

## WIREWOUND TECHNOLOGY



MOLDED RESISTORS									
REFERENCES	DATA SHEET	POWER RATING	RESISTANCE RANGE	TOLERANCE	TEMPERATURE LIMITS	TYPICAL TCR	DIMENSIONS mm		
	NO.	W	$\Omega$	%	$^{\circ}\text{C}$	ppm/ $^{\circ}\text{C}$	L	I	H
MSP 1B	50003	25 $^{\circ}\text{C}$ 1 W	0.04 $\Omega$ to 2.2 k $\Omega$	$\pm 0.1\%$ to $\pm 5\%$	- 55 $^{\circ}\text{C}$ + 200 $^{\circ}\text{C}$	$\pm 25$ $\pm 50$ $\pm 100$	6.9	3.8	3.8
MSP 2B		2 W	0.04 $\Omega$ to 4.7 k $\Omega$				11.4	7	5
MSP 3B		2.5 W	0.04 $\Omega$ to 13 k $\Omega$				14.8	7	6.6

## THICK FILM TECHNOLOGY



TO 220 CASE							
MODEL	DATA SHEET	POWER RATING	RESISTANCE RANGE STANDARD MODEL	TOLERANCE	TEMPERATURE LIMITS	TYPICAL TCR	DIMENSIONS
	NO.	W	$\Omega$	%	$^{\circ}\text{C}$	ppm/ $^{\circ}\text{C}$	mm
RTO20	50005	25 $^{\circ}\text{C}$ 20 W	0.012 $\Omega$ to 1 M $\Omega$	$\pm 1\%$ to $\pm 10\%$	- 55 $^{\circ}\text{C}$ + 155 $^{\circ}\text{C}$	$\pm 150 \geq 0.5$ $\pm 250 \geq 0.1$	10.1 x 15 x 4.5
RTO50	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 $\Omega$ to 1 M $\Omega$	$\pm 1\%$ to $\pm 10\%$	- 55 $^{\circ}\text{C}$ + 125 $^{\circ}\text{C}$	$\pm 150$ $R > 1 \Omega$ $\pm 250$ $R < 1 \Omega$	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



100 W							
RPH 100	50046	25 $^{\circ}\text{C}$ 100 W	0.092 $\Omega$ to 1 M $\Omega$	$\pm 1\%$ to $\pm 10\%$	- 55 $^{\circ}\text{C}$ + 125 $^{\circ}\text{C}$	$\pm 300 < 1 \Omega$ $\pm 150 > 1 \Omega$	65.5 x 46.7 x 21.6



**WIRETHICK FILM TECHNOLOGY (CONTD)**



SOT 227 B CASE - 20 W TO 200 W								
MODEL	DATA SHEET	POWER RATING AT 25 °C	RESISTANCE RANGE STANDARD MODEL	TOLERANCE PER RESISTOR	ELECTRICAL DIAGRAMS	TEMPERATURE LIMITS	TYPICAL TCR	DIMENSIONS
	NO.	W	$\Omega$	%		$^{\circ}\text{C}$	ppm/ $^{\circ}\text{C}$	mm
RTOP 200	50045	200 W	0.046 $\Omega$ to 1 M $\Omega$	$\pm 1\%$ to $\pm 10\%$		-55 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$	$\pm 300$ R < 1 $\Omega$ $\pm 150$ R > 1 $\Omega$	38 x 25 x 10
RTOP 100		100 W						
DRTOP 100		100 W	0.092 $\Omega$ to 1 M $\Omega$					
DRTOP 50		50 W						
TRTOP 40		40 W	0.046 $\Omega$ to 1 M $\Omega$					
TRTOP 30		30 W						
QRTOP 35		35 W						
QRTOP 20		20 W						

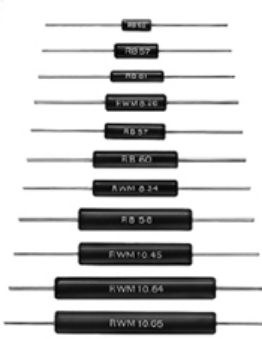


HIGH POWER FOR MOUNTING ONTO A HEATSINK - 250 W AND 500 W							
MODEL	DATA SHEET	POWER RATING	RESISTANCE RANGE STANDARD MODEL	TOLERANCE	TEMPERATURE LIMITS	TYPICAL TCR	DIMENSIONS
	NO.	W	$\Omega$	%	$^{\circ}\text{C}$	ppm/ $^{\circ}\text{C}$	mm
RPS 250D	50007	70 $^{\circ}\text{C}$ 250 W	0.24 $\Omega$ to 1 M $\Omega$	$\pm 1\%$ to $\pm 10\%$	-55 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$	$\pm 300$ < 1 $\Omega$ $\pm 150$ > 1 $\Omega$	73 x 60 x 24.5
RPS 500D	50047	70 $^{\circ}\text{C}$ 500 W					

## MEDIUM DISSIPATION WIREWOUND RESISTORS

REFERENCES			DATA SHEET	POWER RATING	RESISTANCE RANGE STANDARD MODEL	TOLERANCE	TEMPERATURE LIMITS	TYPICAL TCR	DIMENSIONS	
SFERNICE	CECC								NO.	W
	NF	BS	mm	mm						


