

LVC Series

Low Value Chip



Ohmite's LVC Series low value chip resistors are ideal for today's current sense applications requiring low profile, low cost solutions. Available in 0.5, 0.75, and 1 watt sizes, footprints are 1206, 2010, and 2512 size respectively. These resistors are offered in ohmic ranges from 0.10 to 4.7 ohms in standard 1% and 2% in E12 values depending on value.

The LVC Series resistors are well suited for a variety of industrial and commercial applications.

APPLICATIONS

- Switching Power Supplies
- Cellular
- Telecom and Wireless
- Computer
- RF

FEATURES

- Industry Standard Sizes
- Terminal Barrier Resists Ag Migration
- Working Temperature Range is from -40°C to +125°C
- Designed for Automatic Insertion

SERIES SPECIFICATIONS

Series	Power Rating	Max. Current	Resistance Range*	TCR ppm/°C	Resistance Tolerance
LVC06	0.5W	32A	10m-15m	500	10mΩ ~ 22mΩ 2%
			18m-27m	350	27mΩ ~ 4.7Ω 1%
			33m-47m	200	
			50m- 4.7	100	
LVC20	0.75W	40A	10m-15m	500	
			18m-27m	350	
			33m-47m	200	
			50m- 4.7	100	
LVC25	1.0W	45A	10m-15m	500	
			18m-27m	350	
			33m-47m	200	
			50m- 4.7	100	

* E-12 values and 20, 25, 50

CHARACTERISTICS

Substrate	Alumina 96%
Resistor	Thick Film, Ni-Cr Alloy
Electrode	Sn, Ni, Cu
Coating	Epoxy resin
Max. Working Volts	$V = \sqrt{PR}$ (P = Rated Watts, R = Resistance Value)
Derating	100% @ 70°C, Derates Linearly to Zero @ 125°C
Operating temp. range	-40°C ~ +125°C
Soldering	The recommended soldering condition for both reflow and wave soldering is as follows: Preheating: 150° ~ 180°C 60 ~ 120 sec. Soldering: min. 230°C 30 ~ 40 sec. Max. temp.: max. 260°C max. 10 sec.

PERFORMANCE DATA

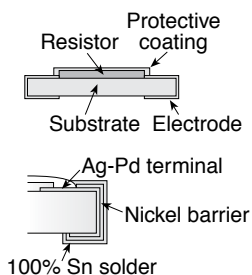
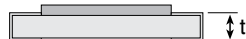
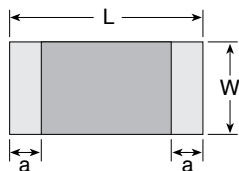
Moisture resistance	60°C±2°C, 90%~95% RH, Rated voltage 1.5h ON, 0.5h OFF, 1000h	±(0.5%+0.0005Ω)
Temperature Cycle	-40°C (30min.)/+125°C (30min.), 5 cycles	±(0.5%+0.0005Ω)
Short Time Overload	Rated voltage x 2.5 for 5s	±(0.5%+0.0005Ω)
Endurance	70°C±3°C, Rated voltage 1.5h ON, 0.5h OFF, 1000h	±(0.5%+0.0005Ω)
Resistance to Solder Heat	260°C±5°C for 10±1s	±(0.5%+0.0005Ω)
Terminal strength	Bending width: 2mm for 10s±1s, Glass epoxy substrate with thickness of 1.6mm	±(0.5%+0.0005Ω)
Solderability	245°C±5°C for 3s±0.5s	Min. 90% coverage
Max. Overload Current	(A) Time applied: max. 10msec Interval: min. 60sec	LVC06 $I = \sqrt{(32/R)}$ LVC20 $I = \sqrt{(50/R)}$ LVC25 $I = \sqrt{(64/R)}$

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DIMENSIONS

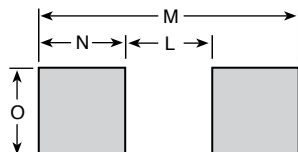
(mm)



Size	L ±0.2	W ±0.2	t ±0.15	a ±0.15
LVC06 (EIA size 1206)	3.2	1.6	0.5	1.0
LVC20 (EIA size 2010)	5.0	2.5	0.5	1.7
LVC25 (EIA size 2512)	6.4	3.2	0.5	2.0

Land Pattern

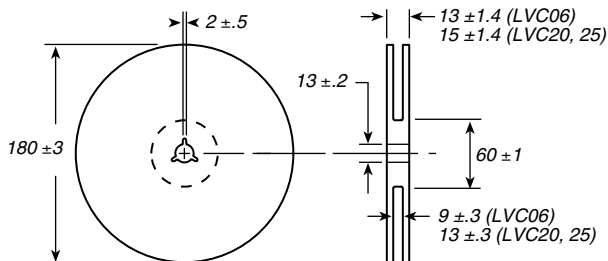
Land pattern dimensions are for reference only



Size	M	N	O	L
LVC06	0.146	0.040	0.080	0.066
LVC20	0.229	0.056	0.120	0.117
LVC25	0.288	0.068	0.150	0.152

REEL SPECIFICATIONS

5,000 pc/reel



ORDERING INFORMATION

LVC06FR560E V
 Low Value Chip Series Case Size L Tolerance Ohms Taping Code
 06 = 1206 F = 1% R249 = 0.249 blank = bulk package
 20 = 2010 G = 2% 1R00 = 1.0 V = reel taped
 25 = 2512

Ohm range	Tol.	Available Ohm Values
0.027 ~ 4.7	1%	0.027, 0.033, 0.039, 0.047, 0.050, 0.056, 0.068, 0.082, 0.10, 0.12, 0.15, 0.18, 0.20, 0.22, 0.25, 0.27, 0.33, 0.39, 0.47, 0.50, 0.56, 0.68, 0.82, 1.0, 1.2, 1.5, 1.8, 2.0, 2.2, 2.5, 2.7, 3.3, 3.9, 4.7
0.010 ~ 0.022	2%	0.010, 0.012, 0.015, 0.018, 0.020, 0.022

Only E12 values plus 20, 25, 50