



## POWER RESISTORS

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*ATE Electronics products set:*

- *CS axial wirewound resistors* (2W to 15W), thanks to raw materials of very high quality and reliability, can replace with better performances resistors in ceramic glaze.
- *Aluminium housed RB series* (10W to 250W) can supply in small dimensions high power with lower operating temperature.
- *CS and RB series* can be supplied on request in *special versions* (fuse resistors, high pulse overload, non inductive...) and with custom leads (high insulation voltage terminals, faston, screw....)
- *Symmetry resistors SR* (10W & 13W) for voltage divider and discharge of electrolytical capacitors.
- *Fuse resistors RF* (2W to 15W)
- *Thick film resistor PR* (100W to 800 W) for snubber and filter applications due to their low parasitic inductance

ATE constantly strives to improve its products and services and it is always ready to support customers and distributors all over the world.

To reach the highest possible best standard in terms of high-tech, reliability, fast delivery and excellent quality-price ratio is our main goal.

Our customers loyalty has always been the main inspiration since 1970.

ATE has been one of the first italian companies to be certified quality system and operates today under a quality management system certified UNI EN ISO 9001 and environmental uni UNI EN ISO 14001.

All ATE products and processes are made in Italy and in compliance to rohs, mil & cecc.



CS 007 26.02.18



ISO 14001



Wirewound resistors silicone coated  
2 W to 15 W

## WIREWOUND RESISTORS SILICONE COATED 2 W TO 15 W

### FEATURES

Easy replacement of vitreous enamel resistors with no cost increase and no performance loss.  
The whole assembly is coated with multi-layer silicone coating to give maximum wire protection from  $-55^{\circ}\text{C}$  to  $+350^{\circ}\text{C}$ .  
Performance improvement is obtained by close tolerance, very low temperature coefficient and excellent stability in operation under severe environmental conditions.  
High level reliability due to ceramic core chemically inert and centerless ground for uniformity, selected wire element and completely welded construction terminal to terminal.

These resistors meet or exceed the requirements of MIL-PRF-26 H specifications.

### ELECTRICAL SPECIFICATIONS

#### - Ohmic values

E24 Series. For out of range or not standard ohmic values, consult ATE Technical Dept.

#### - Tolerance

Standard 5%. Available on request up to 1% (for values  $>R047$ ).

#### - Temperature coefficient

Typical values:  $\pm 100$  to  $\pm 30$  ppm from  $R_{10}$  to  $R_{max}$

Consult factory for special applications

#### - Dielectric strength

500 Vdc 2CS to 6CS

700 Vdc 7CS to 12CS

#### - Insulation resistance

1000 M $\Omega$  minimum.

100 M $\Omega$  after moisture test

#### - Overload

5s at 10 times rated power

5s at 5 times rated power 2CS and 3CS

#### - Non inductive

Models of equivalent physical and electrical specifications are also available with non inductive Ayrton-Perry winding

### MECHANICAL SPECIFICATIONS

#### - Terminal strength

10 lb. pull test.

#### - Solderability

Continuous, satisfactory coverage when tested in accordance to MIL-PRF-26 H.

### MATERIALS

#### - Core

Ceramic steatite or alumina centerless ground

#### - Resistive element

Copper-nickel alloy or nickel-chrome alloy with specific temperature coefficient

#### - End caps

Stainless steel

#### - Coating

Special high temperature silicone

#### - Standard terminals

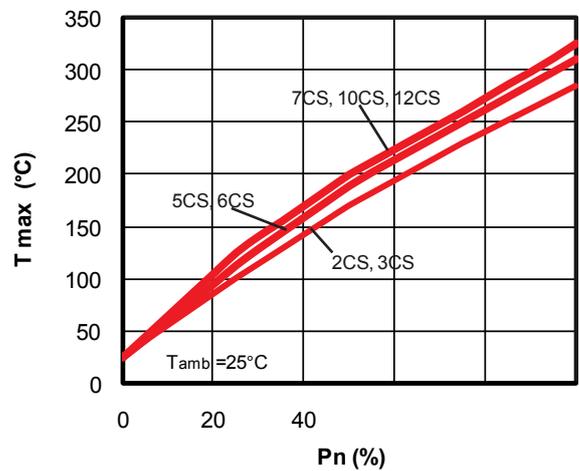
LF tinned copper or LF tinned copperweld

Point of measure:  $L + 20\text{mm}$

### DERATING

These resistors can be used in a temperature range from  $-55^{\circ}\text{C}$  to  $+350^{\circ}\text{C}$

To use these components in applications with working temp. higher  $+25^{\circ}\text{C}$  You have to make a power reduction with linear derating from nominal power to zero at  $350^{\circ}\text{C}$



ATE Type	MIL PRF 26H Type	Rated power (W)	Resistance range ( $\Omega$ )	Voltage Limit (V)	Temperature rise ( $^{\circ}\text{C}/\text{W}$ )	Weight (g)	Dimensions		
							D (mm)	L (mm)	d (mm)
2CS	RW69V	3	0.01-5K6	130	91	1.2	5.2 $\pm$ 0.5	12 $\pm$ 0.8	0.8
3CS	-	4	0.01-10K	200	74	1.8	6 $\pm$ 0.5	13.5 $\pm$ 0.8	0.8
5CS	RW74U	6	0.01-24K	380	52	3.2	8 $\pm$ 0.5	22 $\pm$ 1.6	0.8
6CS	RW67V	7	0.01-27K	435	45	3.8	8 $\pm$ 0.5	25 $\pm$ 1.6	0.8
7CS	RW55V	10	0.01-47K	685	30	7	9.5 $\pm$ 0.5	35 $\pm$ 1.6	0.9
10CS	RW68V	13	0.01-68K	940	24	9	9.5 $\pm$ 0.5	46 $\pm$ 1.6	0.9
12CS	RW56V	15	0.01-82K	1100	21	10	9.5 $\pm$ 0.5	51 $\pm$ 1.6	0.9



