

Current sensing · wide terminal type chip resistors CPQ series

CPQ18 (0612) CPQ50 (1020) CPQ1S (1225)

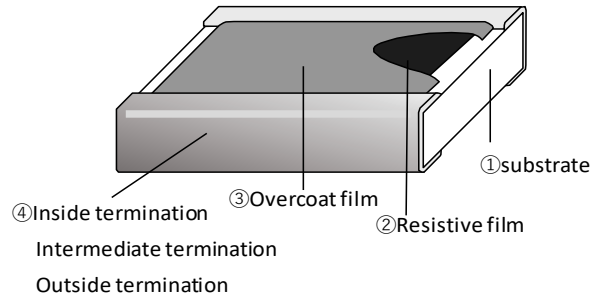
*(): Inch size

EOL (End of life) : CPQ50(1020) , CPQ1S(1225)

■ Features

- Guaranteed low resistance value 10mΩ
- The use of a wide terminal type improves heat dissipation compared to short terminal type.
- Also guaranteed ±0.5% (resistance value on request)
- RoHS qualified
- ELV qualified
- AEC-Q200 qualified

■ Structure



*This is only a schematic drawing of the structure.

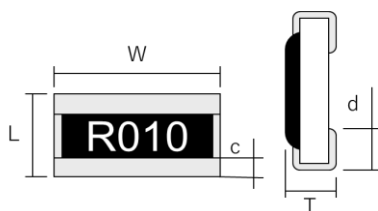
■ Part No. Explanation (Example)

C	P	Q	5	0	T	T	8	R	0	1	0	J
Product type			Rated power and Size		Packaging form		Terminal structure	Material · storage		Nominal resistance value(*)		Resistance tolerance
CPQ : Current sensing · wide terminal type			18:0.75W,0612 50:1W,1020 1S:2W,1225		T : 4mm pitch taping φ 180 reel		T: 2 terminal	8:Silver Palladium-based material of thick film resistors · the resistive film form side should be stored in upward tape		The resistance value is indicated by 4-digit numbers.		J: ± 5% F: ± 1% D: ± 0.5%

* R010=0.01Ω, R015=0.015Ω

*If there is a decimal point in resistance value, it is indicated by "R" and all numbers are significant numbers.

■ Dimensions



	L	W	T	c	d
CPQ18	1.60 ± 0.15	3.20 ± 0.15	0.55 ^{+0.10} _{-0.05}	0.25 ± 0.15	0.35 ± 0.15
CPQ50	2.50 ± 0.20	5.00 ± 0.20	0.55 ± 0.20	0.25 ± 0.20	0.90 ± 0.20
CPQ1S	3.20 ± 0.20	6.30 ± 0.20	0.60 ± 0.20	0.30 ± 0.20	1.10 ± 0.20

* External dimensions are for reference only.

EOL (End of life) : CPQ50(1020) , CPQ1S(1225) (Unit: mm)

Overcoat film color : Black

The resistance value is indicated by 4-digit numbers.

■ Ratings

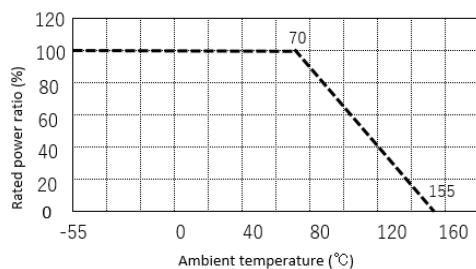
	Rated power	Range of rated resistance	Tolerance on rated resistance	Category temperature range	Temperature Coefficient of Resistance(T.C.R)		
CPQ18	0.75W	0.01Ω~1Ω	J(±5%)	-55°C~+155°C		0.01Ω~0.027Ω	±700×10 ⁻⁶ /°C
						0.03Ω~0.036Ω	±150×10 ⁻⁶ /°C
		0.039Ω~1Ω	F(±1%)	-55°C~+155°C	Z	0.039Ω~1Ω	±100×10 ⁻⁶ /°C
			D(±0.5%)	-55°C~+155°C	T	0.039Ω~1Ω	±100×10 ⁻⁶ /°C
CPQ50	1W	0.01Ω,0.015Ω	J(±5%)	-55°C~+155°C		0.01Ω~0.033Ω	±500×10 ⁻⁶ /°C
CPQ1S	2W	0.03Ω~0.2Ω	J(±5%) F(±1%)	-55°C~+155°C		0.03Ω~0.2Ω	0~200×10 ⁻⁶ /°C

- * There are the supplementary information about rating on reference page.
- * Possible to accommodate different specs from our catalog. Please contact us for details.
- * Temperature Coefficient of Resistance (T.C.R) is based on JIS C5201-1 6.2 between two points: 25°C and 125°C.

■ Specifications and test methods

Item	Specifications	Test method
Overload	±(2%+0.0005Ω)	JIS C5201-1 8.1 2.5×Rated voltage, for 5 seconds
Bend strength of the face plating	±(1%+0.0005Ω)	JIS C5201-1 9.8 Bending distance : 3mm
Resistance to soldering heat	±(1%+0.0005Ω)	JIS C5201-1 11.2 260±5°C.10(sec.)
Solderability	Covered with more than 95%	JIS C5201-1 11.1 245±3°C.2(sec.)
Rapid change of temperature	±(1%+0.0005Ω)	JIS C5201-1 10.1 -55°C⇔+125°C,1000
Loadlife in humidity	±(3%+0.0005Ω)	60±2°C.90~95% R.H 1000h
Endurance at 70°C	±(3%+0.0005Ω)	JIS C5201-1 7.1 70±2°C.1000h

■ Derating curve



* Rated power of the resistor is the maximum power which can be loaded continuously at the ambient temperature of 70°C. For the ambient temperature above 70°C, please use according to the load derating curve (dotted line). Please note that the component surface temperature does not exceed operating temperature range.