KOA SPEER ELECTRONICS, INC.

RoHS COMPLIANT

spec sheet

SS-246 R4
AHA 6/11/07

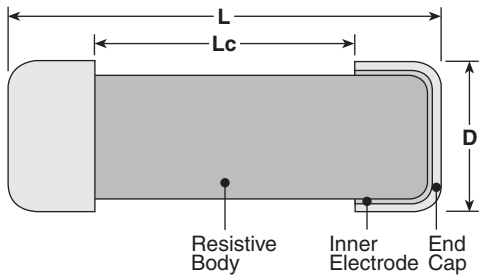
Fixed Ceramics Resistor
CPCN Type

ISO 9001:2000 CERTIFIED
TS-16949 CERTIFIED

1. Features

- Suitable for noise suppression of engine ignition system
- Reliable in pulse/transient applications
- Meets RoHS requirements

2. Dimensions



Size Code	Dimensions inches (mm) L	Lc (min.)	D	Cap Plate Type
CPCN1/2	.421±.02 (10.7±0.5)	.213 (5.4)	.138±.012 (3.5±0.3)	Ni
CPCN1	.63±.024 (16.0±0.6)	.378 (9.6)	.187±.012 (4.75±0.3)	Ni
CPCN2N	.720±.024 (18.3±0.6)	.452 (11.5)	.187±.012 (4.75±0.3)	Ni
CPCN3	.720±.024 (18.3±0.6)	.394 (10.0)	.283±.012 (7.2±0.3)	Sn

3. Type Designation

The type designation shall be in the following form:

CPCN	2N	502	M
Type	Power Rating Symbol	Nominal Resistance	Tolerance
	1/2: 0.5W 2N: 1.5W 1: 1.0W 3: 2.0W	2 significant figures + 1 multiplier	M: ±20%

4. Ratings

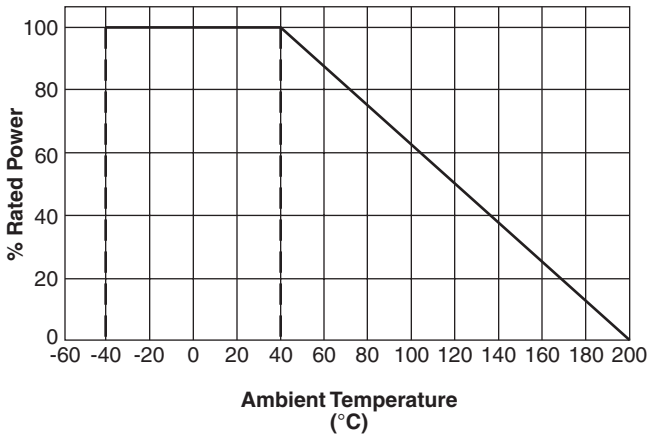
Part Designation	Power Rating	T.C.R. (ppm/°C) Max.	Nominal Resistance	Resistance Tolerance	Absolute Maximum Working Voltage	Absolute Maximum Overload Voltage	Rated Ambient Temperature	Operating Temperature Range
CPCN1/2	0.5W	-1200±300	1kΩ, 5kΩ, 10kΩ, 15kΩ	M: ±20%	86V	215V	+40°C	-40°C to +200°C
CPCN1	1.0W				122V	305V		
CPCN2N	1.5W				150V	375V		
CPCN3	2.0W		15kΩ		173V	432V		

Coating type of CPCN2N is available on request.
Rated Voltage = √Power Rating x Resistance Value or Maximum Working Voltage, whichever is lower.

Bolivar Drive ■ P.O. Box 547 ■ Bradford, PA 16701 ■ USA ■ 814-362-5536 ■ Fax 814-362-8883 ■ www.koaspeer.com

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

4.1. Derating Curve



5. Characteristics

Parameter	Requirement Δ R Limit	Typical	Test Method			
Resistance	Within regulated tolerance	—	Resistance	Measurement Voltage		
			1kΩ, 5kΩ	10V		
			10kΩ, 15kΩ	30V		
T.C.R.	-1200±300ppm/°C	—	+25°C/-40°C and +25°C/+125°C			
Voltage Coefficient	0 ~ -0.2%/V	—	Rated voltage and rated voltage x 10%			
Overload	±2%	±0.3%	Rated voltage x 2.5 or max. overload voltage for 5 seconds, whichever is less			
Load Life at High Voltage Pulse	±30%	—	Continuous 250h high voltage pulse on the test circuit (Refer to JIS D5111)			
Resistor Body Strength	No mechanical damages	—	Type	Holding Distance	Time	Force
			CPCN1/2	5.0 ± 0.2mm	10 seconds	98N (10kgf)
			CPCN1	9.0 ± 0.3mm		
			CPCN2N	12.3 ± 0.3mm		
			CPCN3			490N (50kgf)
Rapid Change of Temperature	±5.0%	±5.0%	-55°C (15 minutes), +155°C (15 minutes), 500 cycles			
Moisture Resistance	±5.0%	±0.9%	40°C ± 2°C, 90 - 95% RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle			
Load Life	±5.0%	±0.7%	40°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle			
Low Temperature Operation	±5.0%	±0.7%	-40°C, 24 hours			
High Temperature Exposure	±5.0%	±2.0%	+200°C, 1000 hours			

The resistance measurement before and after the examination should be performed in room temperature with difference ±1°C.

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