155°C	100V	200V	0.01%, 0.05%, 0.1%, 0.25%, 0.5%	50Ω-16KΩ	5
					0.01%, 0.05%, 0.1%, 0.25%, 0.5%	25Ω-200KΩ	10, 15
					0.01%	25Ω-200KΩ	25, 50
					0.05%	4.7Ω-500KΩ	25, 50
					0.1%, 0.25%, 0.5%, 1%	4.7Ω-1MΩ	25, 50
0.25%, 0.5%, 1%	1Ω-4.6Ω	25, 50					
CTTFR1206	1/8W	-55°C to +155°C	150V	300V	0.01%, 0.05%, 0.1%, 0.25%, 0.5%	50Ω-30KΩ	5
					0.01%, 0.05%, 0.1%, 0.25%, 0.5%	25Ω-500KΩ	10, 15
					0.01%	25Ω-500KΩ	25, 50
					0.05%	4.7Ω-1MΩ	25, 50
					0.1%, 0.25%, 0.5%, 1%	4.7Ω-1MΩ	25, 50
0.25%, 0.5%, 1%	1Ω-4.6Ω	25, 50					
						1MΩ-2MΩ	

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