

# TEMPERATURE SENSITIVE PRECISION WIREWOUND RESISTORS TCR'S FROM +80 TO +6000 PPM



## ATB SERIES- AXIAL LEAD, EPOXY ATS SERIES- AXIAL LEAD, SILICONE PTB SERIES- RADIAL LEAD, EPOXY



- Industry's widest range of positive TCR resistors!
- Available on exclusive **SWIFT™** delivery program!
- Additional sizes available--most popular shown below
- Choice of 15 standard temperature coefficients per Table 1

RCD's AT and PT Series resistors offer inherent wirewound reliability and precision performance in all types of temperature sensing or compensating circuits. Sensors are wound with various alloys to achieve wide range of temperature sensitivity.

### ATS SERIES 350°C RATING

RCD ATS Series offer precision wirewound resistor performance at economical pricing. Ceramic core and silicone coating provide high operating temperature. The coating ensures maximum protection from environmental and mechanical damage (envir. performance per MIL-PRF-26).



RCD Type	Body Length ±.031 [.8]	Body Diameter ±.015 [.4]	Lead Diameter (typ)	Wattage @ 25°C	4500ppm Resis. Range
ATS110	.250 [6.35]	.093 [2.36]	.020 [.51]	.5	1Ω - 300Ω
ATS125	.406 [10.3]	.093 [2.36]	.020 [.51]	1.0	1Ω - 1KΩ
ATS135	.500 [12.7]	.188 [4.78]	.032 [.81]	3.0	1Ω - 1.5K
ATS145	.812 [20.6]	.188 [4.78]	.032 [.81]	3.5	1Ω - 3K
ATS150	.500 [12.7]	.218 [5.54]	.040 [1.02]	3.5	1Ω - 2K
ATS155	.625 [15.9]	.250 [6.35]	.040 [1.02]	4.0	1Ω - 3K
ATS160	.875 [22.2]	.312 [7.92]	.040 [1.02]	5.0	1Ω - 4K
ATS170	1.220 [31.0]	.312 [7.92]	.040 [1.02]	7.0	1Ω - 5K
ATS175	1.780 [45.2]	.375 [9.53]	.040 [1.02]	10.0	1Ω - 10K

### ATB SERIES 175°C RATING

RCD ATB Series are typically multi-layer bobbin-wound enabling higher resistance values. Encapsulated in moisture-proof epoxy, Series ATB meets the environmental requirements of MIL-R-93. Operating temperature range is -55°C to +175°C. Standard tolerances are ±0.1%, ±0.25%, ±0.5%, ±1%.



RCD Type	Body Length ±.031 [.8]	Body Diameter ±.015 [.4]	Lead Diameter (typ)	Wattage @ 25°C	4500ppm Resis. Range
ATB200	.250 [6.35]	.100 [2.54]	.020 [.51]	.05	1Ω - 3K
ATB202	.250 [6.35]	.125 [3.18]	.025 [.635]	.10	1Ω - 5K
ATB204	.375 [9.53]	.142 [3.60]	.025 [.635]	.12	1Ω - 8K
ATB206	.375 [9.53]	.187 [4.75]	.025 [.635]	.15	1Ω - 15K
ATB100	.350 [8.89]	.250 [6.35]	.032 [.81]	.25	1Ω - 20K
ATB101	.500 [12.7]	.250 [6.35]	.032 [.81]	.33	1Ω - 30K
ATB102	.750 [19.1]	.250 [6.35]	.032 [.81]	.50	1Ω - 76K
ATB104	.750 [19.1]	.375 [9.53]	.032 [.81]	.60	1Ω - 114K

### PTB SERIES 175°C RATING

RCD PTB Series offer the same reliability and precision performance as the ATB series except in a radial lead design.



RCD Type	Body Length ±.031 [.8]	Body Dia. ±.015 [.4]	Lead Diameter (typ.)	Lead Spacing ±.015 [.4]	Watts @25°C	4500ppm Resis. Range
PTB401	.312 [7.92]	.250 [6.35]	.025 [.64]	.200 [5.08]	.25	1Ω - 15K
PTB406	.500 [12.7]	.375 [9.53]	.032 [.81]	.200 [5.08]	.33	1Ω - 40K

TABLE 1. SERIES ATB, ATS, ATB RESISTANCE RANGE

Temp. Coef. (ppm/°C)	T.C. Tolerance (ppm/°C)	Resis. Range Multiplier (x 4500ppm Res. Range)	In order to determine the available resistance range for each TC, use the multiplier times the 4500 ppm resistance range.  <b>Example:</b> a resistor with a TC of +3200 ppm can be manufactured with a resistance value twice as high as the same resistor with a TC of 4500 ppm. A resistor with a TC of +6000 ppm can only reach a third of the resistance value available with 4500 ppm wire.
+80	±20	5.3	
+100	±20	5.3	
+140	±40	5.0	
+180	±40	2.0	
+400	±40	4.5	
+650	±50	2.0	
+1000	±100	3.0	
+1400	±200	3.2	
+2600	±200	3.3	
+3200	±200	2.0	
+3500	±300	2.7	
+3850 (Pt)	±80	.4	
+3900 (Cu)	±300	.083	
+4500 (NiFe)	±300	1.00	
+6000 (Ni)	±400	.33	

**P/N DESIGNATION:** **ATS135 - 1000 - F B 452 W**  
RCD Type ————

**Resis.Code ≤1%:** 3 signif. figures & multiplier, (1R00=1Ω, 10R0=10Ω, 1000=100Ω, 1001=1K, etc.)  
**Resis.Code 2%-10%:** 2 signif. figures & multiplier, (1R0=1Ω, 100=10Ω, 101=100Ω, 102=1K, etc.)  
**Tolerance @ 25°C:** J=5%, H=3%, G=2%, F=1%, D=0.5%, C=0.25%, B=0.1%  
**Packaging:** B = Bulk, T = Tape & Reel (axial lead only)  
**Temperature Coefficient:** 80 = 80ppm; 100ppm and higher, use 3 digit code: 101=100ppm, 452=4500 ppm, etc.  
**Termination** W= lead-free, Q= tin/lead (leave blank if either is acceptable, in which case RCD will select based on lowest price and quickest delivery)

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