

Metal Film Resistors

WIREWOUND TECHNOLOGY



MOLDED RESISTORS							
REF.	DATASHEET	POWER RATING	RESISTANCE RANGE	TOL.	TEMP. LIMITS	TYP. TCR	DIMENSIONS L x l x H
	NO.		Ω	%	$^{\circ}\text{C}$	ppm/ $^{\circ}\text{C}$	mm
MSP 1B	50003	25 $^{\circ}\text{C}$ 1 W	0.04 to 2.2K	± 0.1 to ± 5	- 55 + 200	± 25 ± 50 ± 100	6.9 x 3.8 x 3.8
MSP 2B		2 W	0.04 to 4.7K				11.4 x 7 x 5
MSP 3B		2.5 W	0.04 to 13K				14.8 x 7 x 6.6

THICK FILM TECHNOLOGY



MODEL	DATASHEET	POWER RATING	RESISTANCE RANGE STANDARD MODEL	TOL.	TEMP. LIMITS	TYP. TCR	DIMENSIONS
	NO.		Ω	%	$^{\circ}\text{C}$	ppm/ $^{\circ}\text{C}$	mm

TO-220 CASE							
RTO 20	50005	25 $^{\circ}\text{C}$ 20 W	0.012 to 1M	± 1 to ± 10	- 55 + 155	± 150 $\geq 0.5 \Omega$ ± 250 $\geq 0.1 \Omega$	10.1 x 15 x 4.5
RTO 50	50035	25 $^{\circ}\text{C}$ 50 W					10.1 x 15 x 4.5



FOR MOUNTING ONTO A HEATSINK 5 W TO 50 W							
RCH 5	50006	25 $^{\circ}\text{C}$ 5 W	0.24 to 1M	± 1 to ± 10	- 55 + 125	± 150 $R > 1 \Omega$ ± 250 $R < 1 \Omega$	16.6 x 9 x 15
RCH 10		10 W					19 x 11 x 15
RCH 25		25 W					28 x 14 x 15
RCH 50		50 W					47.8 x 15.5 x 15



MODEL	DATASHEET	POWER RATING	RESISTANCE RANGE STANDARD MODEL	TOL.	TEMP. LIMITS	TYP. TCR	DIMENSIONS
	NO.		Ω	%	$^{\circ}\text{C}$	ppm/ $^{\circ}\text{C}$	mm

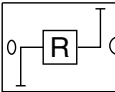
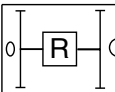
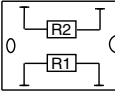
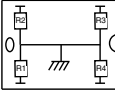
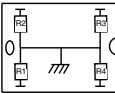
100 W

RPH 100	50046	25 $^{\circ}\text{C}$ 100 W	0.092 to 1M	± 1 to ± 10	- 55 + 125	± 300 < 1 Ω ± 150 > 1 Ω	65.5 x 46.7 x 21.6
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WIRE THICK FILM TECHNOLOGY



SOT-227 B CASE - 20 W TO 200 W

MODEL	DATASHEET	POWER RATING AT 25 °C	RES. RANGE STD. MODEL	TOL. PER RES.	ELEC. DIAGRAMS	TEMP. LIMITS	TYP. TCR	DIMENSIONS
	NO.		Ω	%		°C	ppm/°C	mm
RTOP 200	50045	200 W	0.046 to 1M	± 1 to ± 10		- 55 + 125	± 300 R < 1 Ω ± 150 R > 1 Ω	38 x 25 x 10
RTOP 100		100 W						
DRTOP 100		100 W	0.092 to 1M					
DRTOP 50		50 W						
TRTOP 40		40 W	0.046 to 1M					
TRTOP 30		30 W						
QRTOP 35		35 W						
QRTOP 20		20 W						



