Product Change Notification

Current Date: 16-Jan-2022

TE Connectivity

Product Change Notification: P-22-022000 **PCN Date:** 14-JAN-22

Customer: TTI Inc(0000139702) **Location:** WORLDWIDE **Agreement:** Agreement Unknown

TE would like to inform you of the following change(s) to the listed TE Connectivity Product. In case of any further questions about this change(s), please contact your TE Connectivity Sales Engineer. Affected part, drawing and/or specification numbers are listed on the attached sheet(s).

General Product Description:
Ceramic Composition Resistors Type CCR2 Series

Description of Changes
As per PCN P-21-021661 we are now able to offer full details of the alternative part for the CCR2 series **Other attachments:** CCR - HPCR PCN Document HPCR Data Sheet

Reason for Changes:	
Customer Request.See attached Documents	
Estimated Dates:	
Last Order Date (Obsolete Parts Only):	**First Date To Ship** (Changed Parts Only):
	01-MAR-2022
Last Ship Date (Obsolete Parts Only):	**Last Date for Mixed Shipments:** (Changed Parts Only):
	No Mixed Shipments

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
2-1623720-1	NO			"CCR25R6KB"			

Customer: TTI, Inc. (3057778) **Location:** Maisach-gernlinden **Agreement Number:** Agreement Unknown

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
2-1623720-1	NO			"CCR25R6KB"			

PCN Notification Document

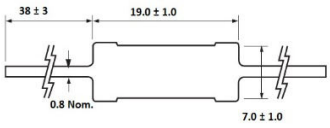
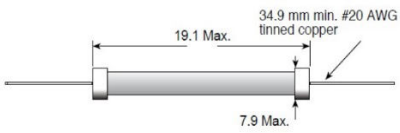
We are currently experiencing supply chain issues concerning our CCR2 resistor. The lead time is being extended and we are close to putting this product line on allocation.

Because of this we are pleased to introduce our new HPCR0819 series as an alternative.

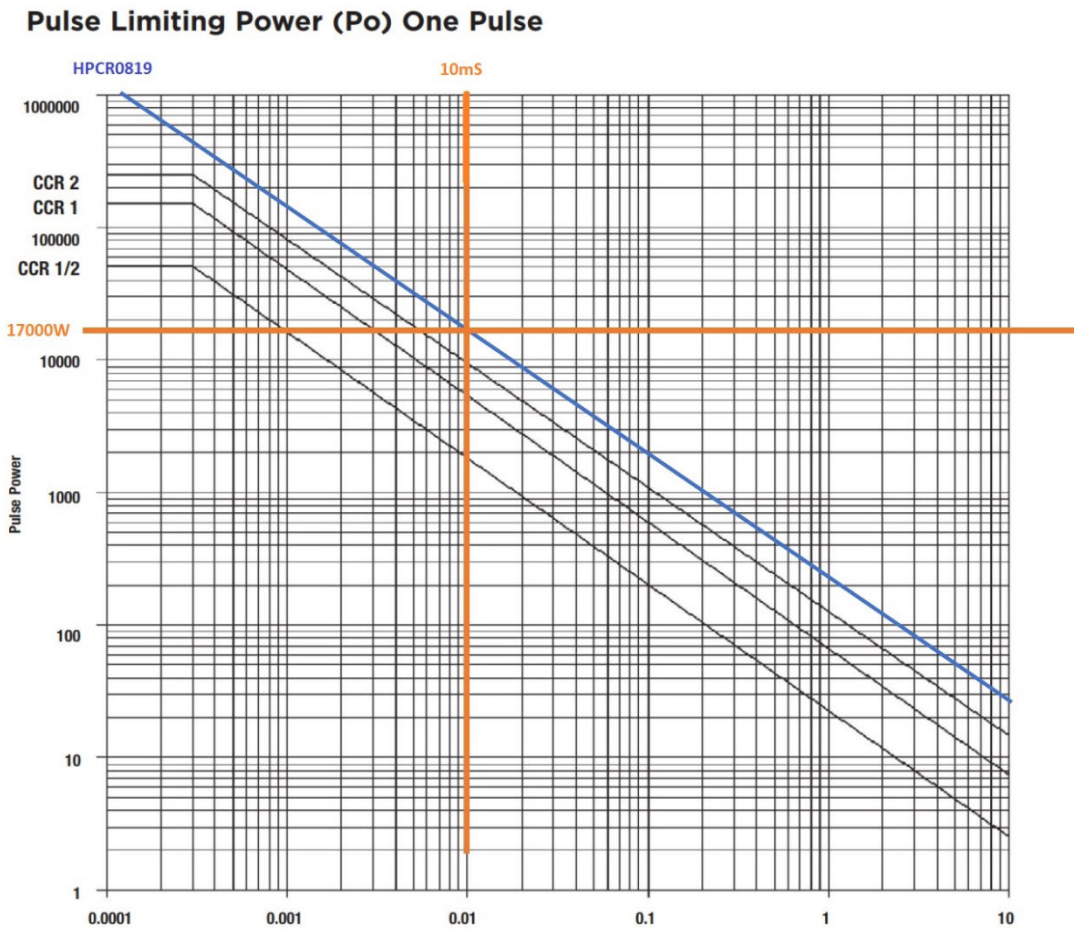
In most applications this will perform as well as, or better than the CCR2.

