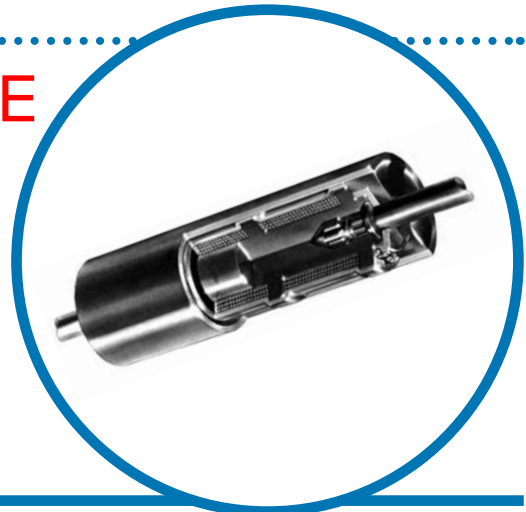


Axial Lead Precision Wirewound Resistors

RB / RBR, VA / HR, SP / 7000 Series

OBSOLETE

- 0.1 to 1.0 watts
- Tolerance to $\pm 0.01\%$
- 0.1 ohm to 12 megohms
- Approved to M, P, & R levels
- TCR's from ± 2 ppm/ $^{\circ}\text{C}$ to $+6000$ ppm/ $^{\circ}\text{C}$
- Meets or exceeds all applicable MIL-R-93 & MIL-R-39005 ratings



The RB/RBR ultra precision resistors are designed and produced for critical parameter applications. They are available for established reliability military and/or commercial applications requiring state of the art precision and stability.

Construction features may vary slightly between commercial and military styles, but both are produced under the same rigid quality control system required by the tightest military specifications. Both are produced in the same production line using the same highly trained operators required to produce the established reliability product.

All terminations are welded to reduce contact noise and thermal EMF. Extensive accelerated aging programs both before and after calibration assure precise initial accuracy and high resistance stability.

Encapsulation is accomplished by a unique dry air chamber epoxy shell technique for established reliability parts. A resilient inner coating is used to minimize internal stresses on all parts.

All resistors (military and commercial) are carefully monitored during assembly, winding, coating, and stabilization procedures to assure high quality standards. Premium grade selected wire is control-stress wound on special designed bobbins. Established reliability military parts are then burned in for 100 hours at 125°C ambient as part MIL-R-93, or equivalent, of group A acceptance testing. Documentation and special tests are available upon customer request to meet your unique requirements.

TCR and Temperature Data

Style	Resistance Range (Ω)	Absolute TCR (ppm/ $^{\circ}\text{C}$)	Operating Temperature Range ($^{\circ}\text{C}$)
All Styles	0.1 - 0.9	± 90	-65 to +145
	1.0 - 9.9	± 30	
	10 - 99.9	± 15	
	100 - 12M	± 10	

Special Screening / Acceptance Test:

Special tests can be performed on a 100% or sample basis, to meet individual customer requirements. Some of the available non-destructive tests include:

- Short Time Overload
- Thermal Shock
- Mechanical Shock
- Vibration
- Temperature Coefficient of Resistance
- Radiographic Inspection

Each of these tests is designed to detect a spectrum of potential resistor defects. Consult the factory for recommendations and a quotation on special screening or acceptance tests to meet your needs.

General Note

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Electrical Data

	Style	IRC Style	Shallcross Style	Wattage		Resistance (ohms)			Max. Working Voltage (Comm.)
				Mil	Comm	Mil		Comm	
				125°C	85°C	Min	Max	Max	
MIL-R-93	RB52	7040	VA36	0.50	1.00	0.1	1M	12M	750
	RB53	7030	VA34	0.33	0.66	0.1	604K	8M	500
	RB54	7020	VA14	0.25	0.50	0.1	226K	4.4M	300
	RB55	7010	VA12	0.15	0.33	0.1	176K	3M	300
	RB56	7009	VA10	0.125	0.250	0.1	127K	1.4M	200
MIL-R-39005	RBR52	HR36	---	0.50	1.00	0.1	1.2M	3M	750
	RBR53	HR34	---	0.33	0.66	0.1	1.1M	3M	500
	RBR54	HR14	---	0.25	0.50	0.1	526K	2M	300
	RBR55	HR12	---	0.15	0.30	0.1	332K	1M	300
	RBR56	HR10	---	0.125	0.250	0.1	220K	840K	200
SUBMINIATURES	---	7004	---	---	0.05	---	---	250K	150
	---	7005	SP41	---	0.10	---	---	300K	150
	---	7006	---	---	0.10	---	---	350K	200
	---	7007	SP21	---	0.250	---	---	700K	300
	---	---	SP42	---	0.125	---	---	200K	200

