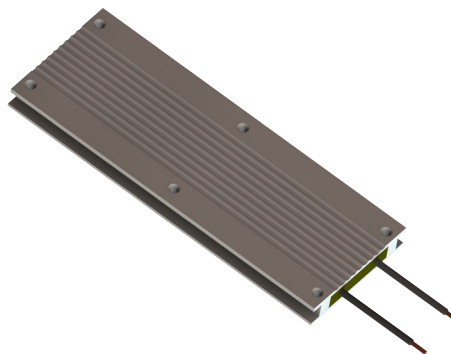


## FEATURES

- Resistances from 0.001 Ohm to 500 Ohms
- Power rating to 2500 Watt
- Resistance tolerances to  $\pm 0.5\%$
- TCR to  $\pm 50$  ppm/K
- Load stability to 0.1%
- Customized resistance values



Pb-free  
Available  
**RoHS\***  
COMPLIANT

**TABLE 1 – SPECIFICATIONS**

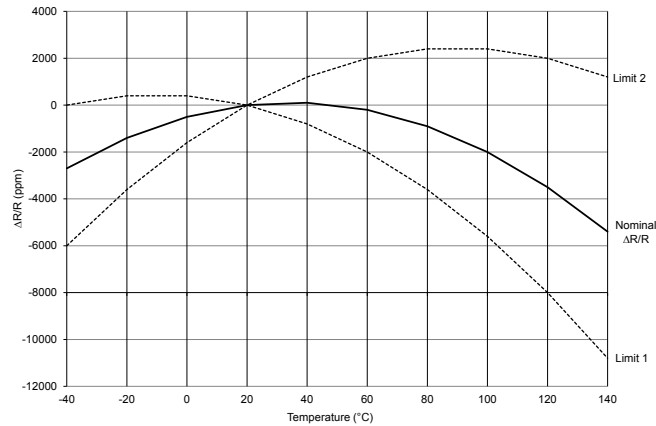
TYPE		FHR 2-	8065	80110	80216	80320	80370
Resistance Range (Ohms)			0.001 to 400	0.001 to 500	0.002 to 500		0.005 to 500
Power Rating	Free air 70°C		24 W	32 W	60 W	80 W	90 W
	With heatsink		350 W	600 W	1200 W	2000 W	2500 W
Tolerances			0.5% / 1% / 2% / 5%; other tolerances upon request				
Thermal Resistance			0.16 K/W	0.09 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			$\pm 50$ ppm/K (20°C to 60°C)				
Max. Current			60 A upon request special cable up to 250 A				
Inductivity			< 50nH				
Capacity against Housing			500 pF	850 pF	1.7 nF	2.5 nF	2.9 nF
Voltage Proof			1.5 kVDC (higher upon request)				
Thermal EMF			<0.1 $\mu$ V/K				
Operating Temperature Range			-40°C to 130°C				
Resistor Material			CuNiMn-Foil				
Substrate			Anodized aluminium				
Housing			Anodized aluminium				
Connector Material			Cu-Cable / 4mm <sup>2</sup> / 500mm lenght (other upon request / AWG possible)				
Terminals			2				

## ORDERING INFORMATION

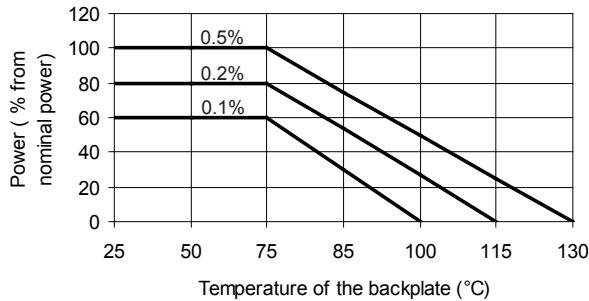
Part Number - Resistance - Contact - Tolerance

