Key Features

Non-inductive "bulk ceramic" resistor

Uniform distribution of energy throughout resistor Body

Replacement of Carbon Composition Resistors

Large peak energy in small size

High voltage and energy absorption

Applications

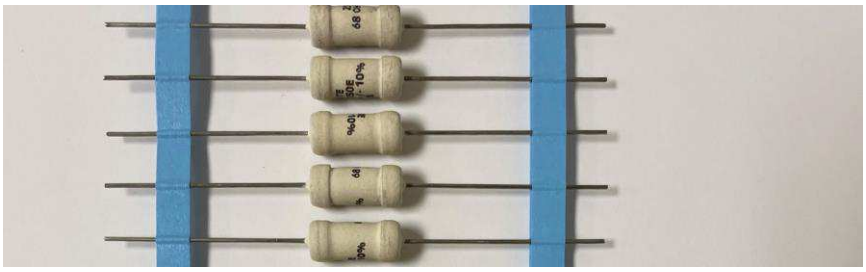
Pulse Waveform

EMI/EFI Test Circuits

RF Dummy Load Circuits

Capacitor Dump Circuits

Type HPCR Series



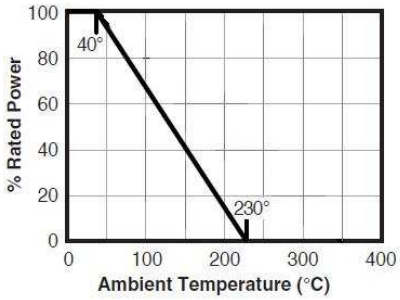
TE Connectivity HPCR Series Axial Leaded Non-Inductive Bulk Ceramic Resistors provide excellent performance where high peak power or high-energy pulses must be handled in a small size. The advantage of the bulk construction is that it produces an inherently noninductive resistor; and it allows energy and power to be uniformly distributed through the entire ceramic resistor body — there is no film or wire to fail.
As alternatives to hard to find carbon composition resistors, Ceramic composition resistors can be used as drop-in replacements for 2 watt sizes. Improved (beige) coating now gives 700VAC Dielectric strength.

Characteristics – Electrical

Type	Resistance Range	Avg. power rating[1] (W)	Rated Peak Energy[2] (J)	Rated Peak Voltage[2] (V)	Rated Peak Current[3] (A)
HPCR0819	5R6 – 1K8	2	170	1100	150

Notes:
[1] @ 40°C Ambient. Derate linearly to 0 Watts at 230°C
[2] Allowable peak energy/voltage will depend on the resistance value and pulse widt Energy ratings are based on pulse <10 milliseconds.
[3] Peak Current Ratings presume energy approaching rated peak energy values. Allowable current can be higher for lower energy values.

Derating



Dimensions in millimetres unless otherwise specified

Dimensions Shown for reference purposes only. Specifications subject to change

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Characteristics - Environmental

Characteristics	Test	Requirement
Operating Temp.		-55°C to +230°C
Resistance Temp. Coefficient		+0 / -800 PPM/°C
Voltage Coefficient	Max. % per kilovolt per inch active length	-1.0%
Short Time Overload	Max. % change after 10 cycles of 1000% rated power 5 sec. On, 90 sec. Off	±2%
Load Life	Max. % change after 1,000 hours at rated power	±5%
Dielectric Strength	700 vac potential applied for 5 seconds.	Leakage current <5mA
Thermal Shock	Max. % change after 10 cycles -55°C to +125°C	±3%
Moisture Resistance	Max. % change when tested per MIL-STD-202, Method 103	±5%
Density		2.2-2.6 gm/cc
Specific Heat		0.23-0.25 cal/gm -°C
Thermal Conductivity		0.003-0.006 cal/(cm-°C-sec)

Dimensions



NB. Resistor shown without protective coating. Maximum Dimensions include coating.

Terminal

S - Standard Includes dielectric coating and silver metalization under caps/leads.

O – Oil resistant coating suitable for immersion in oil.

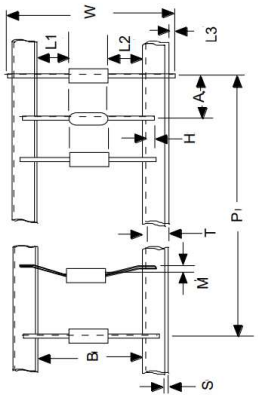
Marking

HPCR0819
TE
DATE CODE
VALUE & TOLERANCE

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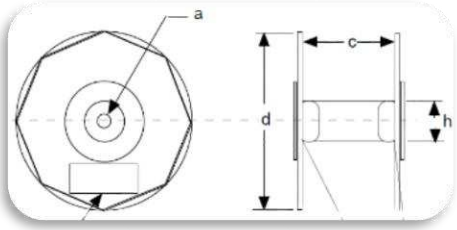
Packaging

Tape Specification



B	L1-L2	P	L3	A	M	S	T	H	W
63.5	1.4 max	100	600	10	1 max	0.8 max	5.5	2	123.5 max

Reel



Dimensions	d	a	c	h
MM	355	16	105	83.5

How To Order

HPCR	0819	A	K	100R	S	T
Common Part	**Size**	**Construction**	**Tolerance**	**Value**	**Terminal**	**Packaging**
HPCR - High Performance Ceramic Resistor	0819 – 7.9 x 19.1 mm	A	J – 5% K – 10%	6R8 100R 1K0, etc.	S - Standard O - Oil resistant coating	T - Tape and Reel

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