

High Power Thick Film Chip Resistors

HP Series (1) - 1'Ω ~ 10 Mega 'Ω



Features

- High power in standard size
- Suitable for both wave & re-flow soldering

Application

- AV adapters
- LCD back-light
- Camera strobe

Website: www.royalohm.com
Email: info@royalohm.com (Thailand)

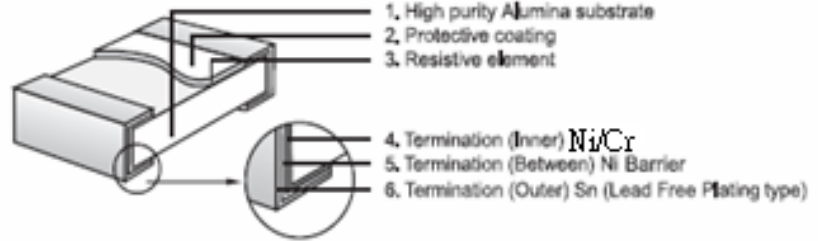
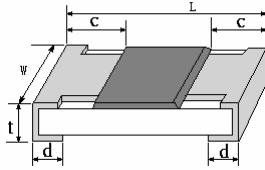


ISO / TS 16949
ISO 14001

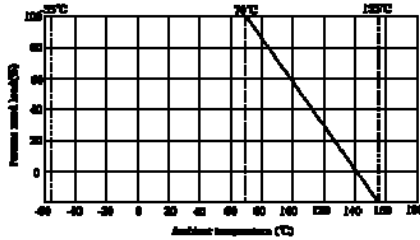
SUPERIOR QUALITY RESISTORS

High Power Thick Film Chip Resistors $1\Omega \sim 10 \text{ Mega } \Omega$

Dimension



Derating Curve



Type	Max Working Voltage	Max Overload Voltage	Operating Temperature Range
HP02	50V	100V	-55~+155°C
HP03	50V	100V	
HP05	150V	300V	
HP06	200V	400V	
HP07	200V	500V	
HP10	200V	400V	
HP12	250V	500V	

Type	Power(70°C)	L (mm)	W(mm)	t(mm)	c (mm)	d (mm)	Resistance Range 1%(E96) 、5%(E24)
HP02	1/10W	1.00±0.10	0.50±0.05	0.35±0.05	0.20±0.10	0.25±0.10	1Ω~10M
HP03	1/5W	1.60±0.10	0.80+0.15 -0.10	0.45±0.10	0.30±0.20	0.30±0.20	
HP05	1/3W	2.00±0.15	1.25+0.15 -0.10	0.55±0.10	0.40±0.20	0.40±0.20	
HP06	1/2W	3.10±0.15	1.55+0.15 -0.10	0.55±0.10	0.45±0.20	0.45±0.20	
HP07	3/4W	3.10±0.10	2.60+0.15 -0.10	0.55±0.10	0.50±0.25	0.50±0.20	
HP10	1W	5.00±0.10	2.50+0.15 -0.10	0.55±0.10	0.60±0.25	0.50±0.20	
HP12	2W	6.35±0.10	3.20+0.15 -0.10	0.55±0.10	0.60±0.25	1.80±0.25	

Characteristic

Test Item	Standard	Test Item	Standard
Temperature Coefficient	1Ω~10Ω: $\leq \pm 200 \text{ppm}/^\circ\text{C}$ 11Ω~10MΩ: $\leq \pm 100 \text{ppm}/^\circ\text{C}$	Solderability	Min. 95%coverage
		Dielectric withstanding voltage	No evidence of flashover, mechanical damage, arcing or insulation breakdown
		Resistance to soldering heat	$\pm(1.0\%+0.05\Omega)$ Max
		Temperature cycling	1%: $\pm(0.5\%+0.05\Omega)$ Max 5%: $\pm(1.0\%+0.05\Omega)$ Max
Short time overload	1%: $\pm(1.0\%+0.1\Omega)$ Max 5%: $\pm(2.0\%+0.1\Omega)$ Max	Load life in humidity	1%: $\pm(1.0\%+0.1\Omega)$ Max 5%: $\pm(3.0\%+0.1\Omega)$ Max
Terminal Bending	$\pm(1.0\%+0.05\Omega)$ Max	Load life	1%: $\pm(1.0\%+0.1\Omega)$ Max 5%: $\pm(3.0\%+0.1\Omega)$ Max

Note: HP02 TCR : 1Ω~10Ω: $\pm 400 \text{PPM}/^\circ\text{C}$ 11Ω~100Ω: $\pm 200 \text{PPM}/^\circ\text{C}$ >100Ω: $\pm 100 \text{PPM}/^\circ\text{C}$

