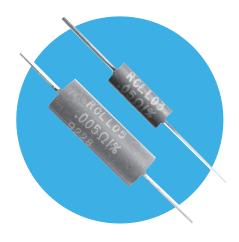
## Resistors

# **Low Resistance Metal Element Resistors**

#### **LOB Series**

- Ultra low resistance values to 0.0050
- Available in 1, 3 and 5 watt rated packages
- 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)

Electi	rical	Data
Electi Lectrical	Det	3a - Citto.

	AUINDIAI PRAIDA									
	, i		LOB-1		LOB-3			LOB-5		
	Continuous power dissipation at 25°Cin free air	watts	LOB-1	1		LOB-3	3		LOB-5	5
Contir	uowepoaepdssep	watts	1	5		3	15		5	25
Overlo	a <b>ባ/ኒውxነγ<del>ດ</del>ប fo (</b> ኢ <mark>៦ናቀርናዓ၅ <b>d</b>6ltage watts</mark>	volts	5	√1xR		15	√3xR		25	√5xR
Resista	nMdAngem storage temperature ohms	∘ <u></u> R0	05 to R	109 <sub>75</sub>	RO	05 to R1	20 <sub>175</sub>	R00	5 to R1	00 <sub>175</sub>
Maxim	um working voltage Power Dissipation The maximum wattage rating depends upon the amount of I แก <b>ุนิย์สายความเก</b> ลา temperature, velocity of cooling air, thermal resistance	neat which	√1xR can be tra	ansferred t			while	not excee	√5xR ding the r	maximum
	ម៉ាល្មិតិខារីប្រែខេក្ខតាប់ស្រាំ air temperature, velocity of cooling air, thermal resistance o nto account when selecting a resistor	neat and	nne tempe	Pature of s	urroundib	nojodko ile	ets will at	fect this b	anster, Ithi	must be

<sup>\*</sup>Power Dissipation - The maximum wattage rating depends upon the amount of heat which can be transferred to the surroundings while not exceeding the maximum element temperature. Ambient air temperature, velocity of cooling air, thermal resistance of heat and the temperature of surrounding objects will affect this transfer, this must be taken

## hen selecting a resist Physical Data Physical Data

1 119	Dimen		(mm)										
Dimer	sions (n	ım)											contact point , contact point
	Туре	L	max.	D	max.	f	min.	d	nor	n.		Ċ	contact point , contact point
Туре	LOB-4	9.9	)±03 D	3.6	±02 f	38.1	±32	ob.813	3±:0	. <b>g</b> Cno	<b>3</b> B.2	7	
LOB-1	LOB-30	.134.2	2 <b>±0.5</b> ±0	<b>5</b> 233	±03 <b>3</b> 5.1	<b>∄∄</b> <i>2</i> 93	<u> 1</u> 88.89	3⊕0805	€0.0	33.2	<b>3</b> 3.27	7	d + L - f -
LOB-3	L@B-5±	<b>02.2</b> 53	7 <b>5£833</b> £0	<b>82.5</b> 8	<u>+3</u> 34, <b>29</b> 3:	<b>3</b> 3.78	±30.1 <b>8</b> 1	40025	£0.0	§ 33.2	₹2.42		D   f
LOB-5	23.37±	0.25	8.38±0	).25	31.75	±3.18	1.02	±0.05		42.4	2		

#### Description

Descriptionseries power precision metal element resistors feature Constructions resistors feature tinned copper leads welded LOB Seriesistancer varierisi dio vviretal @100 fe 02 reitilstoirs da la liture resistanio ed vadta escelo Avva itabli 0 e0 i 0 51 CB vavitabili 5 i intratili i nateed axial leaded inductapatek Agailatblesien resistand Sreventmatetiblexialiteaaleto matic packagiess, el neise regisitoriseme compatible with automatic insertion equipment.

#### **Applications**

**Applications** mode and linear power supplies.

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

#### Construction

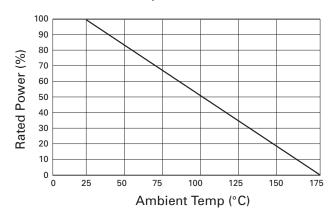
LOB Seriliese cets/istora lifeavite empiene et du recope efficients regulated ce element directly at binaria by value to present a directly at binaria by the control of t a highlyeleurtoenntasterdepthoeprientaaypsodatessl.iTiheerleadlebilmessisstoopound. elements are then encapsulated in a moulding compound.

