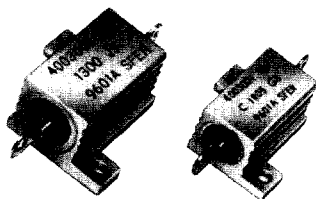


High Reliability Wirewound Power Resistors

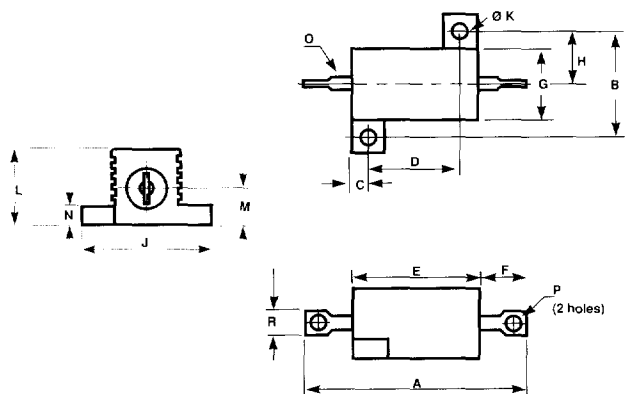


Originally developed for space application, these resistors are housed in an aluminum body with a hard anodic coating.

These components are manufactured, selected and tested to ESA/SCC 4003 specification.

The variants offered differ only by the terminal sizes.

DIMENSIONS in millimeters



FEATURES

As defined in the ESA/SCC specifications two quality levels are proposed :

- Level B with serialized components,
- Level C without serialization.
- Mount onto a heatsink
- ESA/SCC 4003

SERIES DIM.	RH HR 5				RH HR 10	
	VARIANT 01		VARIANT 03		VARIANT 01	
	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
A	27.01	30.15	27.01	30.15	33.36	36.50
B	12.20	12.70	12.20	12.70	15.63	16.13
C	1.19	2.77	1.19	2.77	1.60	3.18
D	11.03	11.23	11.03	11.23	14.02	14.52
E	13.67	16.81	13.67	16.81	17.43	20.62
F	5.19	8.33	5.19	8.33	6.35	9.49
G	6.91	10.05	6.91	10.05	9.56	12.7
H	5.43	7.01	5.43	7.01	7.13	8.71
J	15.62	17.20	15.62	17.20	19.83	21.41
ØK	2.23	2.49	2.23	2.49	2.26	2.52
L	7.34	8.92	7.34	8.92	9.52	11.10
M	1.81	4.95	1.81	4.95	3.59	6.73
N	0.86	2.44	0.86	2.44	1.60	3.18
ØP	1.14	1.40	2.03	2.29	2.03	2.29
Q	1.20	1.40	1.95	2.15	1.95	2.15
R	2.16	–	3.56	–	3.56	–

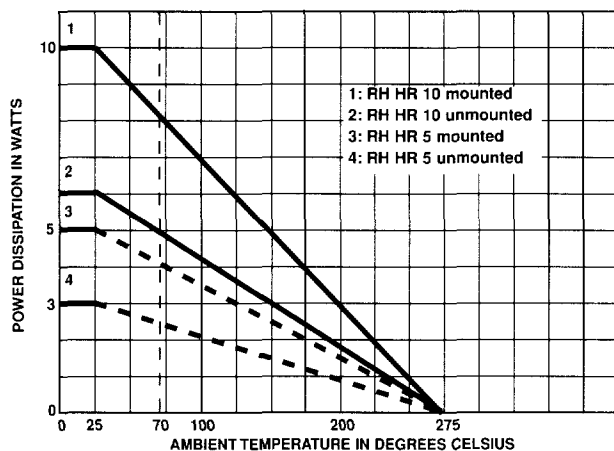
ELECTRICAL SPECIFICATIONS

VISHAY SFERNICE DESIGNATION	RH HR 5		RH HR 10		
ESA Designation	RER 60		RER 65		
ESA Specification Applied	4003/001		4003/002		
Power Rating At	+ 70°C	4W mounted	2.4W unmounted	8W mounted	4.8W unmounted
	+ 25°C	5W mounted	3W unmounted	10W mounted	6W unmounted
Limiting Element Voltage	160V		250V		
Temperature Coefficient	0.05Ω ≤ R < 1Ω ± 100ppm/°C 1 Ω ≤ R < 20Ω ± 50ppm/°C R ≥ 20Ω ± 30ppm/°C		Code 4 Code 3 Code 9		
Qualified Ohmic Range	1Ω to 1kΩ		1Ω to 2kΩ		
Tolerance	± 0.5% to ± 1%				
Temperature Range	– 55°C to + 275°C				



PERFORMANCE		
TESTS	CONDITIONS	LIMIT DRIFTS
Insulation Resistance	UT = 500 V	10Ω G min.
Soldering (Thermal Shock)	T = + 260°C t < 10s	$\pm (0.3 + \frac{0.05\Omega}{R} \times 100)\%$
Short Time Overload (Chassis Mounted)	$U = \sqrt{5 \times P_n \times R_n} t + 5 s$	$\pm (0.3 + \frac{0.05\Omega}{R} \times 100)\%$
Terminal Strength	CEI 68-2-21 Tests Ua	$\pm (0.2 + \frac{0.05\Omega}{R} \times 100)\%$
Rapid Temperature Change	CEI 68-2-14 5 cycles	$\pm (0.5 + \frac{0.05\Omega}{R} \times 100)\%$
Vibration	CEI 68-2-6 10/2000Hz 20g	$\pm (0.2 + \frac{0.05\Omega}{R} \times 100)\%$
Climatic Sequence	SCC 4003 and CEI 68-2- ... - 55°C/+ 275°C/5 cycles	$\pm (1 + \frac{0.05}{R} \times 100)\%$ Insulation resistance $\geq 10^3 M\Omega$
Load Life	2000h at rated power at + 25°C, 90'/30' cycle	$\pm (1 + \frac{0.05\Omega}{R} \times 100) \%$

POWER RATING CHART



PACKAGING

Resistors are packaged in transparent blister pack:
 RH HR 5 type: 20 resistors per blister pack,
 RH HR 10 type: 15 resistors per blister pack.
 On the blister, information printed is: SFERNICE designation, ESA/SCC detail specification, quality level, ohmic value, tolerance and manufacturing date code.

MARKING

The SCC component number is print marked on the aluminum body. It shows: the number of the detail specification which refers to the generic specification of the resistor, the SCC variant number, the quality level B or C, the ohmic value (4 digit code), the tolerance (letter code) D: ± 0.5%, F: ± 1%, G: ± 2%, J: ± 5%; the temperature coefficient (1 digit) 9 for ± 30ppm/°C, 3 for ± 50ppm/°C and 4 for ± 100ppm/°C; the manufacturing date code (4 digits: two for the year and two for the week), the identification lot, the manufacturer logo.

ORDERING INFORMATION					
RH HR MODEL	5 VERSION	100Ω OHMIC VALUE	± 1% TOLERANCE	03 SCC VARIANT	B1 QUALITY LEVEL
	5			01	B1 C1
	10			03	B2 C2
					B3 C3