

FEATURES

- Resistances from 0.005Ohm to 300Ohms
- Power Rating to 2500Watt
- Resistance Tolerances to $\pm 0.1\%$
- TCR to $\pm 2\text{ppm/K}$
- Load Stability to 0.1%
- Very Low Inductance ($< 50\text{nH}$)



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COMPLIANT

TABLE 1 – SPECIFICATIONS

TYPE		8065	80110	80216	80320	80370
Resistance Range (Ohms)		0.005 to 100 Ohms	0.005 to 150 Ohms	0.01 to 200 Ohms	0.02 to 250 Ohms	0.03 to 300 Ohms
Power Rating	Free air 70°C	24 W	32 W	60 W	80 W	90 W
	With heatsink	350 W	600 W	1200 W	2000 W	2500 W
Tolerances from 0.001 Ohms from 0.01 Ohms from 0.02 Ohms		0.5% / 1% / 2% / 5% 0.25% / 0.5% / 1% / 2% / 5% 0.1% / 0.25% / 0.5% / 1% / 2% / 5%				
Thermal Resistance		0.16 K/W	0.16 K/W	0.04 K/W	0.026 K/W	0.022 K/W
Stability (1000h)		0.1% / 0.2% / 0.5% (depends on stress)				
Temperature Coefficient Standard (N) Option (M) Option (L) upon request for selected values		$\pm 10\text{ppm/K}$ (20 to 60°C) $\pm 5\text{ppm/K}$ (20 to 60°C) $\pm 2\text{ppm/K}$ (20 to 60°C) other specifications upon request				
Voltage Proof		1.5 kVDC (higher upon request)				
Maximum Current		60 A upon request special cable up to 250 A				
Inductivity		$< 50\text{ nH}$				
Capacity against housing		500 pF	850 pF	1.7 nF	2.5 nF	2.9 nF
Thermal EMF		$< 1\mu\text{V/K}$				
Operating Temperature Range		-40 to 130°C				
Resistor Material		CuMnSn-Foil				
Substrate		Anodized aluminium				
Housing		Anodized aluminium				
Connector Material		Cu / tinned				
Terminals		4				
Connector Material		Standard: Cu-Cable / 4mm ² / 500mm lenght (D) (other upon request / AWG possible)				

ORDERING INFORMATION

Part Number - Resistance - Contact - Tolerance - TCR

SHR 4-80216 1R000 D 1% N

FIGURE 1 – TEMPERATURE COEFFICIENT

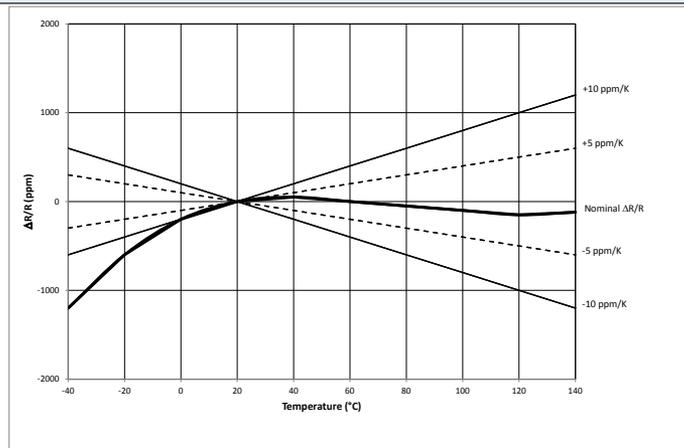
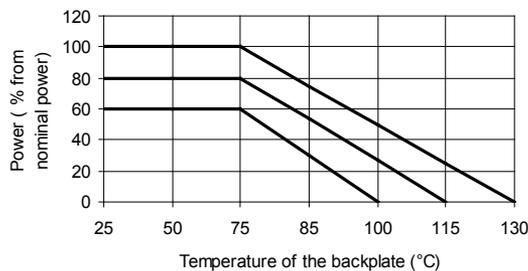


