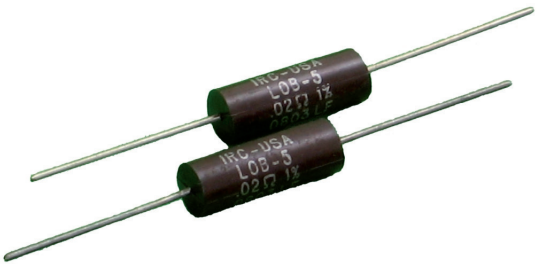
Low Resistance Metal Alloy Power Resistors

LOB Series



Features

- Ultra low resistance values to 0.005Ω
- Up to 5W rated power
- Tolerances from ±1% to ±5%
- Inherently non-inductive (≤.02µH at 0.5MHz)
- Low temperature coefficient of resistance
- High stability over life

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

Electrical Data

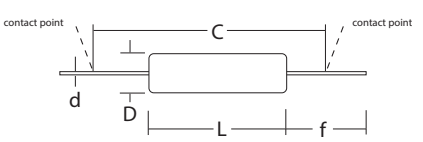
		LOB-3	LOB-5
Power rating at 25˚C [1]	watts	3	5
Overload power for 5 seconds	watts	15	25
Resistance range	ohms	R005 to R120	R005 to R100
Standard values	ohms	R005, R01, R015, R02, R025, R03, R04, R05, R06, R07, R08, R10, R12	R005, R01, R015, R02, R025, R03, R04, R05, R06, R07, R08, R10,
Maximum working voltage	volts	$\sqrt{3xR}$	$\sqrt{5xR}$
Operating temperature	˚C	-55 to 175	-55 to 175

Note 1: To dissipate full rated power forced air cooling must be provided to restrict the maximum body temperature to 180˚C.

Physical Data

Dimensions (mm)

Type	L	D	f	d	C nom
LOB-3	14.22±0.25	5.33±0.25	34.93±3.18	0.77±0.05	33.27
LOB-5	23.37±0.25	8.38±0.25	31.75±3.18	1.02±0.05	42.42



Description

LOB Series power precision metal element resistors feature resistance values down to 0.005 Ω with virtually no inductance. Available in 3 and 5 watt rated axial leaded packages, these resistors are compatible with automatic insertion equipment.

Construction

LOB Series resistors feature tinned copper leads welded directly to a low temperature coefficient resistance element in a highly automated proprietary process. The leaded resistor elements are then encapsulated in a moulding compound.

Applications

- Switchmode and linear power supplies.
- Automotive current-sensing circuits.
- Instrumentation.

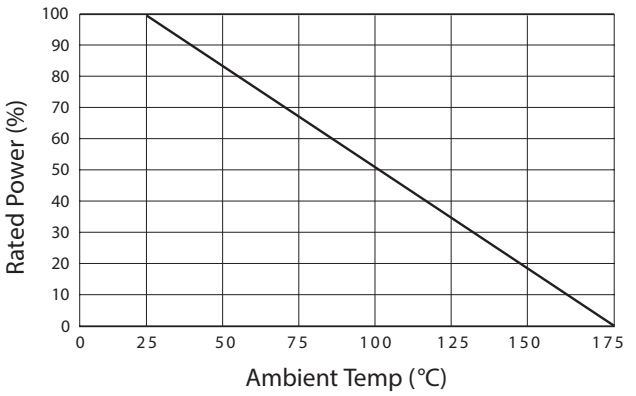
General Note
TT Electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

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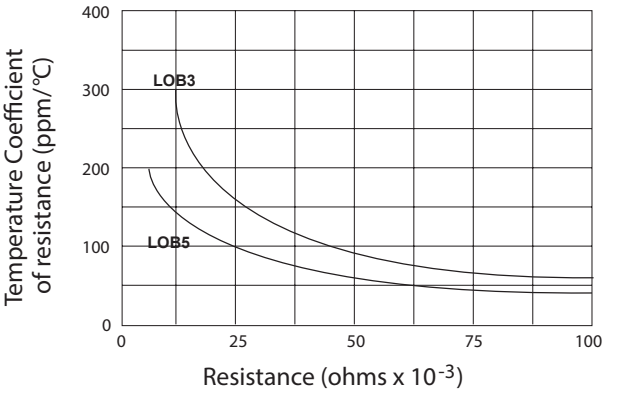
Low Resistance Metal Alloy Power Resistors

