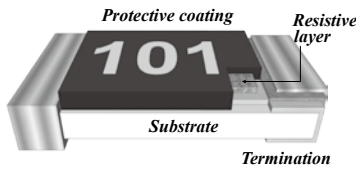


FCF

Thick Film Lead Free Chip Resistors



FEATURES

- Suitable for lead free soldering.
- Compatible with wave and reflow soldering.
- RoHS compliant & Halogen free.

APPLICATION

- Portable Devices.
- Measurement instrument.
- Consumer Electronics.
- Computers /Motherboard.

PART NUMBER

| FCF | 05 | F | T | - | 1002 | P | Special Code |
|------------------------------------|---|---|--|--------------|--|---|---------------------------|
| Type □□□ | Size □□ | Tolerance □ | Packing □ | Watt □ | R Value □□□□ | TCR | |
| FCF Thick Film Normal | 0A 01005 01 0201 02 0402 03 0603 05 0805 06 1206 12 1210 20 2010 25 2512 | B = ±0.1% C = ±0.25% D = ±0.5% F = ±1% G = ±2% J = ±5% | T = Paper tape – 5 Kpcs V = Paper tape – 10 Kpcs U = Paper tape – 15 Kpcs W = Paper tape – 20 Kpcs P = Plastic tape – 4 Kpcs X = Plastic tape – 8 Kpcs Y = Plastic tape – 16 Kpcs | "-" Standard | XXXX >=1R 1% 4 digit 5% 3 digit ("_" means a blank) | No special code- Null special code- "-" for Special TCR Q = 25ppm P = 50 ppm | "Null" Standard |

RATING

| Type | Power Rating at 70°C | Max. RCWW | Max. Overload Voltage | Resistance Toleranc (%) | Temperature Coefficient (TCR; ppm/°C) | Resistance Range (Ω) | | Standard Resistance Values |
|---------------------------|----------------------|-----------|-----------------------|--|---------------------------------------|----------------------|------|--|
| | | | | | | Min. | Max. | |
| FCF0A 01005 | 1/32W | 15V | 30V | ±1%(F) ±5%(J) | ±200 | 100 | 1M | |
| | | | | | ±300 | 10 | 91 | |
| | | | | | -200 ~ +600 | 0 & 4.7 | 9.76 | |
| FCF01 0201 | 1/20W | 25V | 50V | ±1%(F) ±5%(J) | ±200 | 10 | 10M | |
| | | | | | -200 ~ +600 | 0 & 1 | 9.76 | |
| | | | | | | | | |
| FCF02 0402 | 1/16W | 50V | 100V | ±0.1%(B) ±0.5%(D) ±1%(F) ±5%(J) | ±100 | 10 | 1M | |
| | | | | | ±100 | 10.2 | 10M | |
| | | | | | -200 ~ +400 | 1 | 10 | |
| FCF03 0603 | 1/10W | 75V | 100V | ±0.1%(B) ±0.5%(D) ±1%(F) ±5%(J) | ±200 | 10.2 | 10M | |
| | | | | | ±200 | 10.2 | 10M | |
| | | | | | -200 ~ +400 | 0 & 1 | 10 | |
| FCF05 0805 | 1/8W | 150V | 300V | ±0.1%(B) ±0.5%(D) ±1%(F) ±5%(J) | ±100 | 10 | 1M | ±0.1%(B) : E-96/E-24 ±0.5%(D) : E-96/E-24 ±1%(F) : E-96/E-24 ±5%(J) : E-24/Jumper |
| | | | | | ±100 | 10.2 | 10M | |
| | | | | | -200 ~ +400 | 1 | 10 | |
| FCF06 1206 | 1/4W | 200V | 400V | ±0.1%(B) ±0.5%(D) ±1%(F) ±5%(J) | ±200 | 10.2 | 10M | |
| | | | | | ±200 | 10.2 | 10M | |
| | | | | | -200 ~ +400 | 0 & 1 | 10 | |
| FCF12 1210 | 1/3W | 200V | 400V | ±1%(F) ±5%(J) | ±100 | 10.2 | 10M | |
| | | | | | ±200 | 1 | 10 | |
| | | | | | ±200 | 0 & 1 | 10M | |
| FCF20 2010 | 3/4W | 200V | 400V | ±1%(F) ±5%(J) | ±100 | 10.2 | 10M | |
| | | | | | ±200 | 1 | 10 | |
| | | | | | ±200 | 0 & 1 | 10M | |
| FCF25 2512 | 1W | 250V | 500V | ±1%(F) ±5%(J) | ±100 | 10.2 | 10M | |
| | | | | | ±200 | 1 | 10 | |
| | | | | | ±200 | 0 & 1 | 10M | |

Jumper :

- 01005 size maximum resistance $R_{max} < 50m$ and rated current $I_R \leq 0.8A$
- 0201, 0402, 0603 size maximum resistance $R_{max} < 50m$ and rated current $I_R \leq 1A$
- 0805, 1206, 1210, 2010, 2512 size maximum resistance $R_{max} < 50m$ and rated current $I_R \leq 2A$

Note :

(1) RCWW = $(P \times R)^{1/2}$ or Max. RCWW listed above, whichever is lower.

