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DEMINT

Electronics Co., Ltd.

(CF)
Carbon Film
Resistors

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Product Introduction

Pulse load carbon film resistor is the cost-effective option.

Features :

- Tolerances: G (±2%), J (±5%)
- Power wattages up to 5W at +25℃
- Lead (Pb)-free and RoHS compliant
- Operating temperature range: -55℃~+155℃
- Axial leaded type, high power at small sizes

Applications :

- Consumer Electronic
- Telecommunications
- Household Appliances
- Automotive, Computer, Instrumentation

Providing design engineers with an economical power resistor with high quality performance, DeMint Electronics now offers commercial grade low power carbon film resistors.

Designated the CF series, the resistors are available in both standard CF and miniature CFS sizes, the conformal coated resistors offer high quality performance for applications that do not require surge protection or precision tolerances.

The commercial grade carbon CF series is available in flame retardant packaging and have ideal specifications for consumer electronic or electrical devices. The CF devices offer a wide resistance range for devices with power ratings up to 3W in standard CF size, and 5W in miniature CFS sizes, delivering high quality performance for general purpose applications.

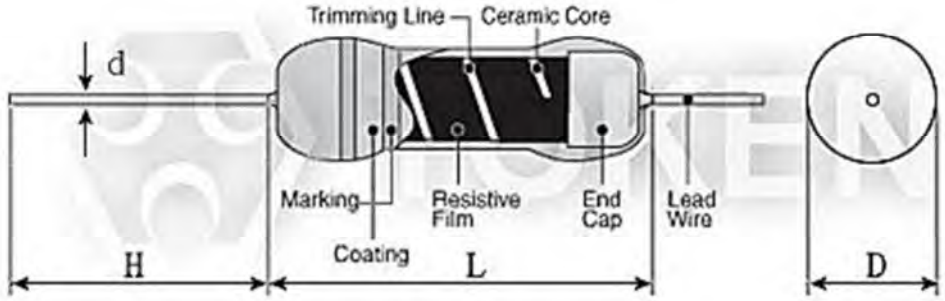
The CF series resistors are ideal for general use applications including electrical equipment, small appliances and consumer electronics, such as televisions and other high-volume products. The CF series feature standard tolerances is G (±2%) and J (±5%), with a resistance range from 0.5Ω to 22MΩ.

All CF series devices are RoHS-compliant, and compatible with high temperature soldering processes normally employed for lead free solders. Also, CF resistors are available in various forming styles and different leads for different applications. Contact us with your specific needs. For more information, please link to DeMint official website "General Purpose Resistors".

Dimensions & Specifications

Dimensions & Specifications (Unit: mm) (CF)

Type		Dimension (mm)				Maximum Working Voltage	Maximum Overload Voltage	Resistance Tolerance	
CF	CFS	L	D	H	d±0.05			± 2%(G)	± 5%(J)
1/8 W	.	3.2±0.2	1.5±0.2	26±1	0.40~0.45	200	400	10Ω-470K	1Ω-4.7M
1/6 W	1/4 W	3.2±0.2	1.5±0.2	26±1	0.40~0.45	200	400	1Ω-10M	0.5Ω-22M
1/4 W	1/2 W	6.2±0.5	2.3±0.3	26±1	0.40~0.50	250	500	1Ω-10M	0.5Ω-22M
1/3 W	1/2 W	8.5±0.5	2.8±0.3	26±1	0.50~0.55	250	500	1Ω-10M	0.5Ω-22M
1/2 W	1 W	9.0±0.5	3.0±0.5	26±1	0.50~0.55	350	700	1Ω-10M	0.5Ω-22M
1 W	2 W	11±1.0	4.0±0.5	35±3	0.75~0.80	500	1000	1Ω-10M	0.5Ω-22M
2 W	3 W	15±1.0	5.0±0.5	35±3	0.75~0.80	500	1000	1Ω-10M	0.5Ω-22M
3 W	5 W	17±1.0	6.0±0.5	35±3	0.75~0.80	500	1000	1Ω-10M	0.5Ω-22M



Carbon Film (CF) Dimensions (Unit: mm)

Electrical Performance

Electrical Performance (CF)

Test Items	Condition	Spec
Operating Temp.range	-55℃ ~ +155℃	
Short Time Over Load	2.5 Times of rated voltage for 5sec.	± 1%
Load Life	70℃ on-off cycle 1,000hrs.	± 5%
Moisture-Proof Load Life	40℃ 95% RH on-off cycle 1,000hrs	± 5%
Soldering After Resistance	350℃ for 3sec.	± 0.5%
Temperature Cycle	-30℃~85℃ 5cycles	± 2%
Resistance Temperature Coefficient	1Ω~22KΩ 22KΩ~510KΩ 510KΩ~1MΩ 1MΩ~2.2MΩ 2.2MΩ~5.1MΩ	± 300PPM/℃ ± 450PPM/℃ ± 800PPM/℃ ± 1000PPM/℃ ± 1400PPM/℃

Order Codes

Order Codes (CF)

CF	0.125W	100R	J	TB

Part Number
CF
CFS

Rated Power (W)

Resistance Value (Ω)	
1R	1Ω
10R	10Ω
100R	100Ω
10K	10KΩ
10M	10MΩ
22M	22MΩ

Resistance Tolerance (%)	
G	±2%
J	±5%

Package	
TB	Taping Box

General Information

General Purpose Resistors with Customized Service

DeMint Electronics is expanding business to include a broad range of General Purpose Resistor products designed for high volume applications. This expanded range of commercial resistor presents a more comprehensive product offering for Customer Experience Management (CEM) and other high volume customers that require quality products at competitive pricing.

Backed by the same customer service, technical support and quality assurance that DeMint has always provided, these new commercial products enable you the opportunity to source a wider range of resistors from a trusted supplier.

General Use

When an ambient temperature exceeds a rated ambient temperature, resistor shall be applied on the derating curve by derating the load power. General purpose resistor under overloads is not combustion resistant and is likely to emit, flame, gas, smoke, red heat, etc. Flame retardant resistor generally emits smoke and red heat in a certain power and over but do not emit fire or flame.

When resistors are shielded or coated with resin etc., stress from the storage heat and the resins are applied. So, performance and reliability should be checked well before use.

When a voltage higher than rated is applied in a short time (single pulse, repeated pulses, surge, etc.), it does not necessarily ensure safety that an effective wattage is not higher than a rated wattage. Then consult with us with your specified pulse wave shape. Resistors shall be used in a condition causing no dew condensation.

Keep temperature from rising by choosing resistor with a higher rated capacity; do not use a component having the exact load value required. For considerations of safety in extended period applications, the rating should be more than four times higher than the actual wattage involved, but never use resistors at less than 25% of its rated power.

In applications where resistors are subject to intermittent current surges and spikes, be sure in advance that the components selected are capable of withstanding brief durations of increased load.

Do not exceed the recommended rated load. Resistor must use within the rated voltage range to prevent the shortening of service life and/or failure of the wound resistance elements.

Minimum load: Resistor must be utilized at 1/10 or more of the rated voltage to prevent poor conductance due to oxidation build-up. For basic particulars for cautions, refer to EIAJ Technical Report RCR-2121 "Guidance for care note on fixed-resistors".