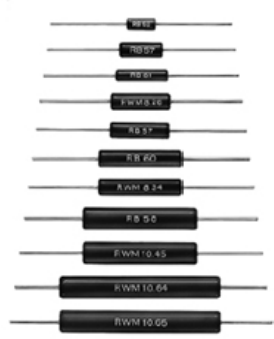
HIGH POWER FOR MOUNTING ONTO A HEATSINK - 250 W AND 500 W

MODEL	DATASHEET	POWER RATING	RES. RANGE STD. MODEL	TOL.	TEMP. LIMITS	TYP. TCR	DIMENSIONS
	NO.		Ω	%	$^{\circ}\text{C}$	ppm/ $^{\circ}\text{C}$	mm
RPS 250D	50007	70 $^{\circ}\text{C}$ 250 W	0.24 to 1M	± 1 to ± 10	- 55 + 125	± 300 < 1 Ω ± 150 > 1 Ω	73 x 60 x 24.5
RPS 500D	50047	70 $^{\circ}\text{C}$ 500 W					

MEDIUM DISSIPATION WIREWOUND RESISTORS

REFERENCES			DATASHEET	POWER RATING	RES. RANGE STD. MODEL	TOL.	TEMP. LIMITS	TYP. TCR	DIMENSIONS	
VISHAY SFFERNICE	CECC								Ø NOM.	L NOM.
	NF	BS							NO.	Ω

ENAMELLED-POWER (E24)

	RWM 4 x 10	RB 59	JB	50008	25 °C 3 W	(1) 5.5 W	0.1 to 10K	± 5 std. ± 1 to ± 10 on req.	- 55 + 350	+ 75	5.5	12
	RWM 4 x 22	RB 61	HB		5 W	7 W	0.1 to 16K				5.5	22.1
	RWM 5 x 26	RB 57	-		7 W	10 W	0.1 to 27K				7.4	24.7
	RWM 6 x 22	RB 57	KB		7 W	10 W	0.1 to 39K				6.5	18
	RWM 8 x 26	RB 60	-		8 W	10 W	0.1 to 27K				7.4	24.7
	RWM 6 x 34	RB 60	LB		8 W	12 W	0.33 to 36K				7.4	33.7
	RWM 8 x 34	RB 58	-		11 W	14 W	0.33 to 36K				7.4	33.7
	RWM 8 x 45	RB 58	MB		11 W	20 W	0.47 to 62K				9.4	44.8
	RWM 10 x 45	-	-		25 W	25 W	0.47 to 62K				9.4	44.8
	RWM 10 x 64	-	-		25 W	25 W	0.68 to 100K				9.4	63.8
	RWM 10 x 65	-	-		30 W	30 W	0.68 to 100K				9.4	63.8

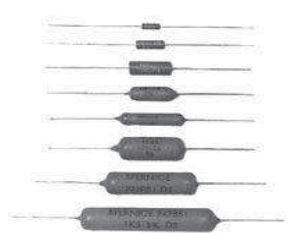
Note

(1) With surface temperature 450 °C

MOLDED-INSULATED-PRECISION (E24-E48-E96)

	RLP 1 molded	RP 8	50009	25 °C 1 W	0.05 to 2.2K	± 0.1 to ± 5	- 55 + 275	± 20 ± 50	2.5	6.5
	RLP 2 molded	RP 7		2 W	0.025 to 6.8K				4	10.2
	RLP 3 insulated	RP 4		3 W	0.01 to 15K				5.54	14
	RLP 6 insulated	-		6 W	0.02 to 59K				8.7	23.8
	RLP 10 insulated	-		10 W	0.06 to 150K				10.3	46.8

MOLDED-INSULATED-PRECISION (E24-E48-E96)

	58 BSI molded	-	50011	25 °C 1 W	0.1 to 2K	± 0.5 to ± 5	- 55 + 200	± 100 ± 300	2.4	6.5
	63 BSI molded	-		2 W	0.025 to 4K				3.7	10
	68 BSI molded	-		3 W	0.01 to 15K				5.6	15
	516 BSI insulated	-		4 W	0.01 to 20K				5	16
	523 BSI insulated	-		5 W	0.015 to 40K				5	23
	923 BSI insulated	-		6 W	0.02 to 60K				9	23
	932 BSI insulated	-		8 W	0.035 to 100K				9	32
	947 BSI insulated	-		10 W	0.06 to 150K				9	47

MEDIUM DISSIPATION WIREWOUND RESISTORS

REFERENCES		DATASHEET	POWER RATING	RES. RANGE STD. MODEL	TOL.	TEMP. LIMITS	TYP. TCR	DIMENSIONS	
VISHAY SFERNICE	CECC							Ø NOM.	L NOM.
	NF BS	NO.		Ω	%	°C	ppm/°C	mm	mm