High Power Thick Film Chip Resistors

HP Series (2) – 0.1Ω ~ 1Ω



Features

- Low resistance High power in standard size
- Suitable for both wave & re-flow soldering

Application

- AV adapters
- LCD back-light
- Camera strobe



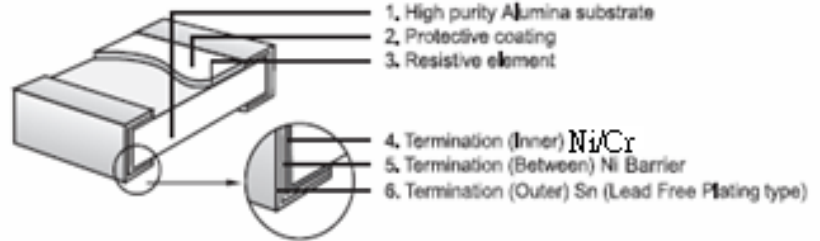
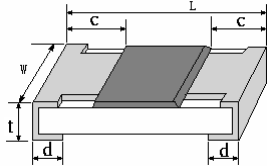
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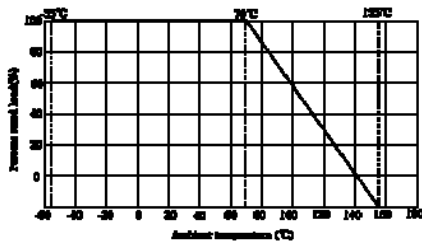
SUPERIOR QUALITY RESISTORS

Low Resistance High Power Thick Film Chip Resistors $0.1\Omega \sim 1\Omega$

Dimension



Derating Curve



Type	Max Working Voltage	Max Overload Voltage	Operating Temperature Range
HP03	50V	100V	-55~+155°C
HP05	150V	300V	
HP06	200V	400V	
HP07	200V	500V	
HP10	200V	500V	
HP12	250V	500V	

Type	Power(70°C)	L (mm)	W(mm)	t(mm)	c (mm)	d (mm)	Resistance Range 1%(E96) - 5%(E24)
HP03	1/5W	1.60±0.10	0.80+0.15 -0.10	0.45±0.10	0.30±0.20	0.30±0.20	0.1Ω~1Ω
HP05	1/3W	2.00±0.15	1.25+0.15 -0.10	0.55±0.10	0.40±0.20	0.40±0.20	
HP06	1/2W	3.10±0.15	1.55+0.15 -0.10	0.55±0.10	0.45±0.20	0.45±0.20	
HP07	3/4W	3.10±0.10	2.60+0.15 -0.10	0.55±0.10	0.50±0.25	0.50±0.20	
HP10	1W	5.00±0.10	2.50+0.15 -0.10	0.55±0.10	0.60±0.25	0.50±0.20	
HP12	2W	6.35±0.10	3.20+0.15 -0.10	0.55±0.10	0.60±0.25	1.80±0.25	

Characteristic

Test Item	Standard	Test Item	Standard
Temperature Coefficient	HP03 & HP05: $\leq \pm 200\text{ppm}/^\circ\text{C}$ HP06: $\leq \pm 100\text{ppm}/^\circ\text{C}$ HP07: $\leq \pm 100\text{ppm}/^\circ\text{C}$ HP10: $\leq \pm 100\text{ppm}/^\circ\text{C}$ HP12: $\leq \pm 100\text{ppm}/^\circ\text{C}$	Solderability	Min. 95%coverage
		Dielectric withstanding voltage	No evidence of flashover, mechanical damage, arcing or insulation breakdown
		Resistance to soldering heat	$\pm(1.0\%+0.05\Omega)$ Max
		Temperature cycling	1%: $\pm(0.5\%+0.05\Omega)$ Max 5%: $\pm(1.0\%+0.05\Omega)$ Max
Short time overload	1%: $\pm(1.0\%+0.1\Omega)$ Max 5%: $\pm(2.0\%+0.1\Omega)$ Max	Load life in humidity	1%: $\pm(1.0\%+0.1\Omega)$ Max 5%: $\pm(3.0\%+0.1\Omega)$ Max
Terminal Bending	$\pm(1.0\%+0.05\Omega)$ Max	Load life	1%: $\pm(1.0\%+0.1\Omega)$ Max 5%: $\pm(3.0\%+0.1\Omega)$ Max

Option: HP10, HP12 T.C.R $\pm 75\text{ppm}/^\circ\text{C}$ could be provided specially on a case to case basis.