### SYMMETRY RESISTORS AND/OR CAPACITORS DISCHARGE

#### SPECIFICATIONS

- Tolerance : Standard 5%. On request up to 1%
- Ohmic values : E24 Series
- Temperature coefficient : From  $\pm 100$  to  $\pm 30$  ppm from R10 to Rmax
- Dielectric strength: 1000 Vac
- Packing: Strip of 10 pcs or loose pcs 10SRS, in blister
- Vibrations test : According IEC 60571-1

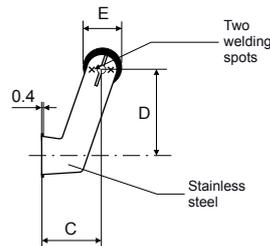
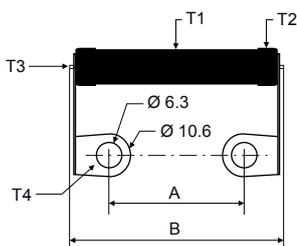


More technical data as 7CS and 10CS standard type

ATE Type	Basic Resistors	A (mm) tol: $\pm 1$	B (mm) max value	C (mm) tol: $\pm 1$	D (mm) tol: $\pm 1$	E (mm) tol: $\pm 1$	Weight (g)
7SR	7CS	22.2	40	15	21	9.5	9
7SR/B	7CS	22.2	40	10	16	9.5	9
10SR	10CS	31.8	50	15	21	9.5	11
10SR/B	10CS	31.8	50	10	16	9.5	11

ATE Type	MIL-R-26H Type	Rated power (W)	Resistance range ( $\Omega$ )	Voltage limit (V)
7SR	RW55	10	0.1 - 47K	685
10SR	RW68	13	0.1 - 68K	940

ATE Type	Temperature rise at rated power 7SR and 7SR/B	Temperature rise at rated power 10SR and 10SR/B
T1	$\Delta T = 26 \text{ }^\circ\text{C/W}$	$\Delta T = 21.5 \text{ }^\circ\text{C/W}$
T2	$\Delta T = 16 \text{ }^\circ\text{C/W}$	$\Delta T = 12.3 \text{ }^\circ\text{C/W}$
T3	$\Delta T = 15 \text{ }^\circ\text{C/W}$	$\Delta T = 11.5 \text{ }^\circ\text{C/W}$
T4 (capacitor mounted)	$\Delta T = 1.2 \text{ }^\circ\text{C/W}$	$\Delta T = 1 \text{ }^\circ\text{C/W}$



Fixed power wirewound resistors  
aluminium housed 10 W to 250 W

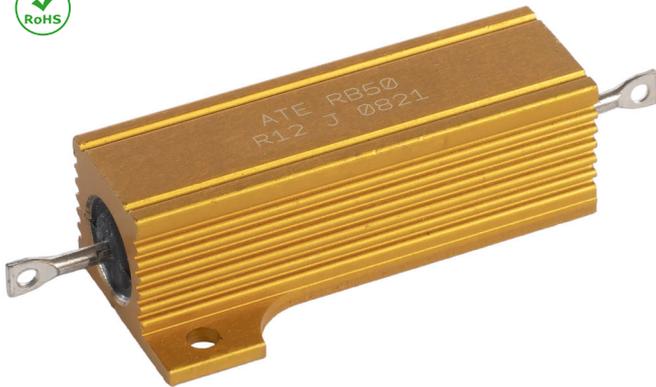
## FIXED POWER WIREWOUND RESISTORS ALUMINIUM HOUSED

### FEATURES

Extruded aluminium housing provides superior heat conduction. Housing deep finned for maximum heat dissipation at natural or forced air convection.

Gold anodized finish for maximum resistance to environmental conditions. Special thermosetting compound with high thermal conductivity. Winding designed to give maximum core coverage and uniformity for even heat dissipation.

Core centerless ground for maximum winding uniformity. Marking at top surface for easy identification after mounting. Complete welded construction terminal to terminal.



These resistors meet or exceed the requirements of MIL-PRF-18546 G specifications.

### ELECTRICAL SPECIFICATIONS

- Ohmic values  
Serie E24. For out of range or not standard ohmic values, consult ATE Technical Dept.
- Tolerance  
Standard 5%. Available on request up to 1%.
- Temperature coefficient  
±30 ppm  $R > 20 \Omega$   
±50 ppm  $1 \Omega < R < 20 \Omega$   
±100 ppm  $0.1 \Omega < R < 1 \Omega$
- Dielectric strength  
1500 Vac for RB10  
2500 Vac for RB25 and RB50  
3500 Vac for RB75, RB101 and RB150  
4500 Vac for RB100 and RB250
- Insulation resistance  
10000 MΩ minimum  
1000 MΩ after moisture test
- Overload  
5s at 5 times rated power
- Non inductive  
Models of equivalent physical and electrical specifications are also available with non inductive Ayrton-Perry winding

### MECHANICAL SPECIFICATIONS

- Terminal strength  
10 lb. pull test; 3 Nm x RB100 and 4 Nm x RB250 max torque
- Solderability  
Satisfactory when tested in accordance with method 208 of MIL-STD-202.  
The use of high temperature solder is recommended when resistors work near the maximum specified ratings