FIGURE 2 – DERATING



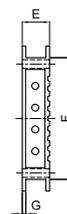
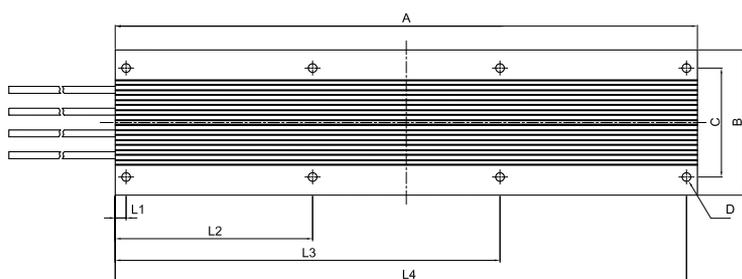
Power Rating Notes -

The SHR Series Resistors must be attached to a suitable heat-sink. The maximum internal resistor temperature is 130°C. To specify an appropriate heatsink use the following formula :

$$R_{0H} = \frac{T_{MAX} - (P \times R_{0R}) - T_A}{P}$$

Where: R_{0H} = Thermal Resistance of Heatsink (K/W)
 R_{0R} = Thermal Resistance of Resistor (K/W)
 T_{MAX} = Maximum Temperature of Resistor
 T_A = Ambient Temperature of Heatsink (°C)
 P = Power Through Resistor (W)

FIGURE 3 – DIMENSIONS in mm (inches)



Dimension	mm
B ±0.3 (±0.012)	80.00 (3.15)
C ±0.3 (±0.012)	60.00 (2.36)
D ±0.2 (±0.008)	Ø4.75 (Ø0.19)
E ±0.2 (±0.008)	15.00 (0.59)
F ±0.3 (±0.012)	67.00 (2.64)
G ±0.1 (±0.004)	2.00 (0.08)

Dimension	8065	80110	80216	80320	80370
A ±0.3(±0.012)	65.00 (2.56)	110.00 (4.33)	216.00 (8.50)	320.00 (12.60)	370.00 (14.57)
L1 ±0.3(±0.012)	6.00 (0.24)	6.00 (0.24)	6.00 (0.24)	6.00 (0.24)	6.00 (0.24)
L2 ±0.3(±0.012)	59.00 (2.32)	104.00 (4.09)	108.00 (4.25)	108.50 (4.27)	125.50 (4.94)
L3 ±0.3(±0.012)	-	-	210.00 (8.27)	211.50 (8.33)	244.50 (9.63)
L4 ±0.3(±0.012)	-	-	-	314.00 (12.36)	364.00 (14.33)

FIGURE 4—STABILITY AGAINST IMPULSES (Reference values without heatsink)

