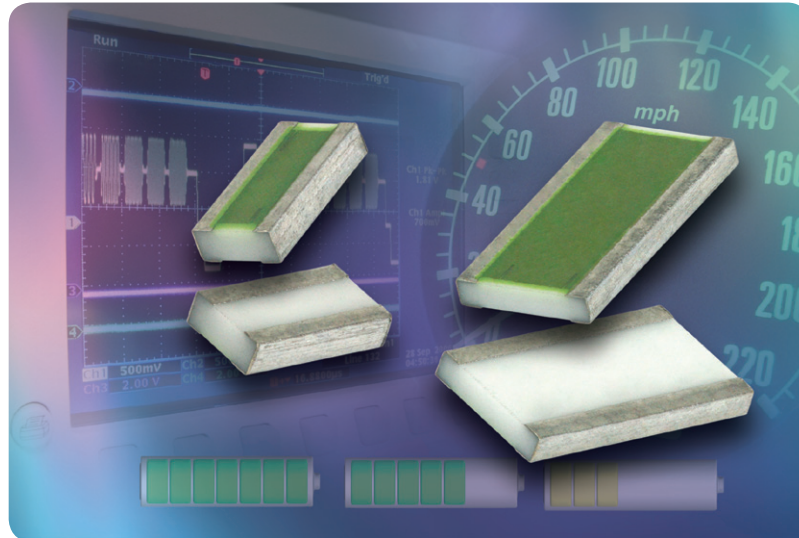


### Low Value (0.03 $\Omega$ to 10 $\Omega$ ) Surface-Mount Thin Film Chip Resistor (Long Terminals)



#### KEY BENEFITS

- Small physical size down to 0505
- High power handling capability (2 W maximum power rating)
- Approximately 2x improvement in power rating due to wide terminals
- Homogeneous nickel alloy moisture resistant film
- Attachment options: tin/lead, lead (Pb)-free-soldered-, gold terminations, or epoxy bondable terminations available
- Sulfur resistant (per ASTM B809-95 humid vapor test)
- Ohmic range from 0.03  $\Omega$  to 10  $\Omega$

#### APPLICATIONS

- Battery life indicators, over-current protection and supervising circuits, current and voltage regulators, linear switch-mode power supplies, medical diagnostic equipment, motor speed controls, and overload protection devices

#### RESOURCES

- Datasheet: L- Series - [www.vishay.com/doc?60027](http://www.vishay.com/doc?60027)
- For technical questions contact [thinfilm@vishay.com](mailto:thinfilm@vishay.com)
- Material categorization: For definitions of compliance please see <http://www.vishay.com/doc?99912>



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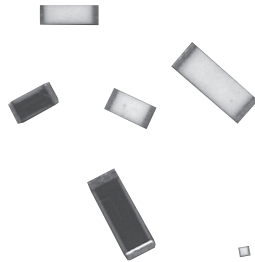


# THIN FILM CHIP RESISTOR

## L-Series



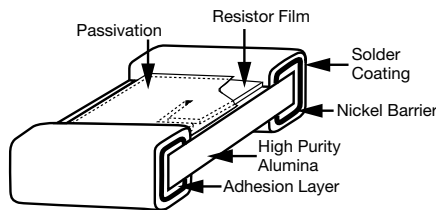
### Low Value (0.03 Ω to 10 Ω) Surface-Mount Thin Film Chip Resistor (Long Terminals)



Actual Size  
0805

With extremely low resistances and high power capabilities, Vishay's proven and unique ultra-low value resistors can be used in your hybrid or surface-mount applications. These resistors are available with solderable or weldable terminations.

#### CONSTRUCTION



#### FEATURES

- Homogeneous **nickel alloy film**
- No inductance for high-frequency applications
- Alumina substrates for high power handling capability (2 W maximum power rating)
- Pre-soldered or gold terminations
- Epoxy bondable termination available
- Sulfur resistant (per ASTM B809-95 humid vapor test)

#### TYPICAL PERFORMANCE

	ABSOLUTE
TCR	300
TOL.	1.0

#### VALUE AND MINIMUM TOLERANCE

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

#### STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
Material	Nickel alloy	-
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)	-
Stability: Absolute	-	-
Stability: Ratio	-	-
Voltage Coefficient	-	-
Working Voltage	$\sqrt{P \times R}$	-
Operating Temperature Range	-55 °C to +125 °C	-
Storage Temperature Range	-55 °C to +150 °C	-
Noise	< -35 dB (typical)	-
Shelf Life Stability: Absolute	-	-

#### COMPONENT RATINGS

CASE SIZE <sup>(1)</sup>	POWER RATING (mW)	RESISTANCE RANGE (Ω)
0505	125	0.05 to 5.0
0508	400	0.03 to 2.0
0603	125	0.10 to 5.0
0612	500	0.05 to 2.5
0705/0805	200	0.10 to 6.0
1005	250	0.15 to 10.0
1020	1000	0.03 to 3.0
1206	330	0.10 to 10.0
1225	2000	0.03 to 2.6
1505	500	0.25 to 10.0
2010	1000	0.17 to 10.0
2512	2000	0.18 to 10.0

#### Notes

- Resistor values beyond ranges shall be reviewed by the factory
- <sup>(1)</sup> 0705 and 0805 are the same (only use 0805 when ordering)

Revision 27-Jul-12

Resistors - Long Termination, Low Value