

CHR Series

Non-magnetic Chip Resistors



- Resistances from 1 Ohm to 10M Ohms
 - Power Rating 0.05 to 2Watt
 - Resistance Tolerances to $\pm 0.5\%$
 - TCR's to ± 50 ppm/ $^{\circ}\text{C}$
 - Non-Magnetic (contact PtAg)
 - Suitable for Gluing or Soldering
 - Sizes: 0402 / 0603 / 0805 / 1206 / 2010 / 2512 / 4020
 - Special High Temperature Version to 300 $^{\circ}\text{C}$ (H)
- (See ordering Information below)



SPECIFICATIONS

Type	0402 ⁴	0603 ⁴	0805 ⁴	1206	2010	2512	4020	
Power Rating (W)	0.05	0.10	0.125	0.25	0.50	1.0 ³	2.0 ³	
Working ² Voltage (V AC)	Trimmed	30	75	100	200	250	300	500
	Untrimmed ($\geq 5\%$ tol.)	60	150	200	400	900	1200	1200
Resistance Range (Ω)	Tolerances Available (%) Temperature Coefficients Available (\pm ppm/ $^{\circ}\text{C}$) ¹ (others upon request)							
1 Ω - <10 Ω	10% to 20% 250	5% to 20% 100 / 250	5% to 20% 100 / 250	5% to 20% 100 / 250	5% to 20% 100 / 250	5% to 20% 100 / 250	5% to 20% 100 / 250	
10 Ω - <100 Ω	5% to 10% 100	2% to 10% 50 / 100	1% to 10% 50 / 100	1% to 10% 50 / 100	1% to 10% 50 / 100	1% to 10% 50 / 100	1% to 10% 50 / 100	
100 Ω - 1M	1% to 10% 50 / 100	1% to 10% 50 / 100	0.5% to 10% 50 / 100	0.5% to 10% 50 / 100	0.5% to 10% 50 / 100	0.5% to 10% 50 / 100	0.5% to 10% 50 / 100	
>1M - 10M	5% to 20% 50 / 100	1% to 10% 50 / 100	1% to 10% 50 / 100	1% to 10% 50 / 100	1% to 10% 50 / 100	1% to 10% 50 / 100	1% to 10% 50 / 100	

- 1) TCR: in ppm/ $^{\circ}\text{C}$; +25 $^{\circ}\text{C}$...+125 $^{\circ}\text{C}$; TCR below standard TCR (highest value): +25 $^{\circ}\text{C}$...+85 $^{\circ}\text{C}$
 2) Continuous operating voltage (V_{-} , V_{eff}): $V \leq \sqrt{P \cdot R}$ or max. working voltage (the lower value)
 3) Solder pads must be sufficiently large to keep resistors's peak temperature below rating
 4) Best tolerance for High Temp version is 2%

Ordering Information

Standard Part Description: Part Type - Resistance - Tolerance - TCR

Example: CHR0603 10 kOhms 5% 50ppm

High Temperature Example: CHR0805H 50 kOhms 10% 50ppm

(Note: if no TCR is specified, the highest value will be supplied)

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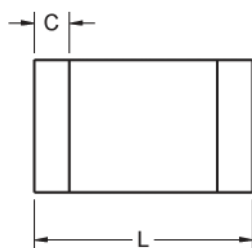
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SPECIFICATIONS

Long Term Stability	Max ΔR			
	<10 Ω	<10 Ω high temp	10 Ω - 10M	10 Ω - 10M high temp
Storage 125°C / 1000h	±1%	±1%	±0.5%	±1%
Storage 155°C / 1000h	±2%	±2%	±1%	±1%
Load Life / P=70% / 70°C / 1000h	±1%	±1%	±0.5%	±1%
Short term overload	±0.5%	±1%	±0.25%	±1%
Humidity / 96%RH / 40°C / 56 days	±1%	±1%	±0.5%	±1%
Temperature Range	-55°C to +155°C (Standard) -55°C to +125°C (50ppm/°C Parts) -55°C to +300°C (High Temperature Version, TCR valid +25°C to +125°C)			
Climactic Category	55 / 155 / 56			
Solderability	250°C / 3s (up to 6 months after shipment or 12 monts at storage in Nitrogen)			
Max. Soldering Temperature	260°C / 10s			
RoHS Compliant Exemption	This part is RoHS complian <u>with exemption</u> 7(c)-I, as authorized by 2011/b5/EU.			
Packaging	Bulk or Blister tape to IEC 60286-3, Tape width 8mm / Reel Diameter 180 or 330mm Minimum quantity Bulk / 100 pieces per value Tape & Reel Minimum / 500 pieces per value, Except size 0402 / 1000 pieces per value)			

Type	Dimensions			
	L	B	D	C
CHR0402 / CHR0402H	0.95 +0.10 / -0.05	0.48 +0.10 / -0.05	0.28 +0.1 / -0.05	0.1 +0.1 / -0.05
CHR0603 / CHR0603H	1.5 +0.15 / -0.05	0.8 +0.15 / -0.05	0.4 +0.15 / -0.05	0.2 +0.2 / -0.1
CHR0805 / CHR0805H	2.0 +0.15 / -0.05	1.25 +0.15 / -0.05	0.4 +0.15 / -0.05	0.3 +0.2 / -0.1
CHR1206 / CHR1206H	3.2 +0.15 / -0.05	1.5 +0.2 / -0.05	0.4 +0.15 / -0.05	0.3 +0.2 / -0.1
CHR2010 / CHR2010H	5.1 +0.15 / -0.05	2.5 +0.2 / -0.05	0.6 +0.20 / -0.1	1.2 ±0.2
CHR2512 / CHR2512H	6.3 +0.15 / -0.05	3.5 +0.2 / -0.05	0.6 +0.15 / -0.05	0.9 ±0.2
CHR4020 / CHR4020H	10.2 +0.15 / -0.05	5.1 +0.2 / -0.05	0.6 +0.15 / -0.05	0.9 ±0.2



Power Derating Curve