RCWW : Rated Continue Working Voltage(V) · P : Rated Power(W) · R : Resistance Value(Ω)

Thick Film Lead Free Chip Resistors

RATING

Special TCR High Precision Type

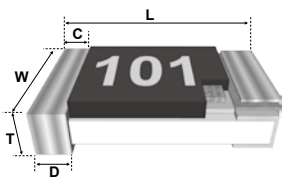
| Type | Normal Type Power Rating @ 70°C | Max. RCWW | Max. Overload Voltage | Resistance Tolerance (%) | Temperature Coefficient of Resistance (ppm/°C) | Resistance Range | | Standard Resistance Values |
|-------------------|---------------------------------|-----------|-----------------------|-----------------------------------|--|------------------|------|----------------------------|
| | | | | | | Min. | Max. | |
| FCF02 0402 | 1/16W | 50V | 100V | ±0.1%(B) ±0.25%(C) ±0.5%(D) | ±50 | 100 | 1M | E-96 |
| FCF03 0603 | 1/10W | 50V | 100V | | ±25 | 470 | 470K | E-96 |
| FCF05 0805 | 1/8W | 150V | 300V | ±25 | 470 | 470K | E-96 | |
| FCF06 1206 | 1/4W | 200V | 400V | ±50 | 20 | 510K | E-96 | |
| | | | | ±25 | 470 | 470K | E-96 | |
| | | | | ±50 | 20 | 510K | E-96 | |

Note :

(1) RCWW = $(P \times R^{1/2})$ or Max. RCWW listed above, whichever is lower.

RCWW : Rated Continue Working Voltage(V) · P : Rated Power(W) · R : Resistance Value(Ω)

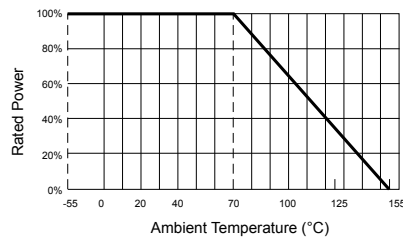
DIMENSIONS



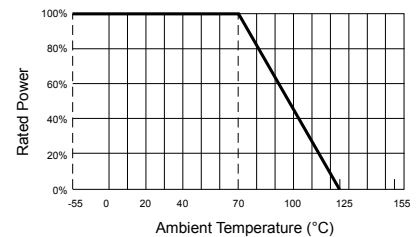
unit: mm

| Size | L | W | C | D | T |
|-------|-----------|-----------|-----------|-----------|-----------|
| 01005 | 0.40±0.02 | 0.20±0.02 | 0.08±0.03 | 0.10±0.03 | 0.13±0.02 |
| 0201 | 0.60±0.03 | 0.30±0.03 | 0.10±0.05 | 0.15±0.05 | 0.23±0.03 |
| 0402 | 1.00±0.05 | 0.50±0.05 | 0.20±0.10 | 0.25±0.10 | 0.35±0.05 |
| 0603 | 1.60±0.10 | 0.80±0.10 | 0.30±0.20 | 0.30±0.20 | 0.45±0.10 |
| 0805 | 2.00±0.10 | 1.25±0.10 | 0.40±0.20 | 0.40±0.20 | 0.50±0.10 |
| 1206 | 3.10±0.10 | 1.60±0.10 | 0.50±0.20 | 0.50±0.25 | 0.55±0.10 |
| 1210 | 3.10±0.10 | 2.60±0.15 | 0.50±0.25 | 0.50±0.25 | 0.55±0.10 |
| 2010 | 5.00±0.20 | 2.50±0.20 | 0.60±0.25 | 0.60±0.25 | 0.60±0.10 |
| 2512 | 6.40±0.20 | 3.20±0.20 | 0.60±0.25 | 0.90±0.25 | 0.60±0.15 |

POWER DE-RATING CURVE



Maximum dissipation in percentage of rated power as a function of the ambient temperature for 0402, 0603, 0805, 1206, 1210, 2010, 2512



Maximum dissipation in percentage of rated power as a function of the ambient temperature for 0201, 01005

MLCC

Chip R

Coil