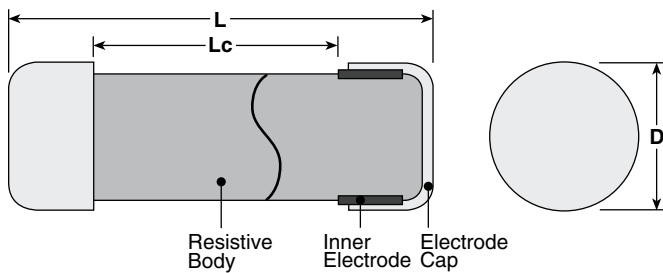


### features

- Suitable for noise suppression of engine ignition system
- Reliable in pulse/transient applications
- Marking: Gray body color with no marking
- Products meet EU RoHS requirements



### dimensions and construction



Size Code	Dimensions inches (mm)			Cap Plate Type
	L	Lc (min.)	D	
CPCN1/2	.421±.02 (10.7±0.5)	.213 (5.4)	.138±.004 (3.5±0.1)	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

### ordering information

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

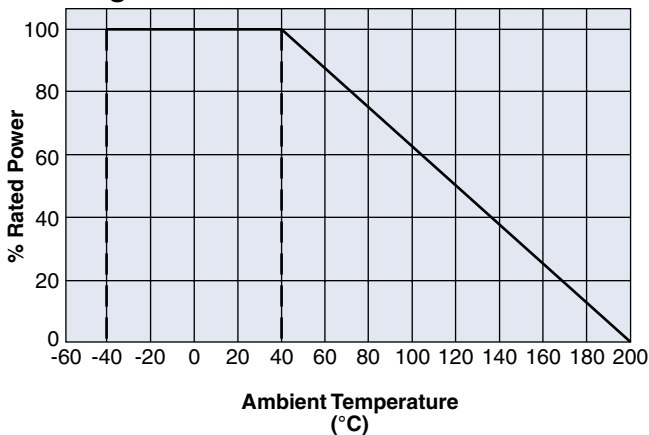
## applications and ratings

Type	Power Rating	T.C.R. (ppm/°C)	Nominal Resistance	Resistance Tolerance	Maximum Working Voltage	Maximum Overload Voltage	Rated Ambient Temperature	Operating Temperature Range
CPCN1/2	0.5W	-1200±300	1kΩ, 2kΩ, 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				173V	432V		

Rated Voltage =  $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$  or Maximum Working Voltage, whichever is lower.

## environmental applications

### Derating Curve



For resistors operated at an ambient temperature of 40°C or higher, the power rating shall be derated in accordance with this derating curve.

## Performance Characteristics

Parameter	Requirement $\Delta R \pm(\%+0.05\Omega)$		Test Method			
	Limit	Typical	Resistance	Measurement Voltage		
Resistance	Within regulated tolerance	—	1kΩ, 2kΩ, 5kΩ	10V	25°C	
			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) CPCN1/2, CPCN1 in insulation oil			
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	—	-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.