MOLDED-PRECISION (E24-E48-E96)



RMB 075	-	-	50010	25 °C 0.75 W	0.1 to 2K	± 0.1 to ± 5	- 55 + 275 + 200	± 20 ± 50	2.5	6.5
RMB 1.5	-	-		1.50 W	0.1 to 6.81K				4	10.2
RMB 3	-	-		3 W	0.051 to 13K				6.4	16.2
RMBS 0.5	RP 1	-		0.50 W	0.1 to 2K				2.5	6.5
RMBS 1	RP 2	-		1 W	0.1 to 6.81K				4	10.2
RMBS 2	RP 3	-		2 W	0.015 to 13K				6.4	16.2

Note

- RMBS spare parts

CEMENTED



CEMENTED								
SG 3	50012	40 °C 3 W	0.01 to 3.3K	± 1 to ± 10	- 55 + 200	± 150	4.8	13
SG 4		4 W	0.1 to 3.9K				5.5	15.8

Note

-  Undergoes European Quality Insurance System (CECC)

HIGH DISSIPATION WIREWOUND RESISTORS

REFERENCES		DATASHEET	POWER RATING	RES. RANGE STD. MODEL	TOL.	TEMP. LIMITS	TYP. TCR	DIMENSIONS	
VISHAY SFERNICE	CECC CONF.							Ø NOM.	L NOM.
		NO.		Ω	%	°C	ppm/°C	mm	mm

VITREOUS EXTERNAL RINGS OR COLLARS (E12)



RW 8 x 34	-	50016	25 °C 13 W	1 to 10K	± 5	- 55 + 450	+ 75	11.5	34
RW 10 x 50	-		20 W	1 to 27K				13	50
RW 13 x 70	RB 13.70		32 W	2.2 to 56K				16	70
RW 16 x 94	-		50 W	2.2 to 56K				19.5	94
RW 20 x 117	RB 20.117		80 W	2.7 to 68K				23	117

VITREOUS EXTERNAL COLLARS ELECTRICAL TRACTION (E12)



RWST 25 x 138	-	50017	25 °C 110 W	2.7 to 82K	± 5	- 55 + 450	+ 75	28	138
RWST 25 x 168	RB 25 x 168		180 W	2.7 to 100K				28	168
RWST 30 x 250	RB 30 x 250		320 W	4.7 to 220K				33	250
RWST 40 x 370	-		600 W	8.2 to 360K				45	370
RWST 50 x 373	-		800 W	12 to 430K				53	373

REFERENCES		DATASHEET	POWER RATING	RES. RANGE	TOL.	TEMP. LIMITS	TYP. TCR	DIMENSIONS	
VISHAY SFERNICE	CECC CONF.			STD. MODEL				Ø NOM.	L NOM.
		NO.		Ω	%	°C	ppm/°C	mm	mm

VITREOUS ADJUSTABLE (E6)

RA 13 x 70	RBA 13.70	50019	25 °C 21 W	33 to 3.9K	± 10	- 55 + 350	+ 75	16	70
RA 16 x 94	-		35 W	68 to 3.9K				19.5	94
RA 20 x 117	RBA 20.117		50 W	100 to 4.7K				23	117
RA 25 x 138	-		75 W	150 to 6.8K				28	138
RA 25 x 168	RBA 25.168		120 W	220 to 10K				28	168
RA 30 x 250	-		180 W	330 to 22K				33	250

RA Model
B Collars



VITREOUS UNDULATED WIREWOUND (E12)

RSO 25 x 138	-	50018	25 °C 160 W	0.068 to 12	± 5 to ± 10	- 55 + 450	+ 75	39	138
RSO 25 x 168	-		200 W	0.1 to 18				39	168
RSO 30 x 250	-		350 W	0.22 to 33				44	250
RSO 40 x 370	-		700 W	0.33 to 56				54.5	370
RSO 50 x 373	-		1000 W	0.39 to 68				65	373



FIXED OR ADJUSTABLE SEMI-VITREOUS (E12)

