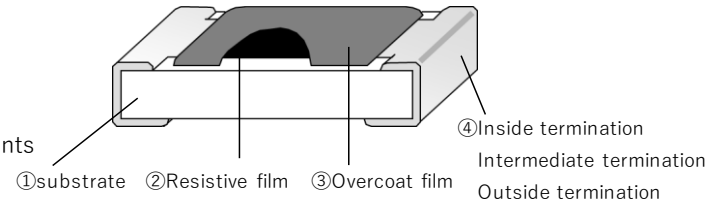
Gold flash plating terminal thick film chip resistors　GPC sereis

GPC01（0201）　GPC03（0402）　GPC05（0603）　　*(　): Inch size

■Features

・Used Gold flash plating for outside electrodes.
・These chip resistors are suitable for mounting with conductive adhesive.
・Can be mounted in high-temperature environments where solder materials cannnot be used.
・RoHS qualified
・ELV qualified
・AEC-Q200 qualified

■Structure



*This is only a schematic drawing of the structure.

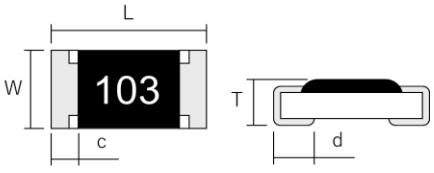
■Part No. Explanation (Example)

G	P	C	0	1	T	1	0	3	J

Product type	Rated power and size	Packaging form	Nominal resistance value(*)	Resistance tolerance
GPC : Gold flash plating terminal	01:0.05W,0201 03:0.063W,0402 05:0.1W,0603	T : 2mm pitch taping ϕ 180 reel (GPC 05 is 4mm pitch)	The resistance value is indicated by 3-digit numbers.	J:±5% F:±1%

*The first two numbers are significant numbers,
and the third one is the number of zeros "0" following to the first two numbers (multiple of 10).
*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
GPC01	0.60±0.03	0.30±0.03	0.23±0.03	0.10±0.05	0.15 ±0.05
GPC03	1.00±0.05	0.50±0.05	0.35±0.05	0.20±0.10	0.25 $^{+0.05}_{-0.10}$
GPC05	1.60±0.15	0.80±0.15	0.45±0.10	0.30±0.15	0.20 $^{+0.20}_{-0.10}$

(Unit: mm)

＊External dimensions are for reference only.
Overcoat film color : Black
The resistance value is indicated by 3-digit numbers.
There are no indication of resistance value in GPC01,03.

■Ratings

	Rated power	Limiting element voltage(*1)	Maximum overload voltage(*2)	Range of rated resistance	Tolerance on rated resistance	Category temperature range	Temperature Coefficient of Resistance(T.C.R)		
GPC01	0.05W	25V	50V	1.0Ω~3.3MΩ	J(±5%)	-55°C~+125°C		1.0Ω～9.1Ω	$+500\times10^{-6}$/°C -100×10^{-6}/°C
								10Ω～3.3MΩ	$\pm250\times10^{-6}$/°C
				10Ω~1MΩ	F(±1%)	-55°C~+125°C		10Ω～1MΩ	$\pm200\times10^{-6}$/°C
GPC03	0.063W	50V	100V	10Ω~3.3MΩ	J(±5%)	-55°C~+125°C		1.0Ω～9.1Ω	$+500\times10^{-6}$/°C -100×10^{-6}/°C
					J(±5%)	-55°C~+125°C		10Ω～3.3MΩ	$\pm200\times10^{-6}$/°C
				F：10Ω~1MΩ	F(±1%)	-55°C~+125°C		10Ω～3.3MΩ	$\pm200\times10^{-6}$/°C
GPC05	0.1W	50V	100V	1.0Ω~10MΩ	J(±5%)	-55°C~+155°C		1.0Ω～9.1Ω	$+500\times10^{-6}$/°C -100×10^{-6}/°C
								10Ω～10MΩ	$\pm200\times10^{-6}$/°C
				10Ω～1MΩ	F(±1%)	-55°C~+155°C		10Ω～1MΩ	$\pm200\times10^{-6}$/°C

(*1)Rated voltage $=\sqrt{Rated\ power\times Resistance\ value}$

In the case of rated voltage over above limiting element voltage, limiting element voltage will be the maximum.

(*2) The applied voltage in short time overload test = 2.5×rated voltage

In the case of the applied voltage in short time overload test over above maximum overload voltage, maximum overload voltage will be the maximum.

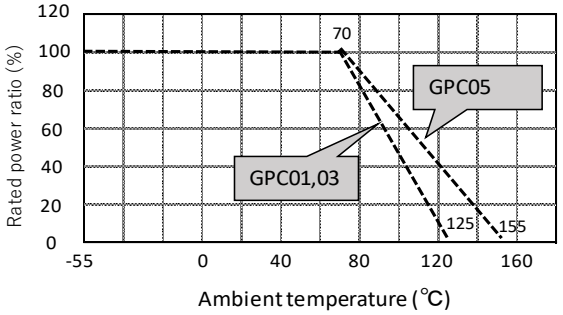
＊There are the supplementary information about rating on reference page.

＊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%+0.05Ω)	JIS C5201-1 8.1 2.5×Rated voltage, for 5 seconds
Bend strength of the face plating	±(1%+0.05Ω)	JIS C5201-1 9.8 Bending distance : 3mm
Resistance to soldering heat	±(1%+0.05Ω)	JIS C5201-1 11.2 260±5°C.10(sec.)
Rapid change of temperature	±(1%+0.05Ω)	JIS C5201-1 10.1 -55°C⇔+125°C,1000(times)
Loadlife in humidity	±(3%+0.05Ω)	60±2°C.90~95% R.H 1000h
Endurance at 70°C	±(3%+0.05Ω)	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.