### MATERIALS

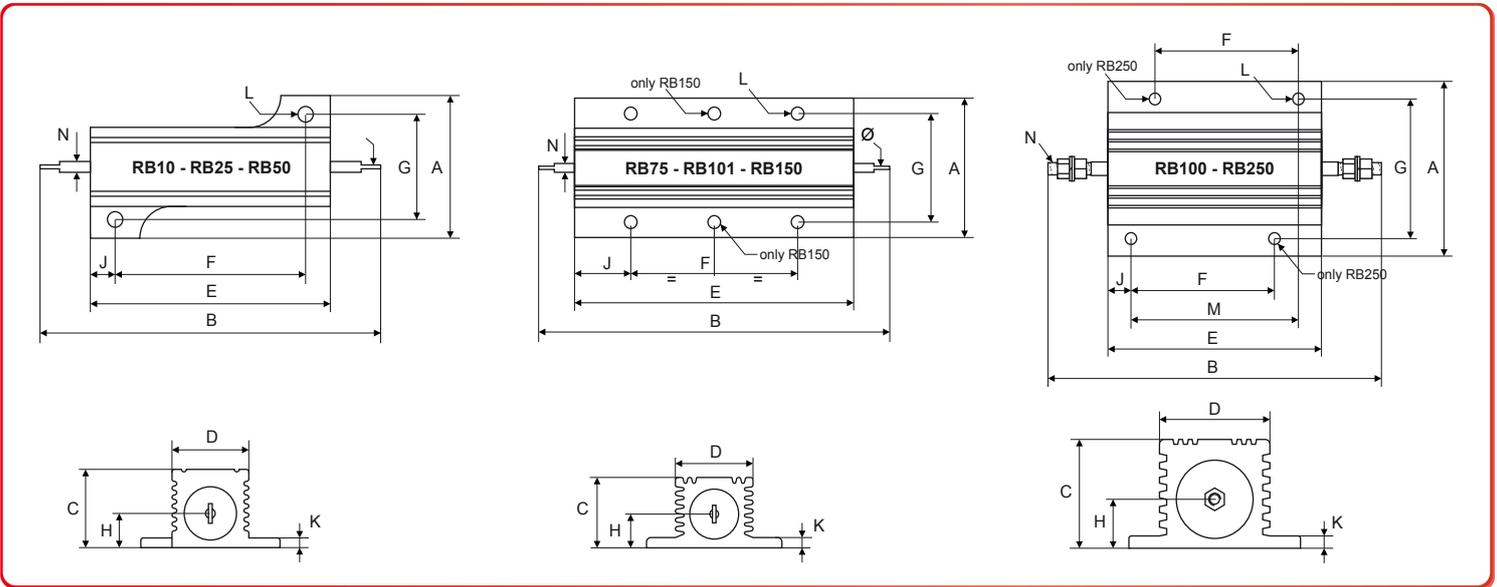
- Core  
Ceramic steatite or alumina centerless ground
- Resistive Element  
Copper-nickel alloy or nickel-chrome alloy with specific temperature coefficient
- End caps  
Stainless steel
- Encapsulant  
High temperature thermosetting compound
- Housing  
Aluminium with hard anodic finish
- Standard terminals  
Copperweld RB10 to RB150  
Stainless steel for RB100 and RB250

### DERATING

ATE RB resistors have an operative temperature range from -55°C to +250°C. Derating is required for reduced chassis area and for high ambient temperature.

ATE Type	MIL-PRF-18546 G Type	Rated power (W)	Max power no heatsink (W)	Resistance range (Ω)	Voltage limit (V)	Temp. rise with heatsink (°C/W)	Weight (g)	Heatsink dimensions (cm² x mm)
RB10	RE65	12	6	0.01-10K	265	5.1	6	415x1
RB25	RE70	25	12.5	0.01-18K	550	3	14	535x1
RB50	RE75	50	20	0.01-68K	1250	1.9	35	930x1.5
RB75	-	75	35	0.1-50K	1400	1.1	85	995x3
RB101	-	100	40	0.1-70K	1900	1	115	995x3
RB150	-	150	55	0.1-100K	2500	1	165	995x3
RB100	RE77	150	75	0.1-100K	1900	0.84	500	930x3
RB250	RE80	250	100	0.1-120K	2300	0.66	900	930x3

Fixed power wirewound resistors  
aluminium housed 10 W to 250 W



ATE Type	Dimensions (mm)													
	A	B	C	D	E	F	G	H	J	K	L	M	N	Ø
RB10	20.4	35	10	11	19	14.3	15.9	5	2.4	2	2.4	-	2	2.2
RB25	27.2	49	14	14	27	18.3	19.8	6.5	4.4	2	3.2	-	2	2.2
RB50	29.2	71	16	16	50	39.7	21.5	7	5.2	2	3.2	-	2	2.2
RB75	47	73	24	27	48	29	37	11.5	9.5	3.5	4.4	-	3	3.2
RB101	47	89	24	27	64	35	37	11.5	14.5	3.5	4.4	-	3	3.2
RB150	47	122	24	27	97	58	37	11.5	19.5	3.5	4.4	-	3	3.2
RB100	71.5	139	44.5	46	89	-	57.1	20	9.6	5	4.8	69.8	M5	-
RB250	76	178	55.6	54	114	76.2	63.5	25.5	7.8	6.3	4.8	98.4	M6	-
Tol.	±0.2	±1	±0.2	±0.2	±0.5	±0.2	±0.2	±0.2	±0.5	±0.2	±0.2	±0.2	±0.2	±0.2

RB25/6  
RB50/6

Fixed power wirewound resistors  
aluminium housed with large creep distance

 **FIXED POWER WIREWOUND  
RESISTORS ALUMINIUM HOUSED  
WITH LARGE CREEP DISTANCE**

These resistors meet or exceed the requirements of MIL - PRF - 18546 G

 **ELECTRICAL SPECIFICATIONS**

- Ohmic values

E24 Series. For out of range or not standard ohmic values, consult

ATE Technical Dept.

