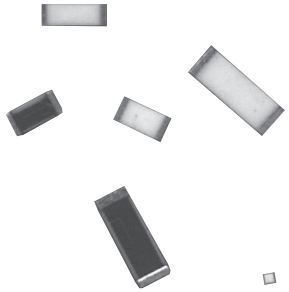
Vishay Thin Film Low Value Surface Mount Chip Resistor



Actual Size
0805

LINKS TO ADDITIONAL RESOURCES

Product Page | Packages | Footprints

The L-NS series resistors are low resistance, high power handling surface mount chip resistors. They are available in either lead bearing or lead (Pb)-free terminations.

FEATURES

- Metal glaze resistor
- Low inductance for high-frequency applications
- Alumina substrates for high power handling capability (2 W maximum power rating)
- Pre-soldered terminations
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free Available

RoHS* Available

HALOGEN FREE Available

Note

* This datasheet provides information about parts that are RoHS-compliant and / or parts that are non RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information / tables in this datasheet for details

VALUE AND MINIMUM TOLERANCE

VALUE (Ω)	BEST TOLERANCE
< 0.1	± 20 %
0.1	± 2.0 %
0.25	± 1.0 %
0.5	± 1.0 %
1.0	± 1.0 %
2.0	± 1.0 %
10.0	± 1.0 %

STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
Material	Metal glaze	-
Resistance Range	0.03 Ω to 10 Ω	-
TCR: Absolute	± 300 ppm/°C	-55 °C to +125 °C
Tolerance: Absolute	1 % to 20 % (value dependent)	-
Working Voltage	$\sqrt{P \times R}$	-
Operating Temperature Range	-55 °C to +155 °C	-
Storage Temperature Range	-55 °C to +155 °C	-
Noise	< -35 dB (typical)	-

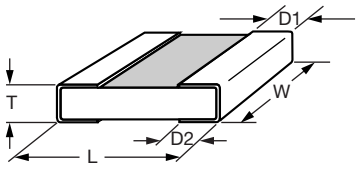
COMPONENT RATINGS

CASE SIZE	POWER RATING (mW)	RESISTANCE RANGE (Ω)
0505	125	0.05 to 5.0
0603	125	0.10 to 5.0
0805	200	0.10 to 6.0
1005	250	0.15 to 10.0
1020	1000	0.03 to 1.0
1206	330	0.10 to 10.0
1505	500	0.25 to 10.0
2010	1000	0.17 to 10.0
2512	2000	0.18 to 10.0

Note

- Resistor values beyond ranges shall be reviewed by the factory

DIMENSIONS in inches



CASE SIZE	SIZE				
	L	W	T	D1	D2
	± 0.006	± 0.005	± 0.005	± 0.005	± 0.005
0505	0.055	0.050	0.020	0.010	0.015
0603	0.063	0.032	0.018	0.012	0.015
0805	0.080	0.050	0.020	0.016	0.015
1005	0.105	0.050	0.020	0.015	0.015
1020	0.098	0.197	0.024	0.016	0.022
1206	0.125	0.063	0.020	0.015	0.015
1505	0.155	0.050	0.020	0.015	0.015
2010	0.197	0.098	0.020	0.020	0.020
2512	0.250	0.124	0.020	0.020	0.020

MECHANICAL SPECIFICATIONS

Resistive Element	Metal glaze
Substrate Material	Alumina
Terminals	Pre-soldered

ENVIRONMENTAL TESTS

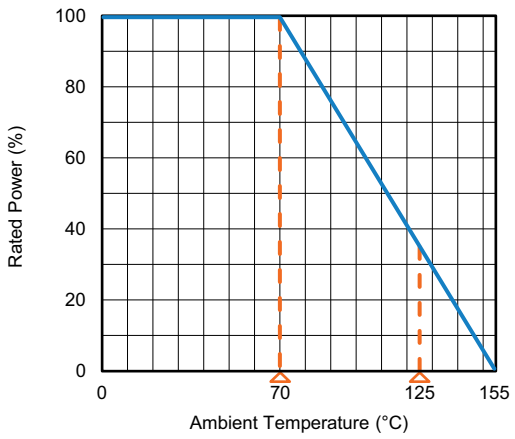
ENVIRONMENTAL TEST	LIMITS (1) ΔR ± %	TYPICAL 1 Ω ΔR ± %
STO (2)	0.5	-0.19
LTO	0.1	-0.03
RSH	0.5	-0.14
Moisture	0.5	0.07
HTE	1.0	0.02
Load Life (2000 h at +70 °C)	0.5	0.20
TCR (ppm)	± 300	+150

Notes

(1) 0.01 Ω additional allowed for measurement error

(2) Testing conducted at 2.0 x working voltage on 2512 case size all other 2.5 x

DERATING CURVE



GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: L-1206M1R00GBT1

L	-	1	2	0	6	M	1	R	0	0	G	B	T	1

GLOBAL MODEL	CASE SIZE	TCR CHARACTERISTICS	OHMIC VALUE	TOLERANCE	TERMINATION	PACKAGING
L- = low value wraparound chip resistor	**0505** **0603** **0805** (1) **1005** **1020** **1206** **1505** **2010** **2512**	**M** = 300 ppm/°C **N** = 350 ppm/°C **O** = 400 ppm/°C **P** = 500 ppm/°C	First 3 digits are significant figures and the last digit specifies the number of zeros to follow. "R" designates the decimal point. Example: R100 = 0.1 Ω 1R60 = 1.6 Ω	**F** = 1 % **G** = 2 % **H** = 3 % **J** = 5 % **K** = 10 % **L** = 20 %	**B** = wraparound Sn/Pb solder w/ nickel barrier **S** = wraparound lead (Pb)-free solder, 100 % Sn w/ nickel barrier RoHS compliant - e3	BULK **BS** = 100 min., 1 mult. WAFFLE **WS** =100 min., 1 mult. **WI** = 100 min., 1 mult. (item single lot date code) TAPE AND REEL **T0** = 100 min., 100 mult. **T1** = 1000 min., 1000 mult. (2) **T3** = 300 min., 300 mult. **T5** = 500 min., 500 mult. **TF** = full reel **TI** = 100 min., 1 mult. (item single lot date code) **TP** = 100 min., 1 mult. (package unit single lot date code) **TS** = 100 min., 1 mult.

Historical Part Number Example: L1206M1R00HBT (for reference purposes only)

L	1206	M	1R00	H	B	T
STYLE	CASE SIZE	TCR CHARACTERISTICS	OHMIC VALUE	TOLERANCE	TERMINATION	PACKAGING

Notes

(1) 0705 and 0805 are the same (only use 0805 when ordering)

(2) Preferred packaging code

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