RSSD 8 x 34	50020	25 °C 16 W	0.12 to 10	± 5 to ± 20	- 55 + 450	± 75	10	34
RSSD 10 x 50		25 W	0.12 to 22				11.5	50
RSSD 13 x 70		42 W	0.12 to 43				14.5	70
RSSD 16 x 94		70 W	0.33 to 75				18	94
RSSD 20 x 117		100 W	0.22 to 100				22	117
RSSD 25 x 138		140 W	0.1 to 150				27	138
RSSD 25 x 168		200 W	0.12 to 220				27	168
RSSD 30 x 250		280 W	0.22 to 360				32	250
RSSD 40 x 370		450 W	0.47 to 470				43	370
RSSD 50 x 373		600 W	0.68 to 560				53	373





HEATSINK ENCASED-PRECISION (E24-E48-E96)									
REFERENCES		DATASHEET NO.	POWER RATING ⁽¹⁾	RES. RANGE STD. MODEL Ω	TOL. %	TEMP. LIMITS °C	TYP. TCR ppm/°C	DIMENSIONS	
VISHAY SFERNICE	CECC CONF.							Ø NOM. mm	L NOM. mm
RH 5	RE 4	50013	25 °C 100 W	0.01 to 12K	± 0.1 to ± 10	- 55 + 200	± 20	8.9	16.3
RH 10	RE 1		12.5 W	0.006 to 20K				11	19
RH 25	RE 2		25 W	0.006 to 62K				15	28
RH 50	RE 3		50 W	0.006 to 130K				15	50

Notes

-  Undergoes European Quality Insurance System (CECC)
- (1) Chassis mounted

MEDIUM DISSIPATION WIREWOUND RESISTORS



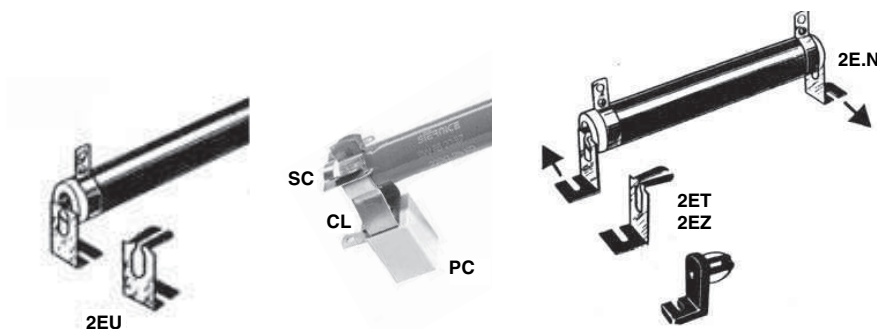
HEATSINK INDUSTRIAL APPLICATIONS								
REFERENCES	DATASHEET	POWER RATING ⁽¹⁾	RES. RANGE STD. MODEL	TOL.	TEMP. LIMITS	TYP. TCR	DIMENSIONS	
	NO.		Ω	%	°C	ppm/°C	Ø NOM. mm	L NOM. mm
SH 5	50014	25 °C 10 W	0.1 to 3.3K	± 5	- 55 + 200	± 50 <i>R</i> > 5 Ω	8.9	16.3
SH 10		12.5 W	0.1 to 15K				11	19
SH 25		25 W	0.1 to 33K				15	28
SH 50		50 W					15	50

Notes

- (1) Chassis mounted

MOUNTING DEVICES

See datasheets 2E, SAT and CL-SC PC



WIREWOUND RHEOSTATS



VITREOUS - RT... L MODEL (RT E6 RTE)						
REFERENCES		DATASHEET	POWER RATING	RESISTANCE RANGE STANDARD MODEL	TOL.	TEMP. LIMITS
VISHAY SFERNICE	CCTU	NO.		Ω	%	$^{\circ}\text{C}$
RT 12L/ RTE 12	PA 9	50025	25 $^{\circ}\text{C}$ 12 W	1 to 2.2K/4.7K	± 10	RT - 55 + 320 RTE - 55 + 220
RT 25L/ RTE 25	PA 1	50026	25 W	1 to 4.7K/13.5K		
RT 55L/ RTE 55	PA 3	50027	55 W	1 to 10K/28K		
RT 100L/ RTE 100	PA 5	50028	100 W	1 to 15K/54K		
RT 230 L/ RTE 230	PA 7	50029	250 W	1 to 22K/95K		
RT 500L	-	50030	500 W	1 to 22K/95K 1 to 33K		

Note

- Special features, sectorial winding, ganging