- Tolerance

Standard 5%. Available on request up to 1%

- Temperature coefficient

From  $\pm 100$  to  $\pm 30$  ppm from R10 to Rmax

- Dielectric strength

3000Vac / 4200Vac peak

- Large creep distance

RB25/6 > 6,5mm

RB50/6 > 10mm

- Insulation resistance

10000 M $\Omega$  minimum

1000 M $\Omega$  after moisture test

- Overload

5s at 5 times rated power

- Non inductive

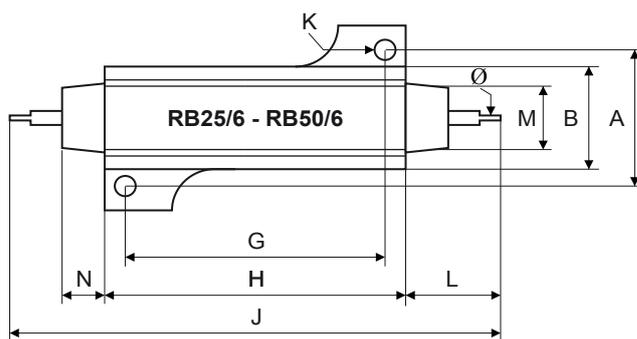
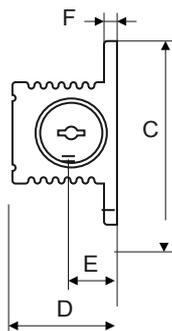
Models of equivalent physical and electrical specifications are also available  
with non inductive Ayrton-Perry winding

More technical data as RB25 / RB50 standard



ATE Type	MIL-PRF 18546 G Type	Rated power (W)	Resistance range ( $\Omega$ )	Voltage Limit (V)	Weight (g)	Heatsink Dimensions (cm <sup>2</sup> x mm)
RB25/6	RE70	25	0.1 - 18K	550	13	535 x 1
RB50/6	RE75	50	0.1 - 68K	1250	32	930 x 1.5

ATE Type	Dimensions (mm)														
	A	B	C	D	E	F	G	H	J	K	L	M	N	$\varnothing$	
RB25/6	19.8	14	27.7	14	6.5	2	18.3	24	49	3.2	12.5	8	4	2.2	
RB50/6	21.5	16	29.2	16	7	2	39.7	46	75	3.2	14.5	10	6.5	2.2	
Tol.	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$	$\pm 0.5$	$\pm 1$	$\pm 0.2$	$\pm 1$	$\pm 0.5$	$\pm 0.5$	$\pm 0.2$



### FIXED POWER WIREWOUND RESISTORS ALUMINIUM HOUSED WITH FASTON LEADS

These resistors meet or exceed the requirements of  
MIL - PRF - 18546 G specifications

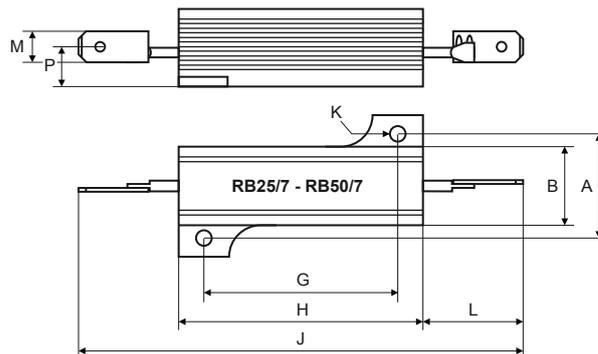
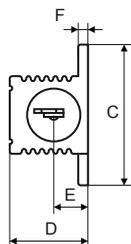
#### ELECTRICAL SPECIFICATIONS

- Ohmic values  
E24 Series. For out of range or not standard ohmic values, consult  
ATE Technical Dept.
  - Tolerance  
Standard 5%. Available on request up to 1%
  - Temperature coefficient  
From  $\pm 100$  to  $\pm 30$  ppm from R10 to Rmax
  - Dielectric strength  
2500Vac / 3500Vac peak
  - Insulation resistance  
10000 M $\Omega$  minimum  
1000 M $\Omega$  after moisture test
  - Overload  
5s at 5 times rated power
  - Non inductive  
Models of equivalent physical and electrical specifications are also available  
with non inductive Ayrton-Perry winding
  - Leads  
6.35 mm Faston nickel plated steel, spot welding
- More technical data as RB25 / RB50 standard



ATE Type	MIL-PRF 18546 G Type	Rated power (W)	Resistance range ( $\Omega$ )	Voltage limit (V)	Weight (g)	Heatsink dimensions (cm <sup>2</sup> x mm)
RB25/7	RE70	25	0.1 - 18K	550	13	535 x 1
RB50/7	RE75	50	0.1 - 68K	1250	32	930 x 1.5

ATE Type	Dimensions (mm)													
	A	B	C	D	E	F	G	H	J	K	L	M	P	
RB25/7	19.8	14	27.7	14	6.5	2	18.3	27	69	3.2	21	6.35	7.7	
RB50/7	21.5	16	29.2	16	7	2	39.7	50	91	3.2	20.5	6.35	8.2	
Tol.	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$	$\pm 0.5$	$\pm 2$	$\pm 0.2$	$\pm 2$	-	$\pm 1$



RB50/8 Fixed power wirewound resistors  
aluminium housed with screw leads (TOP)

### FIXED POWER WIREWOUND RESISTORS ALUMINIUM HOUSED WITH SCREW LEADS (TOP)

These resistors meet or exceed the requirements of  
MIL - PRF - 18546 G specifications