### ENAMELLED-POWER (E24)



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

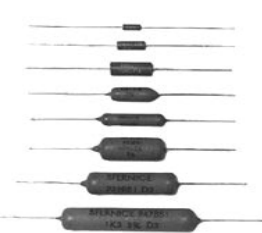
\*\* With surface temperature 450 °C

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



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

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



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

## MEDIUM DISSIPATION WIREWOUND RESISTORS (CONTD)



MOLDED-PRECISION (E24-E48-E96)										
RMB 075	-	-	50010	25 °C 0.75 W	0.1 Ω to 2 kΩ	± 0.1 % to ± 5 %	- 55 °C + 275 °C + 200 °C	± 20 ± 50	2.5	6.5
RMB 1.5	-	-		1.50 W	0.1 Ω to 6.81 kΩ				4	10.2
RMB 3	-	-		3 W	0.051 Ω to 13 kΩ				6.4	16.2
RMBS 0.5	RP 1	-		0.50 W	0.1 Ω to 2 kΩ				2.5	6.5
RMBS 1	RP 2	-		1 W	0.1 Ω to 6.81 kΩ				4	10.2
RMBS 2	RP 3	-		2 W	0.015 Ω to 13 kΩ				6.4	16.2

RMBS spare parts



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

Undergoes European Quality Insurance System (CECC)

## HIGH DISSIPATION WIREWOUND RESISTORS

REFERENCES		DATA SHEET	POWER RATING	RESISTANCE RANGE STANDARD MODEL	TOLERANCES	TEMPERATURE LIMITS	TYPICAL TCR	DIMENSIONS	
SFERNICE	CECC CONFORMITY	NO.	W	Ω	%	°C	ppm/°C	Ø NOM.	L NOM.



RW Model

VITREOUS EXTERNAL RINGS OR COLLARS (E12)										
RW 8 x 34	-	50016	25 °C 13 W	1 Ω to 10 kΩ	± 5 %	- 55 °C + 450 °C	+ 75	11.5	34	
RW 10 x 50	-		20 W	1 Ω to 27 kΩ				13	50	
RW 13 x 70	RB 13.70		32 W	2.2 Ω to 56 kΩ				16	70	
RW 16 x 94	-		50 W	2.2 Ω to 56 kΩ				19.5	94	
RW 20 x 117	RB 20.117		80 W	2.7 Ω to 68 kΩ				23	117	



RWST Model  
CS Collars

VITREOUS EXTERNAL COLLARS ELECTRICAL TRACTION (E12)										
RWST 25 x 138	-	50017	25 °C 110 W	2.7 Ω to 82 kΩ	± 5 %	- 55 °C + 450 °C	+ 75	28	138	
RWST 25 x 168	RB 25 x 168		180 W	2.7 Ω to 100 kΩ				28	168	
RWST 30 x 250	RB 30 x 250		320 W	4.7 Ω to 220 kΩ				33	250	
RWST 40 x 370	-		600 W	8.2 Ω to 360 kΩ				45	370	
RWST 50 x 373	-		800 W	12 Ω to 430 kΩ				53	373	

## MEDIUM DISSIPATION WIREWOUND RESISTORS (CONTD)

RA Model  
B Collars



VITREOUS ADJUSTABLE (E6)									
RA 13 x 70	RBA 13.70	50019	25 °C 21 W	33 Ω to 3.9 kΩ	± 10 %	- 55 °C + 350 °C	+ 75	16	70
RA 16 x 94	-		35 W	68 Ω to 3.9 kΩ				19.5	94
RA 20 x 117	RBA 20.117		50 W	100 Ω to 4.7 kΩ				23	117
RA 25 x 138	-		75 W	150 Ω to 6.8 kΩ				28	138
RA 25 x 168	RBA 25.168		120 W	220 Ω to 10 kΩ				28	168
RA 30 x 250	-		180 W	330 Ω to 22 kΩ				33	250



VITREOUS UNDULATED WIREWOUND (E12)									
RSO 25 x 138	-	50018	25 °C 160 W	0.068 Ω to 12 Ω	± 5 % to ± 10 %	- 55 °C + 450 °C	+ 75	39	138
RSO 25 x 168	-		200 W	0.1 Ω to 18 Ω				39	168
RSO 30 x 250	-		350 W	0.22 Ω to 33 Ω				44	250
RSO 40 x 370	-		700 W	0.33 Ω to 56 Ω				54.5	370
RSO 50 x 373	-		1000 W	0.39 Ω to 68 Ω				65	373