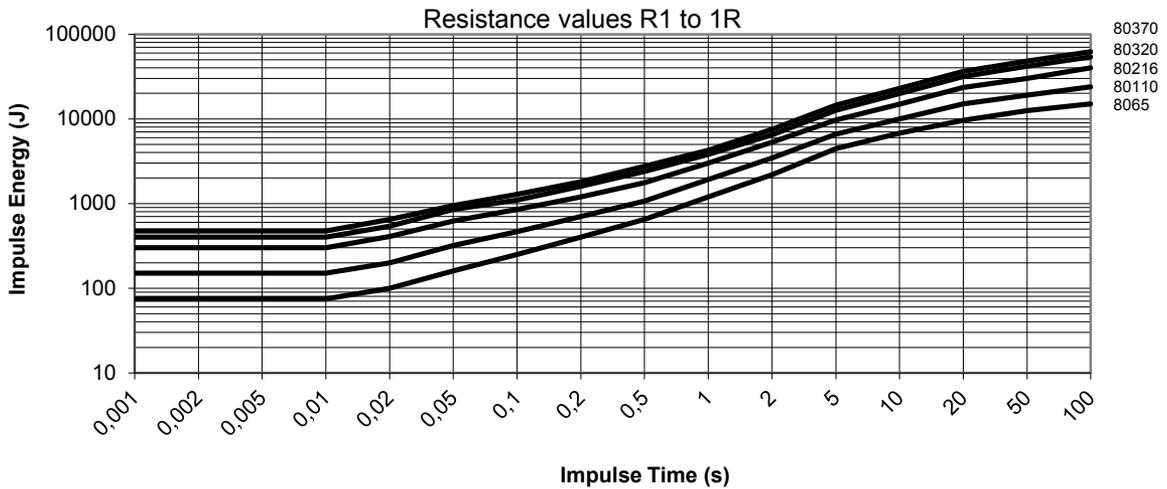
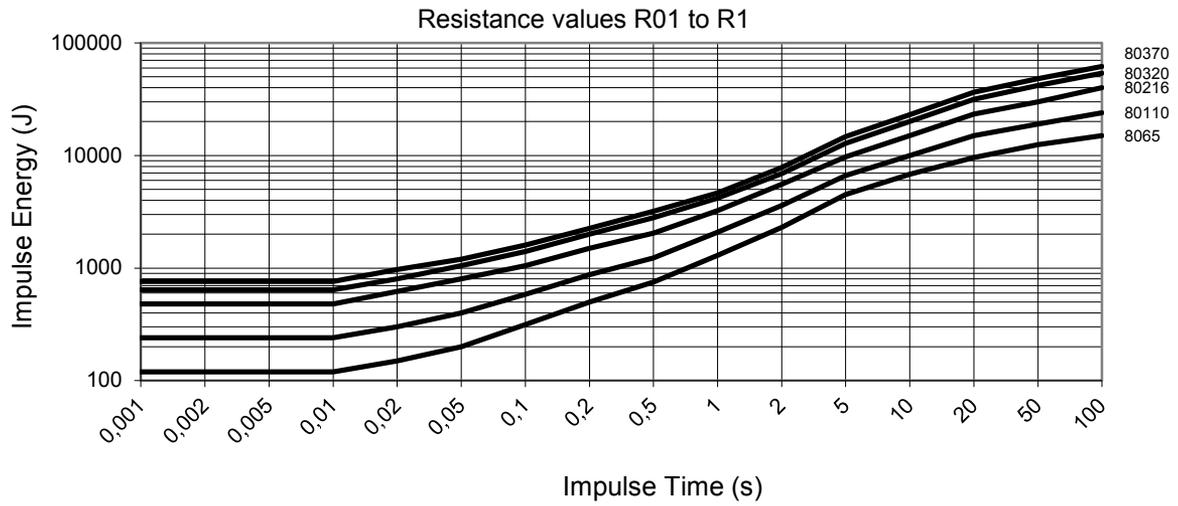
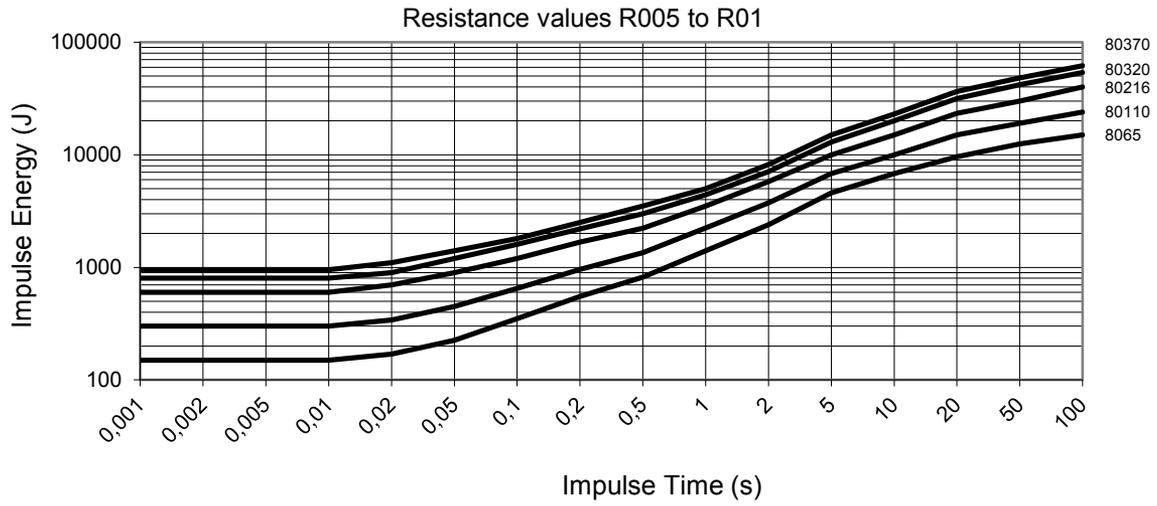


FIGURE 4—STABILITY AGAINST IMPULSES (Reference values without heatsink)