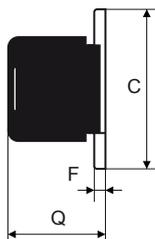
#### ELECTRICAL SPECIFICATIONS

- Ohmic values
- E24 Series. For out of range or not standard ohmic values, consult ATE Technical Dept.
- Tolerance
- Standard 5%. Available on request up to 1%
- Temperature coefficient
- From  $\pm 100$  to  $\pm 30$  ppm from R10 to Rmax
- Dielectric strength
- 2500Vac / 3500Vac peak
- Insulation resistance
- 10000 M $\Omega$  minimum
- 1000 M $\Omega$  after moisture test
- Overload
- 5s at 5 times rated power
- Non inductive
- Models of equivalent physical and electrical specifications are also available with non inductive Ayrton-Perry winding
- Leads
- M4 threaded hole
- Terminal screw tightening torque
- 1,5Nm (static)

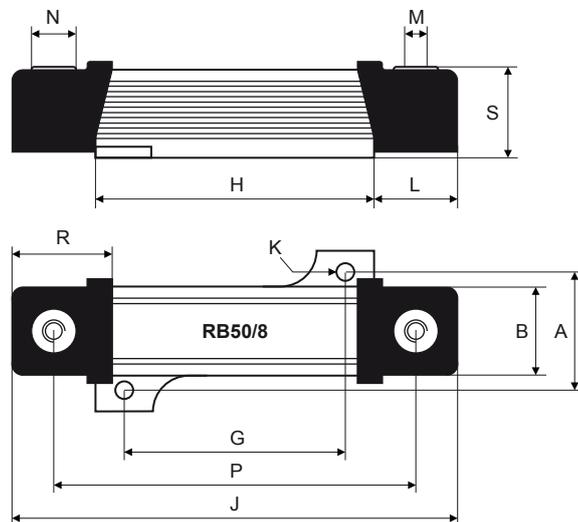


ATE Type	MIL-PRF 18546 G Type	Rated power (W)	Resistance range ( $\Omega$ )	Voltage limit (V)	Weight (g)	Heatsink dimensions (cm <sup>2</sup> x mm)
RB50/8	RE75	50	0.1 - 68K	1250	52	930 x 1.5

ATE Type	Dimensions (mm)															
	A	B	C	D	F	G	H	J	K	L	M	N	P	Q	R	S
RB50/8	21.5	16	29.2	16	2	39.7	50	79.5	3.2	14.5	M4	8	65	17.5	18.5	16.5
Tol.	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$	$\pm 0.5$	$\pm 2$	$\pm 0.2$	$\pm 0.5$	-	-	$\pm 1$	$\pm 0.5$	$\pm 0.5$	$\pm 0.5$



Connection screws supplied with the resistor



### FIXED POWER WIREWOUND RESISTORS ALUMINIUM HOUSED WITH LARGE CREEP DISTANCE

These resistors meet or exceed the requirements of  
MIL - PRF - 18546 G specifications

#### ELECTRICAL SPECIFICATIONS

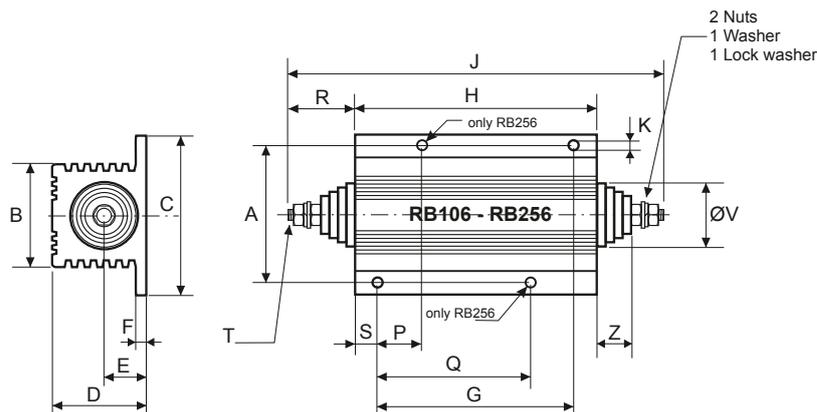
- Ohmic values  
E24 Series. For out of range or not standard ohmic values, consult  
ATE Technical Dept.
- Tolerance  
Standard 5%. Available on request up to 1%
- Temperature coefficient  
From  $\pm 100$  to  $\pm 30$  ppm from R10 to Rmax
- Dielectric strength  
5000Vac / 7000Vac peak
- Large creep distance  
RB106 > 22mm  
RB256 > 25 mm
- Insulation resistance  
10000 M $\Omega$  minimum  
1000 M $\Omega$  after moisture test
- Overload  
5s at 5 times rated power
- Non inductive  
Models of equivalent physical and electrical specifications are also available  
with non inductive Ayrton-Perry winding

More technical data as RB100 and RB250 standard



ATE Type	MIL-PRF 18546 G Type	Rated power (W)	Resistance Range ( $\Omega$ )	Voltage limit (V)	Weight (g)	Heatsink dimensions (cm <sup>2</sup> x mm)
RB106	RE77	150	0.1 - 100K	1900	500	930 x 3
RB256	RE80	250	0.1 - 120K	2300	900	930 x 3

ATE Type	Dimensions (mm)																
	A	B	C	D	E	F	G	H	J	K	P	Q	R	S	T	V	Z
RB106	57.1	46	71.5	44.5	20	5	69.8	89	139	4.8	-	-	25	9.6	M5	32	12
RB256	63.5	54	76	55.6	25.5	6.3	98.4	114	178	4.8	22.2	76.2	32	7.8	M6	32	16
Tol.	$\pm 0.2$	$\pm 0.5$	$\pm 0.2$	$\pm 0.5$	$\pm 2$	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$	$\pm 0.5$	-	-	-				



