

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

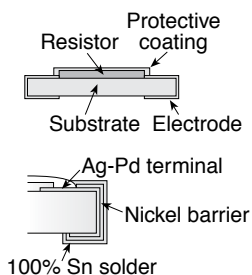
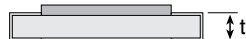
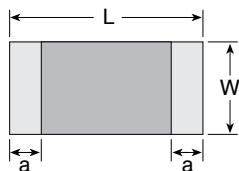
Moisture resistance	60°C±2°C, 90%~95% RH, Rated voltage 1.5h ON, 0.5h OFF, 1000h	±(0.5%+0.0005Ω)
Temperature Cycle	-40°C (30min.)/+125°C (30min.), 5 cycles	±(0.5%+0.0005Ω)
Short Time Overload	Rated voltage x 2.5 for 5s	±(0.5%+0.0005Ω)
Endurance	70°C±3°C, Rated voltage 1.5h ON, 0.5h OFF, 1000h	±(0.5%+0.0005Ω)
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

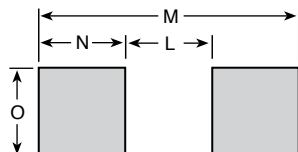
(mm)



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

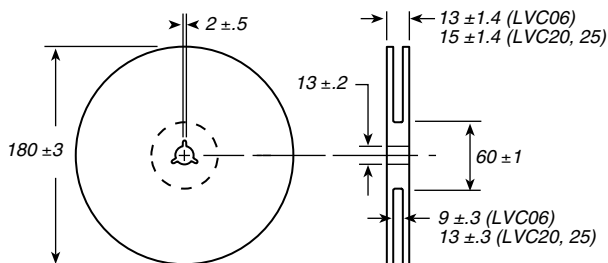
Land pattern dimensions are for reference only



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

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

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		

Mouser Electronics

Authorized Distributor

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Ohmite:

LVC06FR250	LVC06FR010EV	LVC06FR020EV	LVC06FR025EV	LVC06FR030EV	LVC06FR033EV
LVC06FR047EV	LVC06FR050EV	LVC06FR068EV	LVC06FR082EV	LVC06FR100EV	LVC06FR150EV
LVC06FR200EV	LVC06FR220EV	LVC06FR249EV	LVC06FR250EV	LVC06FR330EV	LVC06FR390EV
LVC06FR430EV	LVC06FR470EV	LVC06FR499EV	LVC06FR500EV	LVC06FR511EV	LVC06FR649EV
LVC06FR681EV	LVC06FR750EV	LVC06JR050EV	LVC06JR075EV	LVC06JR100EV	LVC06JR150EV
LVC06JR180EV	LVC06JR200EV	LVC06JR270EV	LVC06JR300EV	LVC06JR330EV	LVC06JR390EV
LVC06JR470EV	LVC06JR500EV	LVC06JR510EV	LVC06JR620EV	LVC06JR750EV	LVC06JR820EV
LVC06JR910EV	LVC20FR050EV	LVC20FR051EV	LVC20FR330EV	LVC20JR033EV	LVC20JR051EV
LVC20JR180EV	LVC20JR200EV	LVC20JR510EV	LVC20JR750EV	LVC25FR010EV	LVC25FR015EV
LVC25FR025EV	LVC25FR033EV	LVC25FR047EV	LVC25FR050EV	LVC25FR068EV	LVC25FR075EV
LVC25FR100EV	LVC25FR150EV	LVC25FR200EV	LVC25FR220EV	LVC25FR249EV	LVC25FR250EV
LVC25FR270EV	LVC25FR300EV	LVC25FR330EV	LVC25FR390EV	LVC25FR430EV	LVC25FR470EV
LVC25FR499EV	LVC25FR500EV	LVC25FR510EV	LVC25FR511EV	LVC25FR680EV	LVC25FR681EV
LVC25FR750EV	LVC25JR020EV	LVC25JR025EV	LVC25JR033EV	LVC25JR050EV	LVC25JR051EV
LVC25JR075EV	LVC25JR100EV	LVC25JR150EV	LVC25JR180EV	LVC25JR200EV	LVC25JR270EV
LVC25JR300EV	LVC25JR330EV	LVC25JR390EV	LVC25JR470EV	LVC25JR510EV	LVC25JR620EV
LVC25JR680EV	LVC25JR750EV	LVC25JR820EV	LVC25JR910EV		