Please also see the Datasheet for the new product attached to the PCN

Key Differences

	CCR2	HPCR0819
Power Rating	2W @ 70°C	2W @ 40°C
Operating Temperature	-40 ~ 200°C	-55 ~ 230°C
Derating	Derating to 0 at 200°C	Derating to 0 at 230°C
TCR (PPM/°C)	<100R: -900 to +300 >100R: -1300 to +300	-800/ +0
Short Time Overload	2x rated voltage for 5 seconds ΔR±2%	10 cycles of 1000% rated power 5 sec. On, 90 sec. Off ΔR±2%
Physical Dimensions		
L	19.0 ± 1.0	19.1 max.
D	7.0 ± 1.0	7.9 max
l	38 ± 3	34.9 min.
d	0.8 nom.	0.8 nom.

Pulse comparison CCR Vs HPCR



Notes.

Allowable peak energy/voltage will depend on the resistance value and pulse width. Energy ratings are based on pulse <10 milliseconds. Rated Peak Voltage should not be exceeded.

Part number List

CCR TCPN	CCR Alias	CCR Description	HPCR TCPN	HPCR Alias	HPCR Description
1623720-1	CCR2100RKB	CCR2 100R 10%	1-2176471-6	HPCR0819AK100RST	HPCR 0819 A 10% 100R Std T&R
1623720-3	CCR210RKB	CCR2 10R 10%	2176471-4	HPCR0819AK10RST	HPCR 0819 A 10% 10R Std T&R
1623720-4	CCR21K0KB	CCR2 1K0 10%	2-2176471-8	HPCR0819AK1K0ST	HPCR 0819 A 10% 1K0 Std T&R
1623720-5	CCR2220RKB	CCR2 220R 10%	2-2176471-0	HPCR0819AK220RST	HPCR 0819 A 10% 220R Std T&R
1623720-7	CCR222RKB	CCR2 22R 10%	2176471-8	HPCR0819AK22RST	HPCR 0819 A 10% 22R Std T&R
1623720-8	CCR2470RKB	CCR2 470R 10%	2-2176471-4	HPCR0819AK470RST	HPCR 0819 A 10% 470R Std T&R
1-1623720-0	CCR247RKB	CCR2 47R 10%	1-2176471-2	HPCR0819AK47RST	HPCR 0819 A 10% 47R Std T&R
1-1623720-3	CCR233RKB	CCR2 33R 10%	1-2176471-0	HPCR0819AK33RST	HPCR 0819 A 10% 33R Std T&R
1-1623720-4	CCR210RKT	CCR2 10R 10% TAPED	2176471-4	HPCR0819AK10RST	HPCR 0819 A 10% 10R Std T&R
1-1623720-7	CCR268RKT	CCR2 68R 10% TAPED	1-2176471-4	HPCR0819AK68RST	HPCR 0819 A 10% 68R Std T&R
1-1623720-8	CCR268RKB	CCR2 68R 10% BULK	1-2176471-4	HPCR0819AK68RST	HPCR 0819 A 10% 68R Std T&R
2-1623720-1	CCR25R6KB	CCR2 5R6 10%	2176471-1	HPCR0819AK5R6ST	HPCR 0819 A 10% 5R6 Std T&R
2-1623720-2	CCR26R8KB	CCR2 6R8 10%	2176471-2	HPCR0819AK6R8ST	HPCR 0819 A 10% 6R8 Std T&R
2-1623720-3	CCR28R2KB	CCR2 8R2 10%	2176471-3	HPCR0819AK8R2ST	HPCR 0819 A 10% 8R2 Std T&R
2-1623720-4	CCR215RKB	CCR2 15R 10%	2176471-6	HPCR0819AK15RST	HPCR 0819 A 10% 15R Std T&R
2-1623720-5	CCR218RKB	CCR2 18R 10%	2176471-7	HPCR0819AK18RST	HPCR 0819 A 10% 18R Std T&R
2-1623720-6	CCR227RKB	CCR2 27R 10%	2176471-9	HPCR0819AK27RST	HPCR 0819 A 10% 27R Std T&R
2-1623720-7	CCR239RKB	CCR2 39R 10%	1-2176471-1	HPCR0819AK39RST	HPCR 0819 A 10% 39R Std T&R
2-1623720-8	CCR256RKB	CCR2 56R 10%	1-2176471-3	HPCR0819AK56RST	HPCR 0819 A 10% 56R Std T&R
3-1623720-3	CCR21K5KB	CCR2 1K5 10% BULK	3-2176471-0	HPCR0819AK1K5ST	HPCR 0819 A 10% 1K5 Std T&R
3-1623720-4	CCR21K8KB	CCR2 1K8 10% BULK	3-2176471-1	HPCR0819AK1K8ST	HPCR 0819 A 10% 1K8 Std T&R
3-1623720-9	CCR2220RKT	CCR2 220R 10% TAPED	2-2176471-0	HPCR0819AK220RST	HPCR 0819 A 10% 220R Std T&R
4-1623720-0	CCR26R8KT	CCR2 6R8 10% TAPED	2176471-2	HPCR0819AK6R8ST	HPCR 0819 A 10% 6R8 Std T&R
4-1623720-1	CCR215RKT	CCR2 15R 10% TAPED	2176471-6	HPCR0819AK15RST	HPCR 0819 A 10% 15R Std T&R
4-1623720-2	CCR2470RKT	CCR2 470R 10% TAPED	2-2176471-4	HPCR0819AK470RST	HPCR 0819 A 10% 470R Std T&R
4-1623720-3	CCR2100RKT	CCR2 100R 10% TAPED	1-2176471-6	HPCR0819AK100RST	HPCR 0819 A 10% 100R Std T&R
4-1623720-4	CCR21K0KT	CCR2 1K0 10% TAPED	2-2176471-8	HPCR0819AK1K0ST	HPCR 0819 A 10% 1K0 Std T&R
4-1623720-5	CCR227RKT	CCR2 27R 10% TAPED	2176471-9	HPCR0819AK27RST	HPCR 0819 A 10% 27R Std T&R