PR100-101 Thick film power resistors  
PR102-103

## THICK FILM POWER RESISTORS PR100

### FEATURES

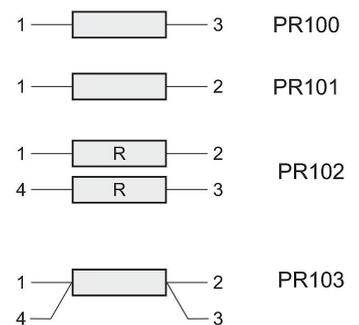
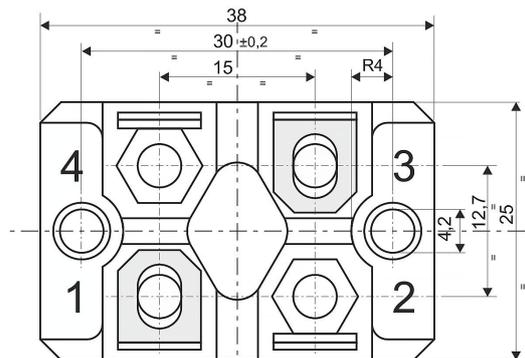
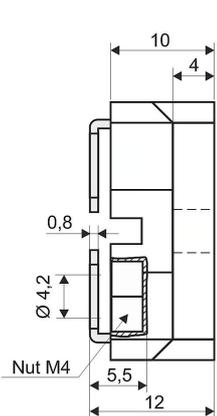
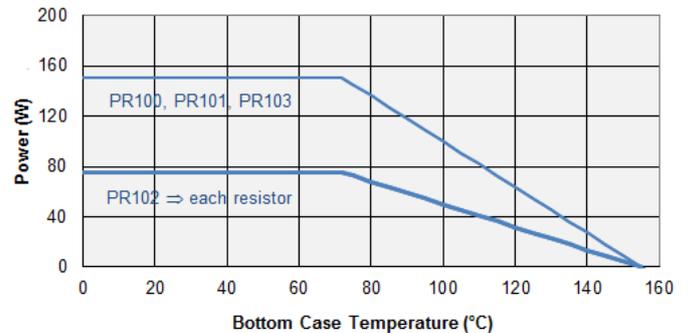
Very good ratio Power / Volume.  
Easy mounting and wiring with significant cost advantages.  
Non inductive performance for high frequency applications.  
One model for power up to 150W.  
Suited to UL94-V0 application.  
SOT227 configuration.



### ELECTRICAL SPECIFICATIONS

- Power rating : 100W (PR102 2 x 50W)
- Max power not trimmed : 150W (heatsink at 70°C)
- Resistance range: From 1R0 to 1M $\Omega$ , E12 series
- Tolerance: Standard 10%, up to 1% on request
- Temperature coefficient :  $\pm 100$  ppm/ $^{\circ}$ C
- Max Work Voltage : 1500 Vac
- Work Temperature Range : From -55 $^{\circ}$ C to +155 $^{\circ}$ C
- Dielectric Strength : 2500 Vac
- Insulation resistance : > 10<sup>8</sup> M $\Omega$  at 500V
- Partial discharge : < 80 pC @ 2000 Vac (on request)
- Self inductance : 40 nH
- Capacitance to heatsink : < 30 pF
- Overload : 2 Pn x 10 s
- Thermal resistance : 0.5  $^{\circ}$ C/W
- Heatsink flatness : 0.05 mm Max
- Heatsink surface finish : 6.3 $\mu$ m Max
- Thermal grease : required
- Max torque for contact : 1.2 Nm (static)
- Max torque for mounting : 1.5 Nm (static)
- Weight : 18 g (PR100 / PR101)  
24 g (PR102 / PR103)

PR100 - Power derating



Connection and mounting screws supplied with the resistor



### THICK FILM POWER RESISTORS PR250

#### FEATURES

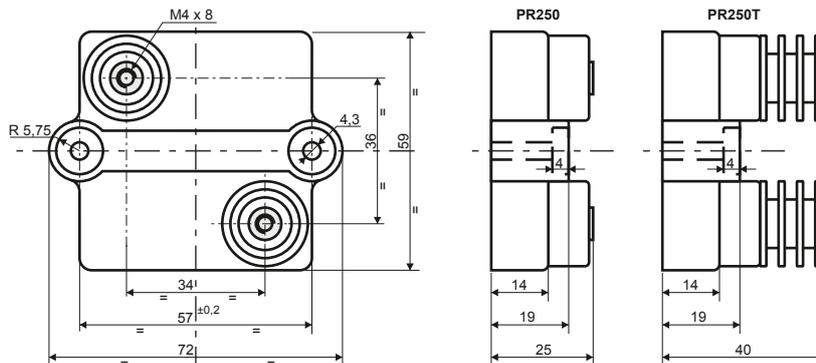
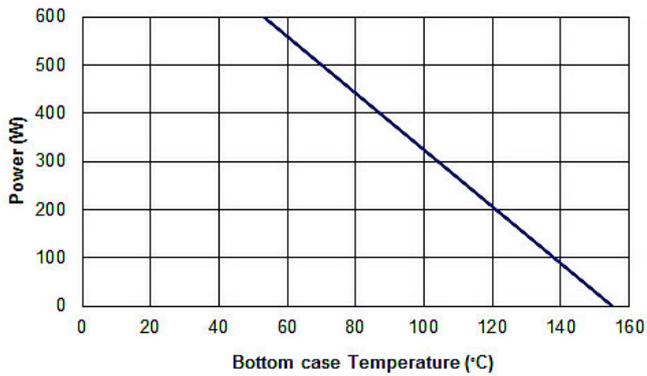
Very good ratio Power / Volume  
Easy mounting and wiring with significant cost advantages.  
Non inductive performance for high frequency applications.  
One models for power applications up to 500W.  
Suited to ULV94-V0 application.



