

LTC 10, 18

The MEGASTAR-OHM's LTC thermistor offers a wide range of thermal sensing characteristics in a small SMD package. This component has a positive temperature coefficient and is useful in applications requiring temperature compensation, temperature sensing or circuit protection. The LTC thermistor can be mounted directly onto a circuit board or similar substrate. It can also be packaged independently for external temperature sensing.

## FEATURES

1. Available in industry standard 0805 and 1206 size packages.
2. T.C.R. available from 500 to 4500 ppm/°C.
3. Excellent solderability with both flow and reflow soldering operations.
4. Resistance and T.C.R. value marked on the chip.

## DIMENSIONS

Units=mm		
TYPE (size)	LTC10 (0805)	LTC18 (1206)
L	2.0±0.15	3.1±0.1
W	1.25± <sup>0.1</sup> / <sub>0.05</sub>	1.55±0.1
H	0.6±0.1	0.6±0.1
l <sub>1</sub>	0.4±0.2	0.45±0.2
l <sub>2</sub>	0.3± <sup>0.2</sup> / <sub>0.1</sub>	0.3± <sup>0.2</sup> / <sub>0.1</sub>
Unit Weight	5 mg	9 mg

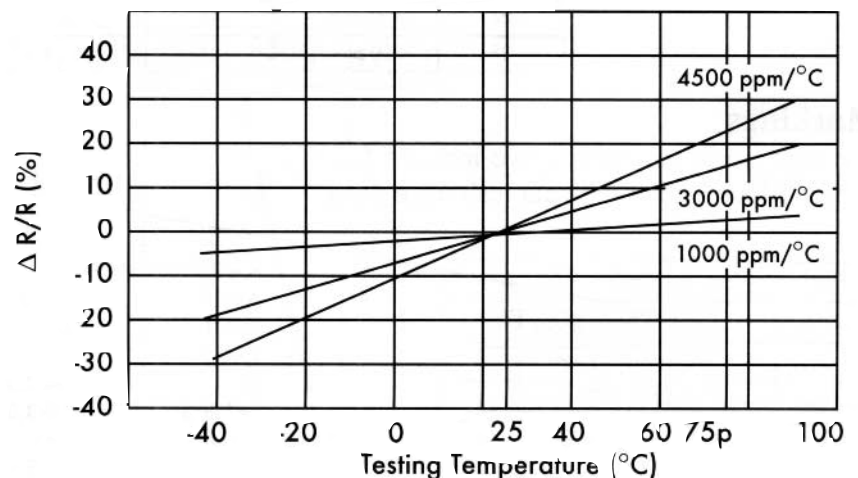
## RATINGS

TYPE (size)	Maximum Working Voltage (V)	Operating Temperature Range
LTC10 (0805)	50	-40°C to 125°C
LTC18 (1206)	100	

## PERFORMANCE CHARACTERISTICS

DESCRIPTION	PERFORMANCE
Resistance Temperature Coefficient	As specified in table
Short Time Overload	±0.5% maximum
Terminal Strength	±0.5% maximum
Solder-Heat Resistance	±1.0% maximum
Solderability	95% min. coverage
Temperature Cycle	±0.5% maximum
Load Life in Moisture	±2.0% maximum
Load Life	±2.0% maximum

Temperature Characteristics and Linearity



Test methods per EIA 575 and JIS C5202



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## RESISTANCE VALUE AND RESISTANCE TEMPERATURE COEFFICIENT

Resistance Value		Resistance Temperature Coefficient			
Range - E <sub>24</sub> Series		Tolerance	Symbol	Nominal Value (ppm/°C)	Tolerance
LTC 10	LTC 18				
100 to 5.1K	100 to 10K	±5%(J)	05	500	±20%
100 to 5.1K	100 to 10K		08	800	
100 to 5.1K	100 to 10K		10	1000	
100 to 3.3K	100 to 4.7K		15	1500	±15%
100 to 3.3K	100 to 4.7K		20	2000	
100 to 1.6K	100 to 2.2K		24	2400	
100 to 3.3K	100 to 3.6K		28	2800	
100 to 3.3K	100 to 3.6K		30	3000	
100 to 3.3K	100 to 3.6K		33	3300	
51 to 910	51 to 1.2K		36	3600	
51 to 560	51 to 910	39	3900	±10%	
33 to 360	33 to 470	42	4200		
33 to 100	33 to 180	45	4500		

### PART NUMBER SYSTEM

LTC 18 — 30 XXX J T

Product Type
Linear Positive T.C.R. Chip Thermistor

Packaging	
CODE	DETAIL
B	Bulk
T	Tape & Reel
Please refer to packaging explanation on page 6.	

CODE	WATTAGE (SIZE)
10	1/10 watt (0805)
18	1/8 watt (1206)

T.C.R.		T.C.R.	
CODE	ppm/°C	CODE	ppm/°C
05	500 ppm/°C	30	3000 ppm/°C
08	800 ppm/°C	33	3300 ppm/°C
10	1000 ppm/°C	36	3600 ppm/°C
15	1500 ppm/°C	39	3900 ppm/°C
20	2000 ppm/°C	42	4200 ppm/°C
24	2400 ppm/°C	45	4500 ppm/°C
28	2800 ppm/°C		

Resistance Value	
3-digit code	Values
102	1.0 K
363	36K

2 significant digits plus multiplier

TOLERANCE
J=±5%

### Markings

Four digit markings. The first two indicate T.C.R. The third and fourth digits indicate resistance value.

10

E

3

See T.C.R. Table above
10 = 1000 ppm/°C
24 = 2400 ppm/°C

2 Significant Digits

A=1.0	J=2.2
B=1.1	K=2.4
C=1.2	L=2.7
D=1.3	M=3.0
E=1.5	N=3.3
F=1.6	P=3.6
G=1.8	Q=3.9
H=2.0	R=4.3

S=4.7
T=5.1
U=5.6
V=6.2
W=6.8
X=7.5
Y=8.2
Z=9.1

Multiplier
1= x10
2= x100
3= x1000

EXAMPLE:  
10E3 = 1000ppm/°C, 1.5K