FHR 2-80370 0R100 D 0.5%

**FIGURE 1 – TEMPERATURE COEFFICIENT**



**FIGURE 2 – DERATING**



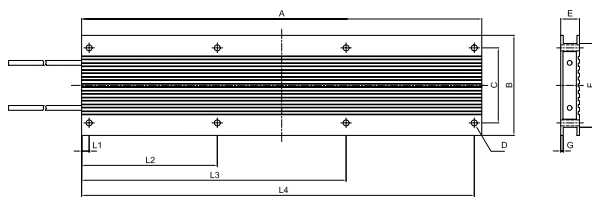
**Power Rating Notes -**

The FHR 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 )

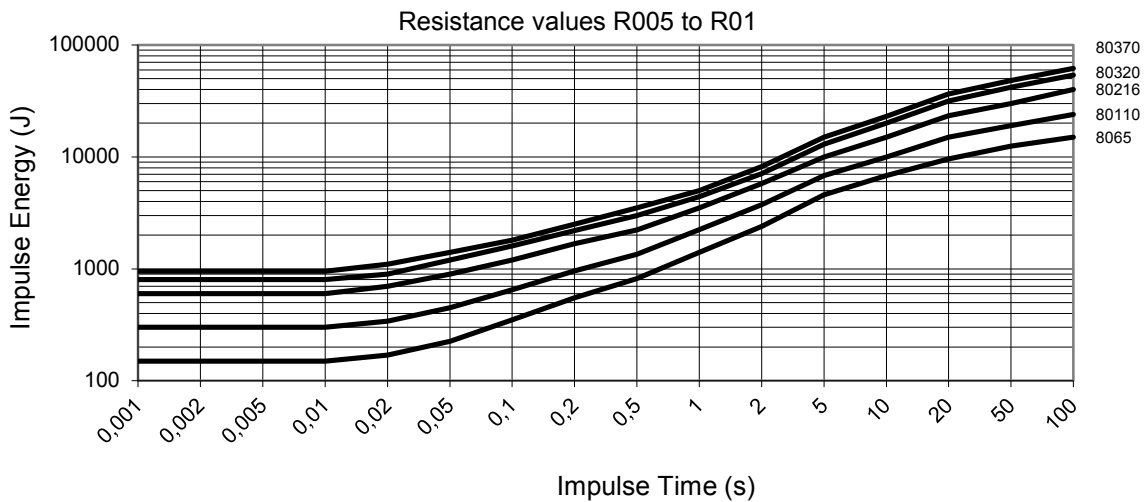
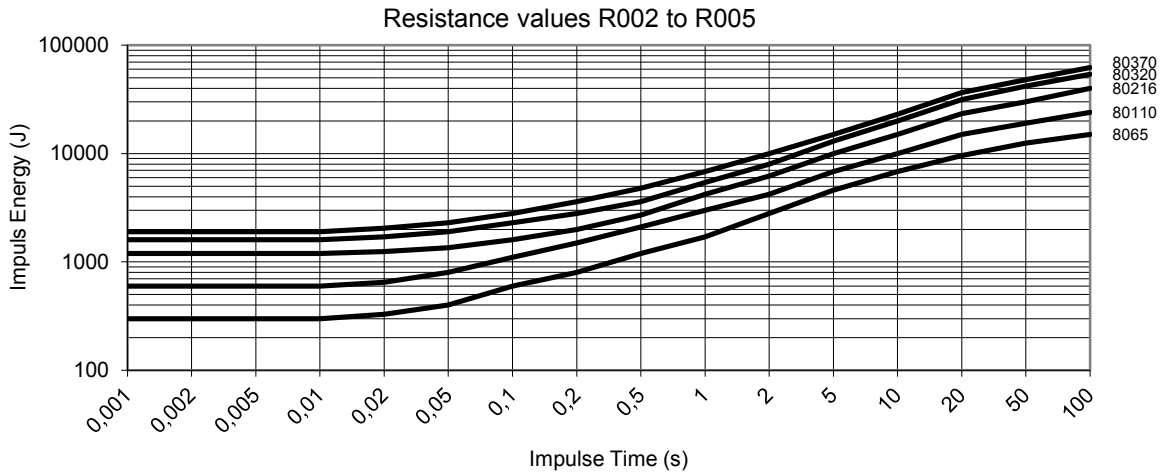
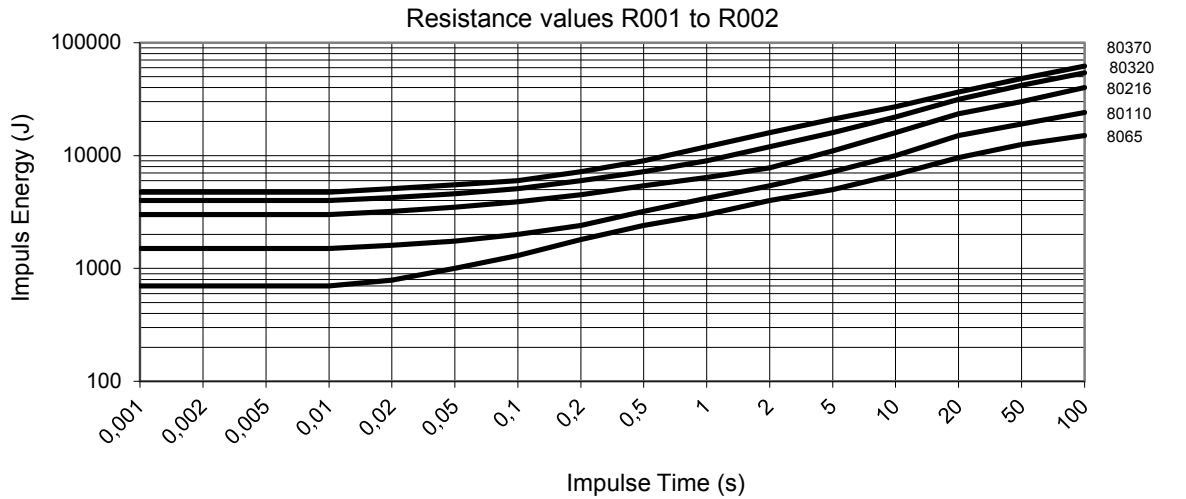
**FIGURE 3 – DIMENSIONS in MM (inches)**



