

Lower Range High Voltage Chip Resistors

LHVC Series

- Superior voltage performance over commercial range chips
- 0603 to 2512 sizes
- Resistance 50K to 10M
- RoHS compliant

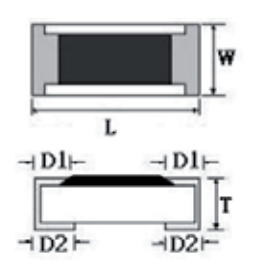


 All parts are Pb-free and comply with EU Directive 2011/65/EU amended by (EU) 2015/863 (RoHS3)

Electrical Data

		LHVC0603	LHVC0805	LHVC1206	LHVC2010	LHVC2512
Power rating at 70°C	watts	0.1	0.125	0.25	0.5	1
Resistance range	ohms	100K to 10M			50K to 10M	
Limiting element voltage	dc / ac pk volts	200	400	500	1600	2000
5s Overload voltage	dc / ac pk volts	400	800	1000	2500	3000
Dielectric withstand voltage	dc / ac pk volts	300	500			
TCR	ppm/°C	±100				
Resistance tolerance	%	1, 5				
Standard values		5%: E24, 1%: E96				
Ambient temperature range	°C	-55 to +155				

Physical Data

Dimensions (mm) and weight (mg)							
Type	L	W	T	D1	D2	Wt. nom.	
LHVC0603	1.6 ±0.1	0.8 +0.15/-0.1	0.45 ±0.1	0.3 ±0.2	0.3 ±0.2	2.1	
LHVC0805	2 ±0.15	1.25 +0.15/-0.1	0.55 ±0.1	0.4 ±0.2	0.4 ±0.2	4.7	
LHVC1206	3.1 ±0.15	1.55 +0.15/-0.1	0.55 ±0.1	0.45 ±0.2	0.45 ±0.2	8.5	
LHVC2010	5 ±0.1	2.5 +0.15/-0.1	0.55 ±0.1	0.6 ±0.25	0.5 ±0.3	25	
LHVC2512	6.35 ±0.1	3.2 +0.15/-0.1	0.55 ±0.1	0.6 ±0.25	0.5 ±0.2	44	

Construction

Pd/Ag terminations are applied to the top and bottom of an alumina substrate. A resistive element is printed between the top face conductors, which is then adjusted to value and protected.

A wraparound conductor is applied to join the top and bottom sides. The terminations are electroplated with a Ni barrier layer prior to plating with a Sn finish.

Marking

Where space allows, LHVC resistors are marked with value in three or four characters. The coding is two digits for E24 or three digits for E96 followed by one multiplier expressing the number of zeros. For E96 values on LHVC0603 standard EIA-96 codes are used, consisting of a 2 digit value code and one letter multiplier code.

Solvent Resistance

The body protection and marking are resistant to all normal industrial solvents suitable for printed circuits.

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

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Flammability

The resistor will not burn or emit incandescent particles under any condition of applied temperature or overload.

Solderability

95% min coverage (MIL-STD 202F / 208H, 235C 2 secs)

Mounting (nominal dimensions in mm)

Type	A	B	C
LHVC0603	0.7	0.7	1.0
LHVC0805	1.0	0.8	1.50
LHVC1206	2.0	1.0	1.75
LHVC2010	4.0	1.2	2.75
LHVC2512	5.3	1.2	3.5

Performance Data

	ΔR%	Maximum
Load at rated power (1000hrs cyclic load at 70°C)		±3
De-rating from rated power at 70°C		See Graph
Short term overload (6.25 x rated power for 5s)		±2
Temperature rapid change (-55 / +155°C, 5 cycles)		1% tolerance: ±0.5, 5% tolerance: ±1
Damp heat steady state		±3
Insulation resistance		>1000M

Packaging

The standard packing for LHVC0603, 0805 and 1206 is in 8mm wide paper tape, for LHVC2010 is in 12mm wide paper or plastic tape and for LHVC2512 is in 12mm wide plastic tape. This is wound on a reel of 178mm diameter.

Ordering Procedure

Example: LHVC0805-100KFT5 (0805, 100 kilohms ±1%, Pb-free)

L	H	V	C	0	8	0	5	-	1	0	0	K	F	T	5
1		2		3			4	5							

1	2	3	5	6			
Type	Size	Value	Tolerance	Packing			
LHVC	0603	E24 = 3/4 characters	F = ±1%	T5	Tape	0603 / 0805 / 1206	5000/reel
	0805	E96 = 3/4 characters	J = ±5%	T4		2010 / 2512	4000/reel
	1206	K = kilohms					
	2010	M = megohms					
	2512						

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