

CHR Series

Non-magnetic Chip Resistors



- Resistances from 1 Ohm to 10M Ohms
- Power Rating 0.05 to 1.5Watt
- Resistance Tolerances to $\pm 0.5\%$
- TCR's to ± 50 ppm/ $^{\circ}\text{C}$
- Non-Magnetic (contact PtAg)
- Suitable for Glueing or Soldering
- Sizes: 0402 / 0603 / 0805 / 1206 / 2010 / 2512 / 4020
- Special HT Version to 300 $^{\circ}\text{C}$



SPECIFICATIONS

Type	0402	0603	0805	1206	2010	2512	4020	
Power Rating (W) ¹	0.05	0.10	0.125	0.25	0.50	1.0	1.5	
Working Voltage (VAC)	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/ $^{\circ}\text{C}$) (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	

¹W @ 70 $^{\circ}\text{C}$ / 0W @ 155 $^{\circ}\text{C}$

Specification	Value
Temperature Range	-55 $^{\circ}\text{C}$ to +155 $^{\circ}\text{C}$ (Standard) -55 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$ (50ppm/ $^{\circ}\text{C}$ Parts) -55 $^{\circ}\text{C}$ to +300 $^{\circ}\text{C}$ (HT Version, TCR valid +25 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$)
Climactic Category	55 / 155 / 56
Solderability	250 $^{\circ}\text{C}$ / 3s (up to 6 month after shipment resp. at storage in Nitrogen)
Max. Soldering Temperature	260 $^{\circ}\text{C}$ / 10s

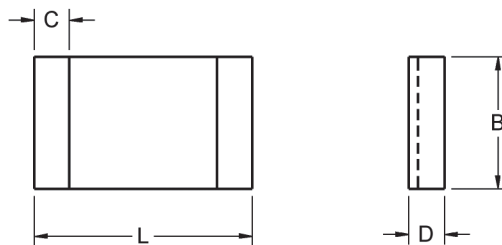
CHR Series

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SPECIFICATIONS (continued)

Long Term Stability	Max ΔR	
	<10 Ω	10 Ω - 10M
Storage 125°C / 1000h	$\pm 1\%$	$\pm 0.5\%$
Storage 155°C / 1000h	$\pm 2\%$	$\pm 1\%$
Load Life / P=70% / 70°C / 1000h	$\pm 1\%$	$\pm 0.5\%$
Short term overload	$\pm 0.5\%$	$\pm 0.25\%$
Humidity / 96%RH / 40°C / 56 days	$\pm 1\%$	$\pm 0.5\%$



Type	Dimensions			
	L	B	D	C
CHR 0402	0.040 ± 0.006 [1.04 ± 0.15]	0.020 ± 0.006 [0.5 ± 0.15]	0.012 ± 0.002 [0.3 ± 0.05]	0.004 $+0.004 / -0.002$ [0.1 $+0.1 / -0.05$]
CHR 0603	0.060 $+0.006 / -0.002$ [1.5 $+0.15 / -0.05$]	0.030 $+0.008 / -0.002$ [0.8 $+0.2 / -0.05$]	0.016 $+0.006 / -0.002$ [0.4 $+0.15 / -0.05$]	0.008 $+0.008 / -0.004$ [0.2 $+0.2 / -0.1$]
CHR 0805	0.080 $+0.006 / -0.002$ [2.0 $+0.15 / -0.05$]	0.050 $+0.006 / -0.002$ [1.25 $+0.15 / -0.05$]	0.016 $+0.006 / -0.002$ [0.4 $+0.15 / -0.05$]	0.012 $+0.008 / -0.004$ [0.3 $+0.2 / -0.1$]
CHR 1206	0.120 $+0.006 / -0.002$ [3.2 $+0.15 / -0.05$]	0.060 $+0.008 / -0.002$ [1.5 $+0.2 / -0.05$]	0.016 $+0.006 / -0.002$ [0.4 $+0.15 / -0.05$]	0.012 $+0.008 / -0.004$ [0.3 $+0.2 / -0.1$]
CHR 2010	0.200 $+0.006 / -0.002$ [5.1 $+0.15 / -0.05$]	0.100 $+0.008 / -0.002$ [2.5 $+0.2 / -0.05$]	0.024 $+0.008 / -0.004$ [0.6 $+0.20 / -0.1$]	0.047 ± 0.008 [1.2 ± 0.2]
CHR 2512	0.250 $+0.006 / -0.002$ [6.2 $+0.15 / -0.05$]	0.120 $+0.008 / -0.002$ [3.2 $+0.2 / -0.05$]	0.024 $+0.008 / -0.004$ [0.6 $+0.20 / -0.1$]	0.035 ± 0.008 [0.9 ± 0.2]
CHR 4020	0.402 $+0.006 / -0.002$ [10.2 $+0.15 / -0.05$]	0.200 $+0.006 / -0.002$ [5.1 $+0.15 / -0.05$]	0.024 $+0.008 / -0.004$ [0.6 $+0.20 / -0.1$]	0.035 ± 0.008 [0.9 ± 0.2]

Packaging:

Bulk or Blister tape to IEC 60286-3

- Tape width 8mm / Reel Diameter 180 or 330mm
- Minimum quantity Bulk / 100 pieces per value
- Minimum quantity Tape & Reel / 1000 pieces per value

Ordering Information

Part Description: Part Type - Resistance - Tolerance - TCR

Example: CHR 0603 10 kOhms 5% 50ppm

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

Power Derating Curve

