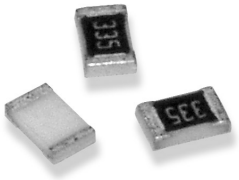
Type CPG Series



Precious metal terminations are screen printed onto a ceramic base and fired. The resistive element is screen printed and fired and the passivation layer added. Each resistor is trimmed to tolerance by laser. The pre-scribed tile is broken into strips, the end plating is fired on and the strips broken into individual components. Final termination is made by electroplating.

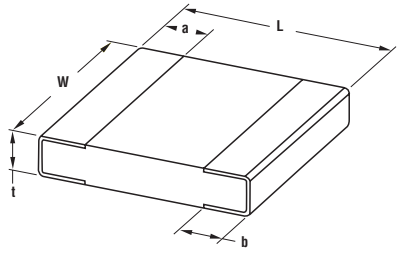
Key Features

- **Case sizes 0603, 0805, 1206**
- **A semi-precision thick film resistor with a temperature coefficient of 50ppm/°C and tolerance down to 0.5%.**
- **CPG chip resistors are suitable for most applications, including high frequency operation, owing to the short lead structure and low capacitance.**
- **Particularly suitable for use where low TC or tolerance are important at a low cost.**

Characteristics - Electrical

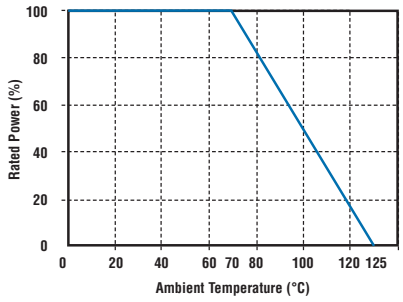
	0603				0805		1206	
Rated Power @ 70°C (W)	0.063				0.1		0.125	
Resistance Range (Ohms) Min	100	10	100	1M1	10	10	10	10
Max	1M1	91	1M0	3M3	3M3	3M3	4M7	4M7
Tolerance (%)	0.5	1			0.5	1	0.5	1
Code letter	D	F			D	F	D	F
Selection Series	E24 - E96							
Temperature Coefficient (ppm/°C)	-50	-100	-50	-100	-50	-50	-50	-50
Code Letter	C	D	C	D	C	C	C	C
Limiting Element Voltage (V)	50				150		200	
Maximum Overload Voltage (V)	100				300		400	
Dielectric Strength Min (V)	100				300		400	
Operating Temperature Range (°C)	-55 to +125							
Climatic Category	55/125/56							
Insulation Resistance Dry Min (Mohms)	1000							
Stability (%)	0.5							
Surface Temperature Rise Max (°C)	400							

Dimensions



Style	L	W	t	a	b
0603	1.6 ± 0.1	0.85 ± 0.1	0.45 ± 0.1	0.25 ± 0.1	0.3 ± 0.1
0805	2.0 ± 0.1	1.25 ± 0.1	0.6 ± 0.1	0.4 ± 0.2	0.4 ± 0.2
1206	3.2 ± 0.15	1.6 ± 0.15	0.66 ± 0.1	0.5 ± 0.25	0.5 ± 0.25

Power Derating Curve



Type CPG Series

Marking

E24 series resistors are marked with a three digit code.
E96 series resistors are marked with a four digit code.
0603 E96 series are unmarked.

Mounting

The resistors are suitable for processing on automatic insertion equipment.

Performance Characteristics

The evaluation of the performance characteristics is carried out with reference to IECQ specifications QC 400 000 and QC 400 100.

TEST REF	Long Term Tests ±(0.5% + 0.1 ohm)
4.23	Climatic sequence
4.24	Damp heat, steady state
4.25.1	Endurance at 70°C
4.25.3	Endurance at 125°C
TEST REF	**Short Term Tests ±(0.5% + 0.05 ohm)**
4.13	Overload
4.32	Adhesion
4.33	Bond strength of end face plating
4.19	Rapid change of temperature
4.18	Resistance to soldering heat

Storage

Unopened reels should be stored within a temperature range of +5°C to +25°C, separated from any dust, chemicals and solvent based materials. Non-adherence to this procedure could affect the solderability of this product.

How to Order

CPG	0603	F	10R
Common Part	**Size**	**Tolerance**	**Resistance Value**
CPG - Thick Film Precision Chip Resistor	0603 0805 1206	F- ±1% D - ±0.5%	10 ohms (10 ohms) 10R 1K ohms (1000 ohms) 1K0 100 K ohm (100000 ohms) 100K 1M ohm (1000000 ohms) 1M0