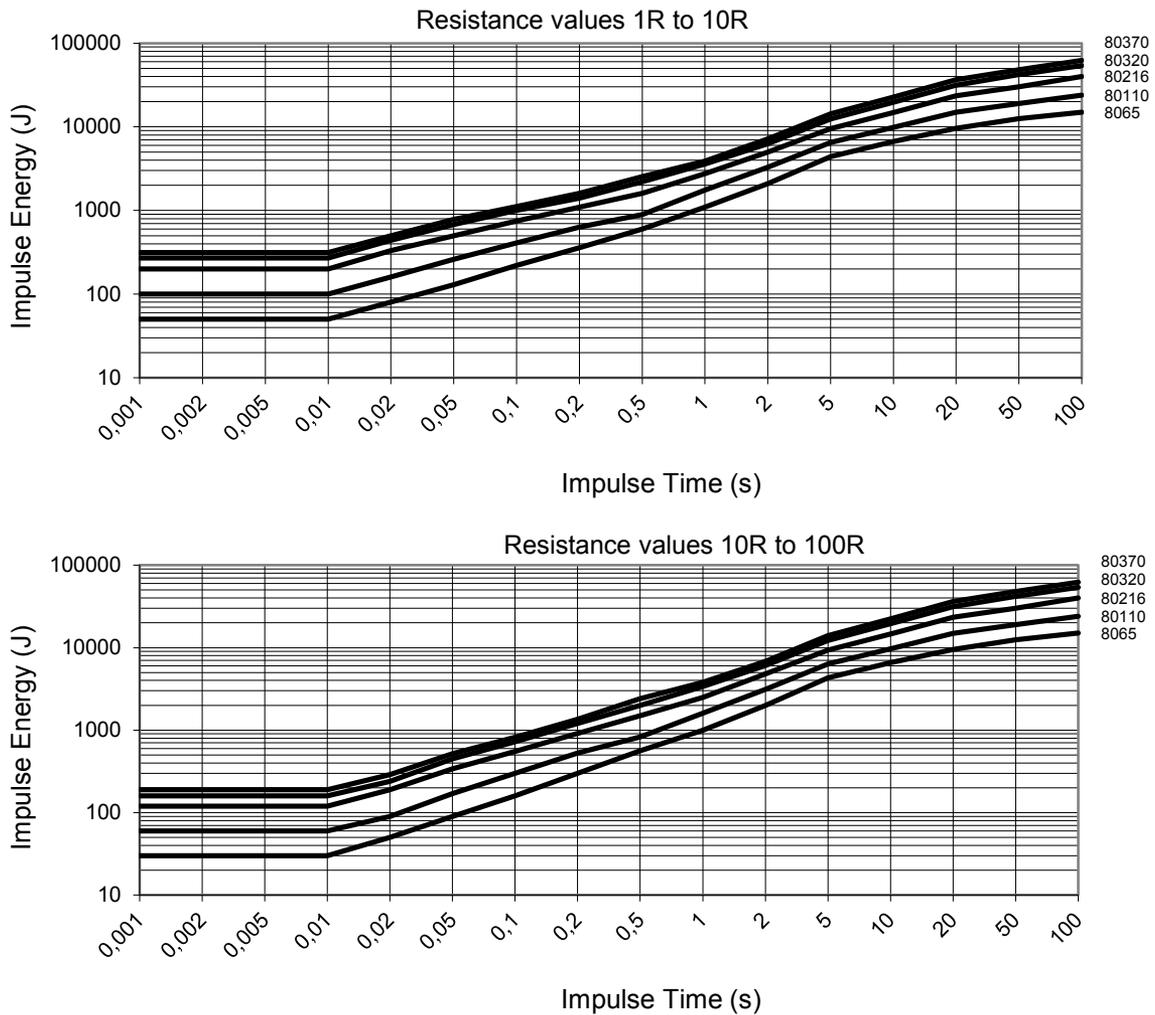


FIGURE 5—LEAD VARIATIONS

Type	max. Current	Description
D	60 A	insulated round cable (cu-tinned)
H1	70 A	insulated Cu-flat cable
H2	85 A	insulated Cu-flat cable
H3	100 A	insulated Cu-flat cable
H4	120 A	insulated Cu-flat cable
H5	150 A	insulated Cu-flat cable
H6	250 A	insulated Cu-flat cable



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