*For all styles, commercial ratings may be applied at 125°C provided 175°C max. Operating temperature is permissible.
NOTE: Contact factory for availability of other styles and sizes of above product.

**Customer must specify TCR required.

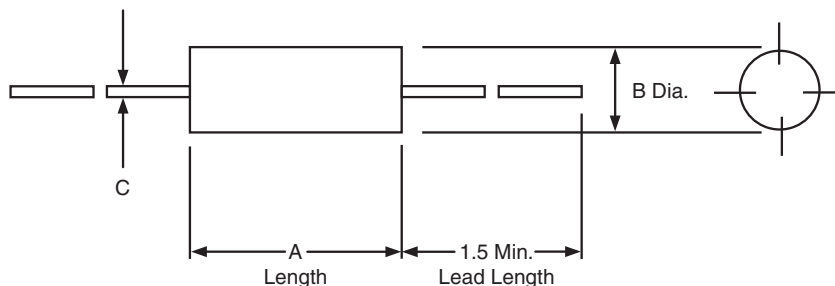
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www.bitechnologies.com www.irctt.com www.welwyn-tt.com

Physical Data



Dimensions (Inches (mm))

	Style	IRC Style	Shallcross Style	A	B	C
MIL-R-93	RB52	7040	VA36	1.00 ± 0.032 (25.4 ±)	0.375 ± 0.015 (9.5 ±)	0.032 ± 0.002 (0.8 ±)
	RB53	7030	VA34	0.750 ± 0.032 (19.0 ±)	0.375 ± 0.015 (9.5 ±)	0.032 ± 0.002 (0.8 ±)
	RB54	7020	VA14	0.750 ± 0.032 (19.0 ±)	0.250 ± 0.015 (6.3 ±)	0.032 ± 0.002 (0.8 ±)
	RB55	7010	VA12	0.500 ± 0.032 (12.7 ±)	0.250 ± 0.015 (6.3 ±)	0.032 ± 0.002 (0.8 ±)
	RB56	7009	VA10	0.343 ± 0.032 (8.7 ±)	0.250 ± 0.015 (6.3 ±)	0.032 ± 0.002 (0.8 ±)
	RB56	7009	VA10	0.343 ± 0.032 (8.7 ±)	0.250 ± 0.015 (6.3 ±)	0.032 ± 0.002 (0.8 ±)
MIL-R-39005	RBR52	HR36	---	1.00 ± 0.032 (25.4 ±)	0.375 ± 0.015 (9.5 ±)	0.032 ± 0.002 (0.8 ±)
	RBR53	HR34	---	0.750 ± 0.032 (19.0 ±)	0.375 ± 0.015 (9.5 ±)	0.032 ± 0.002 (0.8 ±)
	RBR54	HR14	---	0.750 ± 0.032 (19.0 ±)	0.250 ± 0.015 (6.3 ±)	0.032 ± 0.002 (0.8 ±)
	RBR55	HR12	---	0.500 ± 0.032 (12.7 ±)	0.250 ± 0.015 (6.3 ±)	0.032 ± 0.002 (0.8 ±)
	RBR56	HR10	---	0.343 ± 0.032 (8.7 ±)	0.250 ± 0.015 (6.3 ±)	0.032 ± 0.002 (0.8 ±)
SUBMINIATURES	---	7004	---	0.30 ± 0.032 (7.6 ±)	0.10 ± 0.015 (2.5 ±)	0.020 ± 0.002 (0.5 ±)
	---	7005	SP41	0.25 ± 0.032 (6.3 ±)	0.125 ± 0.015 (3.2 ±)	0.025 ± 0.002 (0.6 ±)
	---	7006	---	0.31 ± 0.032 (7.9 ±)	0.125 ± 0.015 (3.2 ±)	0.025 ± 0.002 (0.6 ±)
	---	7007	SP21	0.375 ± 0.032 (9.5 ±)	0.188 ± 0.015 (4.8 ±)	0.025 ± 0.002 (0.6 ±)
	---	---	SP42	0.375 ± 0.032 (9.5 ±)	0.125 ± 0.015 (3.2 ±)	0.025 ± 0.002 (0.6 ±)

