



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# 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  $\pm 50$  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 <sup>4</sup>	0603 <sup>4</sup>	0805 <sup>4</sup>	1206	2010	2512	4020	
Power Rating ( W )	0.05	0.10	0.125	0.25	0.50	1.0 <sup>3</sup>	2.0 <sup>3</sup>	
Working <sup>2</sup> Voltage ( VAC )	Trimmed	30	75	100	200	250	300	500
	Untrimmed ( $\geq 5\%$ tol.)	60	150	200	400	900	1200	1200
Resistance Range ( $\Omega$ )	Tolerances Available ( % ) Temperature Coefficients Available ( $\pm$ ppm/ $^{\circ}\text{C}$ ) <sup>1</sup> (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	

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 ( $U_{-}$ ,  $U_{\text{eff}}$ ):  $V \leq \sqrt{P \cdot R}$  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%

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 $^{\circ}\text{C}$ (High Temperature 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 months after shipment or 12 months at storage in Nitrogen)
Max. Soldering Temperature	260 $^{\circ}\text{C}$ / 10s

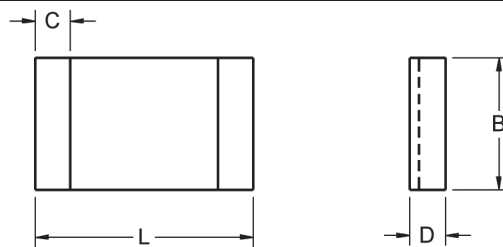
# CHR Series

Non-magnetic Chip Resistors



## SPECIFICATIONS (continued)

Long Term Stability	Max ΔR	
	<10Ω	10Ω - 10M
Storage 125°C / 1000h	±1%	±0.5%
Storage 155°C / 1000h	±2%	±1%
Load Life / P=70% / 70°C / 1000h	±1%	±0.5%
Short term overload	±0.5%	±0.25%
Humidity / 96%RH / 40°C / 56 days	±1%	±0.5%
RoHS Compliant Exemption	This part is RoHS compliant with exemption 7(c)-I, as authorized by 2011/b5/EU.	



Type	Dimensions			
	L	B	D	C
CHR 0402 / CHR 0402H	0.95 +0.10 / -0.05	0.48 +0.10 / -0.05	0.28 +0.1 / -0.05	0.1 +0.1 / -0.05
CHR 0603 / CHR 0603H	1.5 +0.15 / -0.05	0.8 +0.15 / -0.05	0.4 +0.15 / -0.05	0.2 +0.2 / -0.1
CHR 0805 / CHR 0805H	2.0 +0.15 / -0.05	1.25 +0.15 / -0.05	0.4 +0.15 / -0.05	0.3 +0.2 / -0.1
CHR 1206 / CHR 1206H	3.2 +0.15 / -0.05	1.5 +0.2 / -0.05	0.4 +0.15 / -0.05	0.3 +0.2 / -0.1
CHR 2010 / CHR 2010H	5.1 +0.15 / -0.05	2.5 +0.2 / -0.05	0.6 +0.20 / -0.1	1.2 ±0.2
CHR 2512 / CHR 2512H	6.3 +0.15 / -0.05	3.5 +0.2 / -0.05	0.6 +0.15 / -0.05	0.9 ±0.2
CHR 4020 / CHR 4020H	10.2 +0.15 / -0.05	5.1 +0.2 / -0.05	0.6 +0.15 / -0.05	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 / 500 pieces per value  
 (Note: Except size 0402 / 1000 pieces per value)

### Ordering Information

Standard 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 )

High Temperature Part Description (H): Part Type H - Resistance - Tolerance - TCR

Example: CHR 0805H 50 kOhms 10% 50ppm

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