Type HPCR Series

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

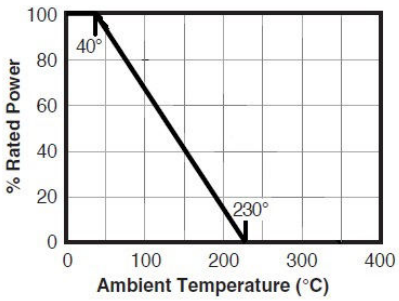
TE Connectivity HPCR Series Axial Leaded Non-Inductive Bulk Ceramic Resistors provide excellent performance where high peak power or high-energy pulses must be handled in a small size. The advantage of the bulk construction is that it produces an inherently noninductive resistor; and it allows energy 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.

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

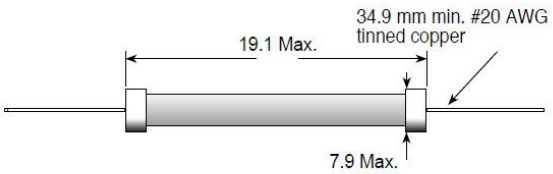
Dimensions Shown for reference purposes only. Specifications subject to change

For Email, phone or live chat, go to: www.te.com/help

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%
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.

Terminal

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

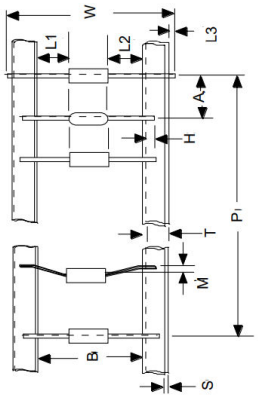
O – Oil resistant coating suitable for immersion in oil.

Marking

HPCR0819
TE
DATE CODE
VALUE & TOLERANCE

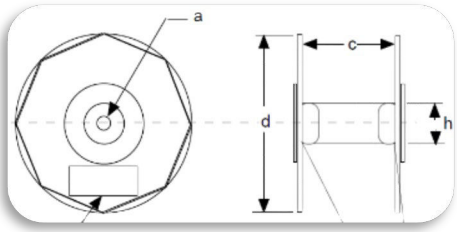
Packaging

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