

# **High Power Resistors**



## **Type FC Series**



This small size pluggable, high power resistor is a popular product in the Tyco CGS range. The resistors are wirewound on to an inert core of glass fibre. The leads and end cap assemblies are firmly crimped onto the core and winding. A particularly resilient silicone cement coating provides an insulating, humidity proof and flameproof seal. They are available in a choice of height profiles and the FCX type is supplied with axial leads. The FC Series is widely used in monitors, power supplies, white goods and brown goods where a low cost, high power resistor is required.

### **Key Features**

- Up to 8 Watts at 70°C
- Choice of Height Profiles
- Flame Retardant
- Proven Reliability
- Resistant to PCB Solvents
- Mechanised Assembly
- Widely Available via Distribution

**Type FC Series** 

#### **Characteristics -**Electrical

|                   | FC2     | FC4      | FC6      | FC8      | FC10     |
|-------------------|---------|----------|----------|----------|----------|
| Watts at 70°C:    | 2.0     | 4.0      | 5.0      | 6.5      | 8.0      |
| TCR400 - 50ppm°C: | R20-R30 | R30-R39  | R47-R56  | R68-R91  | R91-1R2  |
| TCR+40/80ppm°C:   | R33-47R | R47-82R  | R68-120R | 1R0-220R | 1R3-250R |
| TCR-20ppm°C:      | 56R-3K9 | 100R-5K6 | 150R-15K | 270R-20K | 270R-22K |

#### **Characteristics -Environmental**

| Resistance Tolerance:                 | ± 5% ± 10% (<1R0 = ± 10%)                              |  |  |
|---------------------------------------|--|--|--|
| Shelf Life:                           | $\Delta R$ 2% maximum after 3 years                    |  |  |
| Load Life:                            | $\Delta R$ 3% maximum after 1000 hours, rated power    |  |  |
| Overload:                             | $\Delta R$ 2% maximum after 10 x rated power 5 seconds |  |  |
| Climatic Category:                    | 55/200/56 ∆R 3% maximum                                |  |  |
| Maximum Continuous Operating Voltage: | $\sqrt{(Power \ x \ Resistance)}$ or AC RMS            |  |  |
| Flammability:                         | BS415 Clause 20:1                                      |  |  |
| Marking:                              | Resistance Value - Resistance Tolerance - Lot no.      |  |  |

#### **Power Derating Curve**

#### 120 Admissible Power as % of Full Rating 0 0 0 08 00 00 00 20 Λ 0 100 200 300 Temperature (°C)

## **Temperature Curve**



Р

# Dimensions



| Style | N ±0.2 | P (Max.) | Nom. Weight (g) |
|-------|--------|----------|-----------------|
| FC2   | 10.2   | 19.2     | 1.2             |
| FC4   | 15.2   | 24.2     | 1.3             |
| FC6   | 25.4   | 34.4     | 1.6             |
| FC8   | 35.6   | 44.6     | 1.8             |
| FC10  | 45.7   | 54.7     | 2.1             |

## How to Order

| FC                          | Α   | 4  | 1K0  | J                           |
|-----------------------------|---|--|--|-----------------------------|
| Common Part                 | Resistor Package  | Power Rating @ 70°C  | Resistance Value   | Tolerance                   |
| FC - Fibre<br>Core Resistor | A - Low Profile Standoff<br>Radial<br>B - High Profile Standoff<br>Radial<br>X - Axial Leaded<br>Resistor | 2 - 2 Watts<br>4 - 4 Watts<br>6 - 5 Watts<br>8 - 6.5 Watts<br>10 - 8 Watts | 0.1 Ohm<br>(100 mille Ohms) R10<br>1.0 Ohm<br>(1000 mille ohms) 1R0<br>1K Ohm<br>(1000 Ohms) 1K0 | J - 5%<br>K - 10% below 1R0 |

Dimensions are shown for reference purposes only.

Dimensions are in millimetres unless otherwise specified.

Specifications subject to change.

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