

# 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  $\pm 50$  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 ) <sup>1</sup>	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	60	150	200	400	900	1200	1200
Resistance Range ( $\Omega$ )	Tolerances Available ( % ) Temperature Coefficients Available ( $\pm$ ppm/ $^{\circ}\text{C}$ ) (others upon request)							
1 $\Omega$ - <10 $\Omega$	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 $\Omega$ - <100 $\Omega$	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 $\Omega$ - 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	

<sup>1</sup>W @ 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

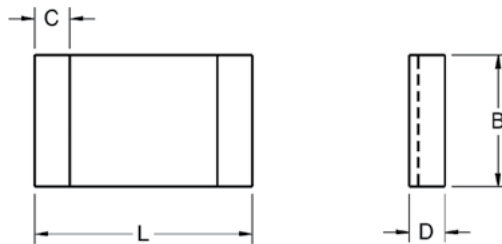
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Non-magnetic Chip Resistors



## SPECIFICATIONS (continued)

Long Term Stability	Max $\Delta R$	
	<10 $\Omega$	10 $\Omega$ - 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
<b>CHR 0402</b>	0.040 $\pm 0.006$ [ 1.04 $\pm 0.15$ ]	0.020 $\pm 0.006$ [ 0.5 $\pm 0.15$ ]	0.012 $\pm 0.002$ [ 0.3 $\pm 0.05$ ]	0.004 $+0.004 / -0.002$ [ 0.1 $+0.1 / -0.05$ ]
<b>CHR 0603</b>	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 $+0.2 / -0.1$ ]
<b>CHR 0805</b>	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 $+0.2 / -0.1$ ]
<b>CHR 1206</b>	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 $+0.2 / -0.1$ ]
<b>CHR 2010</b>	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 $\pm 0.008$ [ 1.2 $\pm 0.2$ ]
<b>CHR 2512</b>	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 $\pm 0.008$ [ 0.9 $\pm 0.2$ ]
<b>CHR 4020</b>	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 $\pm 0.008$ [ 0.9 $\pm 0.2$ ]

### 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 )