General Note

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Ordering Data

RBR Product Description

Sample Part No.....	RBR52	L	12601	B	R
Style					
Terminal					
L = Solderability, U = Weldable					
Resistance					
Example: 12,600 ohms = 12601					
Tolerance					
T = 0.01%, Q = 0.02%, A = 0.05%, B = 0.1%, C = 0.25%, D = 0.5%					
Failure Rate					

RB Product Description

Sample Part No.....	RB52	C	E	12601	B
Style					
Terminal					
C = Solderable, W = Weldable					
TCR Code					
E = Standard					
Resistance					
Example: 12,600 ohms = 12601					
Tolerance					
T = 0.01%, Q = 0.02%, A = 0.05%, B = 0.1%, C = 0.25%, D = 0.5%					

Commercial Product Description

(VA / HR, SP / 7000)

Sample Part No.....	VA10	2	24000	1	LF
Style					
TCR (ppm)					
Omit if Standard					
Resistance					
2.4 kohm (2400 ohm)					
Tolerance					
T = 0.01%, Q = 0.02%, A = 0.05%, B = 0.1%, C = 0.25%, D = 0.5%					
RoHS Indicator					
LF = Indicates RoHS compliance					

General Note

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Mouser Electronics

Authorized Distributor

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

TT Electronics:

RB56CER100F	RBR54L95300BR	RBR56L13001BR	RBR52L44202BR	RBR56L19600BR	RBR56L21500BR
RBR56L10001BR	RBR56L13301BR	RBR53L41202BR	RBR52L15002BR	RBR56L28701BR	RBR56L28001BR
RBR56L10002AR	RBR54L30901BR	RBR52L10002BR	RBR54L49902TR	RBR56L14000BR	RBR56L84500BR
RBR56L71500BR	RBR56L15001BR	RBR56L10002BR	RBR53L68102BR	RBR56L10001AR	RBR56L47501BR
RBR56L20000BR	RBR56L61900BR	RBR56L82500AR	RBR54L30900BR	RBR56L20000FR	RBR52L14700FR
RBR56L76801BR	RBR56L17801BR	RBR56L12101BR	RBR56L49901BR	RBR56L75001BR	RBR56L78700BR
RBR54L30100BR	RBR56L10001TR	RBR56L88700BR	RBR52L19602FR	RBR56L43200BR	RBR56L10000AR
RBR56L16501BR	RBR56L90901AR	RBR56L10201BR	RBR54L10002BR	RBR56L64900BR	RBR56L48700BR
RBR56L12701BR	RBR56L20001AR	RBR54L30101BR	RBR56L20501BR	RBR56L18701AR	RBR56L80600FR
RBR56L26700BR	RBR56L18701BR	RBR56L18201BR	RBR56L80600BR	RBR56L82500BR	RBR56L20501FR
RBR56L51100BR	RBR56L33200BR	RBR56L20001BR	RBR56L54900BR	RBR56L19601BR	RBR56L93100BR
RBR56L24000FR	RBR56L12401BR	RBR56L21001BR	RBR56L59000BR	RBR56L24900BR	RBR56L33000BR
RBR56L33201BR	RBR56L21000BR	RBR54L86600BR	RBR56L10200AR	RBR56L47001BR	RBR56L29400BR
RBR56L39200BR	RBR56L73201BR	RBR56L36500BR	RBR56L97601BR	SP21 250 .05%	SP21 8K .01%
.1%	SP21 1.698K 1%	SP21 1542 1%		SP21 8K	