FIXED OR ADJUSTABLE SEMI-VITREOUS (E12)									
RSSD 8 x 34		50020	25 °C 16 W	0.12 Ω to 10 Ω	± 5 % to ± 20 %	- 55 °C + 450 °C	± 75	10	34
RSSD 10 x 50			25 W	0.12 Ω to 22 Ω				11.5	50
RSSD 13 x 70			42 W	0.12 Ω to 43 Ω				14.5	70
RSSD 16 x 94			70 W	0.33 Ω to 75 Ω				18	94
RSSD 20 x 117			100 W	0.22 Ω to 100 Ω				22	117
RSSD 25 x 138			140 W	0.1 Ω to 150 Ω				27	138
RSSD 25 x 168			200 W	0.12 Ω to 220 Ω				27	168
RSSD 30 x 250			280 W	0.22 Ω to 360 Ω				32	250
RSSD 40 x 370			450 W	0.47 Ω to 470 Ω				43	370
RSSD 50 x 373			600 W	0.68 Ω to 560 Ω				53	373



HEATSINK ENCASED-PRECISION (E24-E48-E96)									
REFERENCES		DATA SHEET	POWER RATING*	RESISTANCE RANGE STANDARD MODEL	TOLERANCES	TEMPERATURE LIMITS	TYPICAL TCR	DIMENSIONS	
SFERNICE	CECC	NO.	W	Ω	%	°C	ppm/°C	H NOM.	L NOM.
								mm	mm
RH 5	RE 4	50013	25 °C 100 W	0.01 Ω to 12 kΩ	± 0.1 % to ± 10 %	- 55 °C + 200 °C	± 20	8.9	16.3
RH 10	RE 1		12.5 W	0.006 Ω to 20 kΩ				11	19
RH 25	RE 2		25 W	0.006 Ω to 62 kΩ				15	28
RH 50	RE 3		50 W	0.006 Ω to 130 kΩ				15	50

Undergoes European Quality Insurance System (CECC)

\* Chassis mounted

## MEDIUM DISSIPATION WIREWOUND RESISTORS (CONTD)

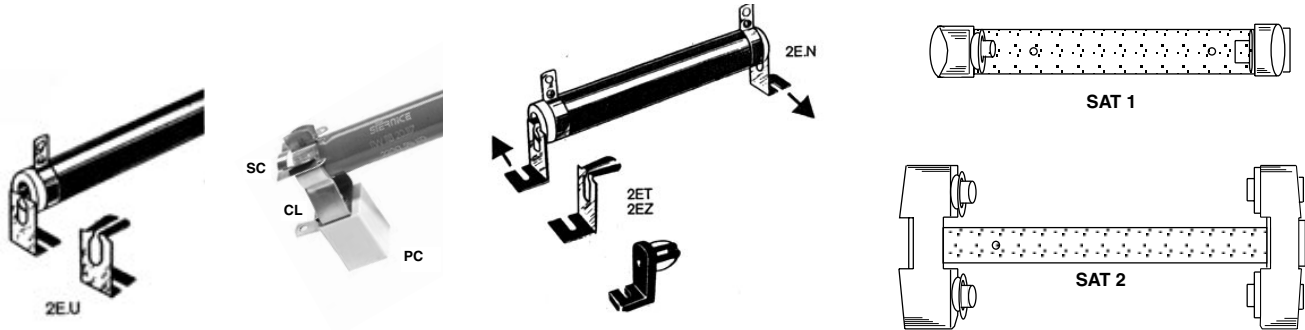


HEATSINK INDUSTRIAL APPLICATIONS								
REFERENCES	DATA SHEET	POWER RATING*	RESISTANCE RANGE STANDARD MODEL	TOLERANCES	TEMPERATURE LIMITS	TYPICAL TCR	DIMENSIONS	
							Ø NOM.	L NOM.
	NO.	W		%	°C	ppm/°C	mm	mm
SH 5	50014	25 °C 10 W	0.1 Ω to 3.3 kΩ	± 5 %	- 55 °C + 200 °C	± 50 R > 5	8.9	16.3
SH 10		12.5 W	0.1 Ω to 15 kΩ				11	19
SH 25		25 W	0.1 Ω to 33 kΩ				15	28
SH 50		50 W					15	50

\* Chassis mounted

### MOUNTING DEVICES

See data sheets 2E, SAT and CL-SC PC



### WIREWOUND RHEOSTATS



VITREOUS - RT... L MODEL (RT E6 RTE)						
REFERENCES		DATA SHEET	POWER RATING	RESISTANCE RANGE STANDARD MODEL	TOLERANCE	TEMPERATURE LIMITS
SFERNICE	CCTU	NO.	W	Ω	%	°C
RT 12L/RTE 12	PA 9	50025	25 °C 12 W	1 Ω to 2.2 kΩ/4.7 kΩ	± 10 %	RT - 55 °C + 320 °C
RT 25L/RTE 25	PA 1	50026	25 W	1 Ω to 4.7 kΩ/13.5 kΩ		
RT 55L/RTE 55	PA 3	50027	55 W	1 Ω to 10 kΩ/28 kΩ		
RT 100L/RTE 100	PA 5	50028	100 W	1 Ω to 15 kΩ/54 kΩ		
RT 230 L/RTE 230	PA 7	50029	250 W	1 Ω to 22 kΩ/95 kΩ		
RT 500L	-	50030	500 W	1 Ω to 22 kΩ/95 kΩ 1 Ω to 33 kΩ		RTE - 55 °C + 220 °C

Special features, sectorial winding, ganging