#### ELECTRICAL SPECIFICATIONS

- Power rating: 250W (heatsink at 100°C)
- Resistance range: From 1R0 to 1MΩ, E12 series
- Tolerance: Standard 10%, up to 1% on request
- Temperature coefficient:  $\pm 100$  ppm/°C
- Max Work. Voltage: 5000 Vac
- Work Temp. Range: From -55°C to +155°C
- Dielectric Strength: 7000 Vac (12000 Vac x PR250T)
- Insulation resistance:  $> 10^5$  MΩ at 500V
- Creep distance: 42 mm (65 mm x PR250T)
- Air gap distance: 16 mm (29mm x PR250T)
- Partial discharge:  $< 10$  pC @ 5000 Vac
- Self inductance: 80 nH
- Parallel capacitance: 40 pF
- Capacitance to heatsink:  $< 120$  pF
- Overload : 4 Pn x 10 s
- Thermal resistance: 0.15 °C/W
- Heatsink flatness: 0.05 mm Max
- Heatsink surface finish: 6.3 μm Max
- Thermal grease: Required  $\lambda > 1$ W/mk
- Max torque for contacts: 2Nm (static)
- Max torque for mounting: 2Nm (static)
- Weight: 100 g (130 gr for PR250T)
- Options: For values R039 <R< 1R0 is available Metal Foil type PR500M

PR250 - Power derating

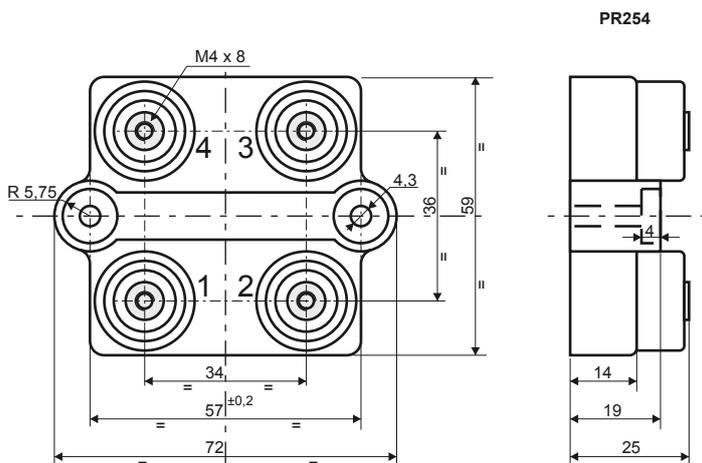


"Connection and mounting screws are supplied with the resistor  
All dimensions are in mm"

PR254 Thick film power resistors


 FEATURES

Very good ratio Power / Volume  
 Easy mounting and wiring with significant cost advantages.  
 Non inductive performance for high frequency applications.  
 One models for power applications up to 500W.  
 Suited to ULV94-V0 application.

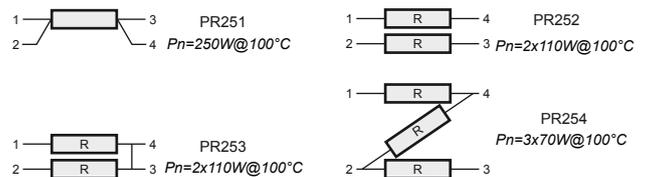
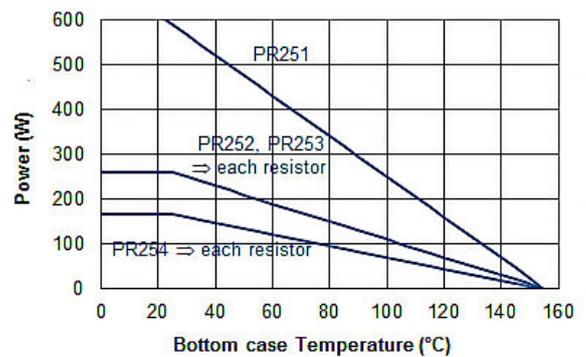


"Connection and mounting screws are supplied with the resistor  
 All dimensions are in mm"

 ELECTRICAL SPECIFICATIONS

- Power rating: 250W (heatsink at 100°C)
- Resistance range: From 1R0 to 1M $\Omega$ , E12 series
- Tolerance: Standard 10%, up to 1% on request
- Temperature coefficient:  $\pm 100$  ppm/°C
- Max Work. Voltage: 5000 Vac
- Work Temp. Range: From -55°C to +155°C
- Dielectric Strength: 7000 Vac
- Insulation resistance:  $> 10^5$  M $\Omega$  at 500V
- Creep distance: 42 mm
- Air gap distance: 16 mm
- Partial discharge:  $< 10$  pC @ 5000 Vac
- Self inductance: 80 nH
- Parallel capacitance: 40 pF
- Capacitance to heatsink:  $< 120$  pF
- Overload :  $4 P_n \times 10$  s
- Thermal resistance: 0.15 °C/W
- Heatsink flatness: 0.05 mm Max
- Heatsink surface finish: 6.3  $\mu$ m Max
- Thermal grease: Required  $\lambda > 1$ W/mk
- Max torque for contacts: 2Nm (static)
- Max torque for mounting: 2Nm (static)
- Weight: 125 g

