BREL International

CHR-LF-Series
Chip Resistors, non-magnetic
Sizes: 0402, 0603, 0805, 1206, 2010, 2512, 4020

Features:

- Chip Resistors in thick film technology
- RoHS conform without exceptions
- Non-magnetic
- PtAg [0)] terminations for conductive gluing and soldering
- RF-versions untrimmed
- Suitable for high vacuum applications – no organics

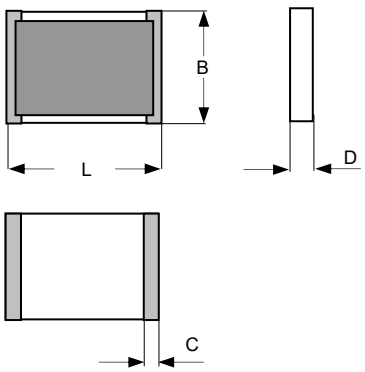
RoHS / ELV conform 2011/65/EC 2000/53/EC
without exceptions

e4

Non-Magnetic

Dimensions:

Size		L (mm)	B (mm)	D (mm)	C (mm)
Imperial (Standard)	Metric (ref. only)	length	width	thickness	width of wrap around
0402	1005	0.95 +0.10/-0.05	0.48 +0.10/-0.05	0.28 +0.10/-0.05	0.1 +0.1/-0.05
0603	1608	1.50 +0.15/-0.05	0.80 +0.15/-0.05	0.40 +0.15/-0.05	0.2 +0.2/-0.1
0805	2012	2.00 +0.15/-0.05	1.25 +0.15/-0.05	0.40 +0.15/-0.05	0.3 +0.2/-0.1
1206	3216	3.20 +0.15/-0.05	1.50 +0.2/-0.05	0.40 +0.15/-0.05	0.3 +0.2/-0.1
2010 [3)]	5025	5.10 +0.15/-0.05	2.50 +0.2/-0.05	0.60 +0.20/-0.1	0.6 ±0.2
2512 [3)]	6332	6.30 +0.15/-0.05	3.50 +0.2/-0.05	0.60 +0.15/-0.05	0.9 ±0.2
4020 [3)]	10050	10.20 +0.20/-0.05	5.10 +0.2/-0.05	0.60 +0.20/-0.1	0.9 ±0.2



Packaging:

Bulk in plastic bags – minimum quantity 100 pieces per value
Embossed carrier tape according to IEC 60286-3 – minimum 500 pieces per value
Reel diameter 180 mm or 330 mm

Ordering Data:

Type – value – tolerance – temperature coefficient TCR - **LF**
Example: CHR 0805 220R ± 1% TCR100 LF

Untrimmed parts are indicated by the extension "*NA*" in the order code:
Type – NA – value – tolerance– temperature coefficient TCR
Example: CHR 0805-NA 1k ±2% TCR100 LF

Without requirement for the temperature coefficient TCR, the standard value (highest value in table) will be supplied.

[0)] PtAg: Platinum-Silver thick film

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CHR-LF-Series
Chip Resistors, non-magnetic
Sizes: 0402, 0603, 0805, 1206, 2010, 2512, 4020

Technical data – depending on size:

Size	0402	0603	0805	1206	2010 [3]	2512 [3]	4020 [3]
Power rating P_{70} (mW) (P_{155} = 0 mW)	50	100	125	250	750	1000	2000
Max. working voltage (V) [2]							
Standard (trimmed)	30	75	100	200	250	300	500
NA (untrimmed, Tol. ≥ 5%)	60	150	200	400	900	1200	1500
Ranges / Tolerances / Temperature coefficients TCR [1]							
1R – <10R	10/20% TCR250	5/10/20% TCR250	5/10/20% TCR250	5/10/20% TCR250	5/10/20% TCR250	5/10/20% TCR250	5/10/20% TCR250
10R – <100R	2/5/10/20% TCR100/200	1/2/5/10% TCR100/200	1/2/5/10% TCR100/200	1/2/5/10% TCR100/200	1/2/5/10% TCR100/200	1/2/5/10% TCR100/200	1/2/5/10% TCR100/200
100R – <100k	2/5/10/20% TCR100/200	1/2/5/10% TCR100/200	1/2/5/10% TCR100/200	1/2/5/10% TCR100/200	1/2/5/10% TCR100/200	1/2/5/10% TCR100/200	1/2/5/10% TCR100/200
100k – <100M	5/10/20% TCR50/100	5/10/20% TCR50/100	5/10/20% TCR50/100	5/10/20% TCR50/100	5/10/20% TCR50/100	5/10/20% TCR50/100	5/10/20% TCR50/100

[1] Temperature coefficient TCR: in ppm/K; +25°C...+125°C; below standard TCR (highest value): +25°C...+85°C
[2] Continuous operating voltage (U_, U_{eff}): V ≤ √(P*R) or max. working voltage (the lower value)
[3] Coming soon

Zero-Ohm-Jumper: < 50 mOhm
Lower values of tolerance, TCR and VCR on request and agreement only

Technical data – general:

Operating temperature range	-55°C ... +155°C
Climatic category acc. to EN 60068-1	55/155/56
Solderability acc. EN 60068-2-58 [4]	250°C 3s
Max. soldering temperature acc. EN 60068-2-58	260°C 10s
Moisture Sensitivity Level acc. to J-STD-020	MSL 1 (unlimited)

Long term stability [5]	>100R – 1M		≤ 100R	
Size	0402 / 0603	0805 / 1206	0402 / 0603	0805 / 1206
Storage 155°C/1000h	< 2% typ.< 0,5%	< 1% typ.< 0,5%	< 2% typ.< 0,5%	< 1% typ.< 0,5%
Damp heat (85°C/85%, 500h)	< 2% typ.< 0,5%	< 1% typ.< 0,5%	< 5% typ.< 2%	< 2% typ.< 0,5%
Cold storage (-55°C, 96h)	< 1% typ.< 0,5%	< 0,5% typ.< 0,25%	< 2% typ.< 0,5%	< 1% typ.< 0,5%
Temperature cycling (-55°C, +155°C, 30min each, 100cycles)	< 1% typ.< 0,5%	< 0,5% typ.< 0,25%	< 2% typ.< 0,5%	< 1% typ.< 0,5%

[4] Up to 6 months after shipment (air, 30°C/60%rH) or up to 12 months at storage in Nitrogen or in evacuated dry packs.
[5] Untrimmed parts (NA)

Other data according to EN 140401-802 (CECC 40401-802).

Specifications subject to change without notice | Made in Germany | Issue 11-2025

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