## Low Resistance Metal Element Resistors

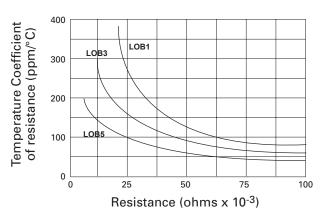




## Power derating percentage vs Free air ambient temperature



## Temperature coefficient of resistance vs Resistance value



Test	MIL-STD 202	MAX %∆R*	Unit
Load life (2000 hours)	Method 108	±1%	% <b>∆</b> R
Thermal shock	Method 107	±1%	% <b>∆</b> R
Vibration	Method 204	±0.5%	% <b>∆</b> R
Mechanical shock	Method 213	±0.5%	% <b>∆</b> R
Dielectric strength	Method 301	±0.5%	% <b>∆</b> R
Insulation resistance	Method 302	>10 <sup>11</sup>	ohms

<sup>\*±0.0005</sup> ohm allowance for test/contact error.

### **Packaging**

Resistors are supplied taped and reeled. Bulk packaging available. **LOB Series** 



## **Ordering Procedure**

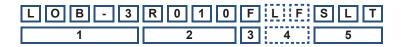
This product has two valid part numbers:

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



1	2	3		4			
Type	Value	Tolerance	Packing	g & Termination Finish			
LOB1	R = ohms	F* = ±1%	I = Standard packing & Pb-free				
LOB3		H = ±3%	PB = Standard packing & SnP				
LOB5		$J^* = \pm 5\%$	LOB1	Taped, 3500/reel			
		* preferred	LOB3	Taped, 1250/reel			
			LOB5	Taped, 800/reel			

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



1	2	3	4	5		
Туре	Value	Tolerance	Termination Finish	Packing		
LOB-1	R = ohms	F = ±1%	Omit for SnPb	SLT = Lead Tape*		
LOB-3		$H = \pm 3\%$	LF = Pb-free	LOB-1	3500/reel	
LOB-5		$J = \pm 5\%$		LOB-3	1250/reel	
				LOB-5	800/reel	
				BLK =	= Bulk	
				LOB-1	1500/box	
				LOB-3	800/box	
				LOB-5	200/box	

<sup>\*</sup> preferred

## **Mouser Electronics**

**Authorized Distributor** 

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

### TT Electronics:

LOB3R040J LOB3R020J LOB3R020F LOB3R025J LOB3R100J LOB1R070J LOB5R005J LOB1R005J
LOB5R025F LOB5R020J LOB5R020F LOB5R025J LOB5R010J LOB1R040J LOB3R010F LOB3R010J
LOB3R015J LOB3R025FTR LOB3R010FTR LOB5R070J LOB5R020FTR LOB3R080J LOB3R050FTR
LOB3R070J LOB3R030H LOB3R030J LOB3R030F LOB5R080J LOB1R050J LOB3R080HTR LOB1R010J
LOB1R025J LOB3R005F LOB-10.051%BLK LOB5R100J LOB5R100F LOB5R050J LOB5R050F LOB1R030J
LOB5R040J LOB3R050J LOB3R050F LOB1R020J LOB3R005JLF LOB1R080J LOB5R050F LOB1R030J
LOB3R050JLF LOB5R050JLF LOB1R050JLF LOB3R030JLF LOB1R030JLF LOB5R030JLF LOB1R025JLF
LOB5R025JLF LOB3R025JLF LOB3R010JLF LOB5R010JLF LOB1R010JLF LOB5R033FLF LOB5R040JLF
LOB1R040JLF LOB3R040JLF LOB3R010JLF LOB5R100JLF LOB1R020JLF LOB5R020JLF LOB3R020JLF
LOB3R050FLFTR LOB3R005FLF LOB3R005FTRLF LOB3R010FLF LOB3R010FTR-LF LOB3R020FLF
LOB3R040FLF LOB3R050FLF LOB3R060FTR LOB3R070F LOB3R080HTRLF LOB3R030JLF LOB5R080JLF
LOB5R020FLF LOB5R020FLF LOB5R020FLFTR LOB5R030FL LOB5R080JLF LOB5R080JLF
LOB5R010F LOB5R020FLF LOB5R020FLFTR LOB5R030F LOB5R080JLF LOB5R