## PR254 - Power Derating



### THICK FILM POWER RESISTOR PR600

#### FEATURES

Very good ratio Power / Volume  
 Easy mounting and wiring with significant cost advantages.  
 Non inductive performance for high frequency applications.  
 One models for power applications up to 600W.  
 Suited to UL94-V0 application

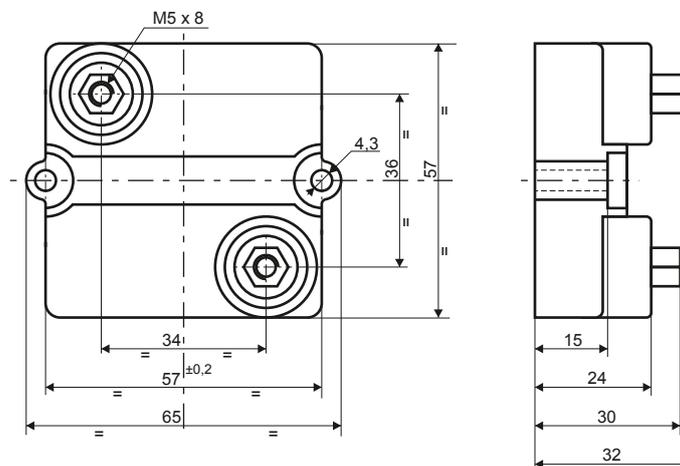


#### ELECTRICAL SPECIFICATIONS

**Power rating:** 600W @ 85°C Bottom case Temperature  
 For power greater than 600W please consult Technical Dept.  
**Resistance Range:** from 1R0 to 1M0  
**Resistance Values:** E12 series  
 For out of range or not std. values please contact ATE Electronics Technical Dept.

**Tolerance:** Standard ±10%.  
 Available on request up to ±1%

**Temperature coefficient:** ±150 ppm/°C  
**Work Temperature Range:** from -55°C to +155°C  
**Max Working Voltage:** 5kV,  $\sqrt{(P \times R)}$   
**Dielectric strength:** 7kVac x 60"  
**Insulation resistance:** > 10<sup>9</sup> MΩ at 500V  
**Creep distance:** 42mm  
**Air Gap distance:** 16mm  
**Partial Discharge:** < 10pC @ 5kVac  
**Self Inductance:** 80nH  
**Parallel Capacitance:** 40pF  
**Capacitance to heatsink:** < 110pF  
**Overload:** 1kW x 10"  
**Thermal resistance:** 0,115°C/W  
**Heatsink flatness:** 0,05mm max  
**Heatsink surface finish:** 6,3µm max  
**Thermal grease:** Required, λ > 1W/mK  
**Max Torque for contacts:** 2Nm (static)  
**Max Torque for mounting:** 2Nm (static)  
**Weight:** 95g



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PR800 Thick film power resistors

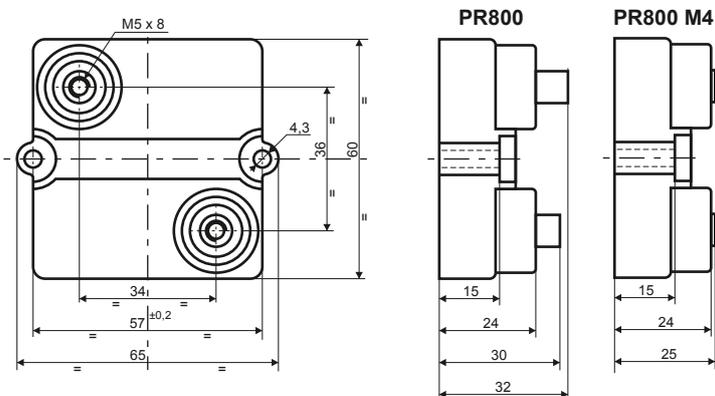

**THICK FILM POWER RESISTOR PR800**

**FEATURES**

Very good ratio Power / Volume  
Easy mounting and wiring with significant cost advantages. Non inductive performance for high frequency applications. Materials are ULV94-V0 listed


**ELECTRICAL SPECIFICATIONS**

- Power rating: 800W @ 85°C Bottom case Temperature  
For power greater than 800W please consult Technical Dept.
- Resistance Range: from 1R0 to 1M0-
- Resistance Values: E12 series  
For out of range or not std. values, please contact ATE Electronics Technical Dept.
- Tolerance: Standard  $\pm 10\%$ .
- Temperature coefficient:  $\pm 150\text{ppm}/^\circ\text{C}$
- Work Temperature Range: from  $-55^\circ\text{C}$  to  $+155^\circ\text{C}$
- Max Working Voltage:  $5,2\text{kV}$ ,  $V = \sqrt{P \times R}$
- Dielectric strength:  $7\text{kVac} \times 60''$  ( $12\text{kVac}$  on request)
- Insulation resistance:  $> 10^5 \text{M}\Omega$  at 500V
- Creep distance: 42mm
- Air Gap distance: 16mm
- Partial Discharge:  $< 10\text{pC}$  @ 5kVac
- Self Inductance: 80nH (typical)
- Parallel Capacitance: 40pF (typical)
- Capacitance to heatsink: 150pF (typical)
- Overload:  $1\text{kW} \times 10''$
- Thermal resistance:  $0,11^\circ\text{C}/\text{W}$
- Heatsink flatness:  $0,05\text{mm}$  max
- Heatsink surface finish:  $6,3\mu\text{m}$  max
- Thermal grease: Required,  $\lambda > 1\text{W}/\text{mK}$
- Max Torque for contacts: 2Nm (static)
- Max Torque for mounting: 2Nm (static)
- Weight: 100g



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All dimensions are in mm"