LOB Series

Power derating percentage vs Free air ambient temperature



Temperature coefficient of resistance vs Resistance value



Performance Data

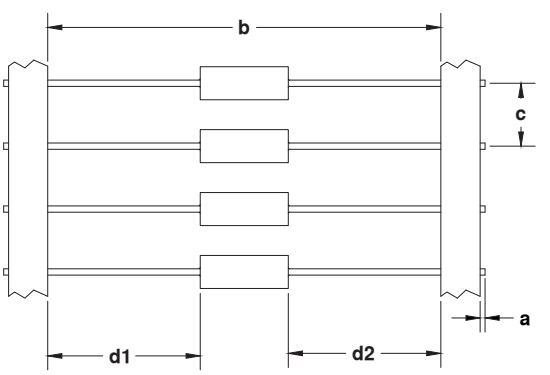
Test	MIL-STD 202	MAX %ΔR*	Unit
Load Life (1000 hours)	Method 108	±1%	%ΔR
Thermal Shock	Method 107	±1%	%ΔR
Vibration	Method 204	± 0.5%	%ΔR
Mechanical Shock	Method 213	± 0.5%	%ΔR
Dielectric strength	Method 301	± 0.5%	%ΔR
Insulation resistance	Method 302	> 10^{11}	ohms

*±0.005 ohm allowance for test/contact error.

Packaging

Resistors are supplied taped and reeled (see Ordering Procedure for reel quantities.) The taping dimensions are shown below.

Taping dimensions, inches (mm)			
Type	a max	b	c
LOB-3	0.031 (0.8)	2.5±0.031 (63.5±0.8)	0.4±0.015 (10.2±0.4)
LOB-5	0.031 (0.8)	2.5±0.031 (63.5±0.8)	0.4±0.015 (10.2±0.4)



d1-d2 ≤ 0.055 (1.4)

General Note
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Ordering Procedure

This product has two valid part numbers:

European (Welwyn) Part Number: LOB3-R01JI (LOB3, 10 milliohms ±5%, Pb-free)

L	O	B	3	-	R	0	1	J	I	
1					2			3	4	

1 Type	2 Value	3 Tolerance	4 Packing & Termination Finish	
LOB3	R = ohms	F* = ±1%	I = Standard packing & Pb-free	
LOB5		H = ±3%	PB = Standard packing & SnPb	
		J* = ±5%	LOB3	Taped, 1250/reel
		* preferred	LOB5	Taped, 800/reel

USA (IRC) Part Number: LOB-3R010FLFSLT (LOB3, 10 milliohms ±5%, Pb-free)

L	O	B	-	3	R	0	1	0	F	L	F	S	L	T
1					2				3	4		5		

1 Type	2 Value	3 Tolerance	4 Termination Finish	5 Packing	
LOB-3	R = ohms	F = ±1%	Omit for SnPb	SLT = Lead Tape	
LOB-5		H = ±3%	LF = Pb-free	LOB-3	1250/reel
		J = ±5%		LOB-5	800/reel

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Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

TT Electronics:

MFC0805-R10FT5 OARS-XP-0R001 PCF0603R-100KBT1 WCR0805-82KFI WH25-8R2JI BPR10101J P160KNP-0QC20A10K WA84-180RJI ASC1206-150KFT5 PCF0603PR-1K-BT1 RC55Y-210KBI WCR1206-200KFI WH10-100RJI WH5-50RJI 67WR5KLFTB APC0805RD-10KBT5 LRMAP3920C-R001FT MFR3-10RFC OPB829CZ WP4S-1R5JA2 CAW104R70JLF LR1206-R10FW OAR5 - R020FI PCF0402PR-180RBT1 OPB802W55Z OVLBB4C7 SQP7S-82RJB15 W24-33KJI WDBR122RKT WHS3-33RJA1