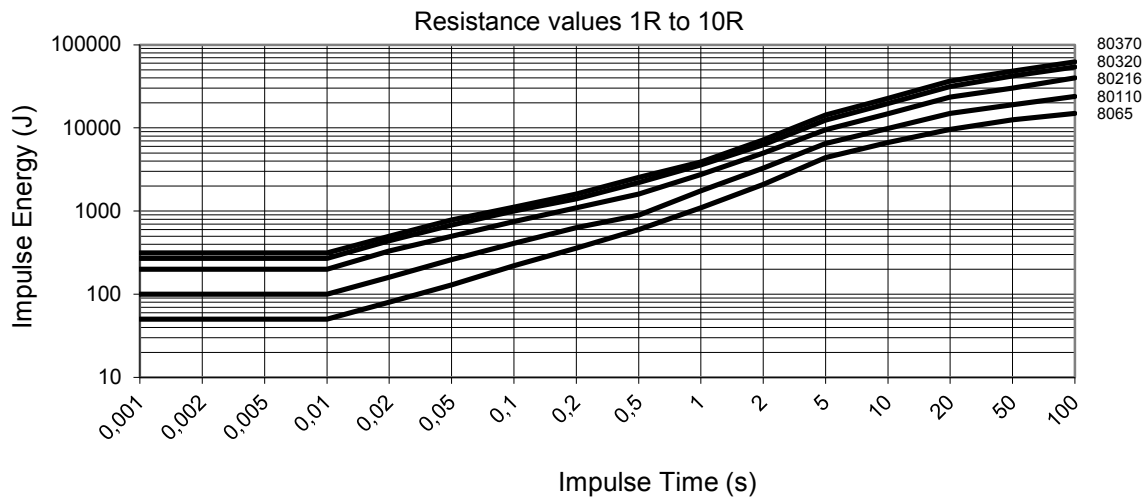
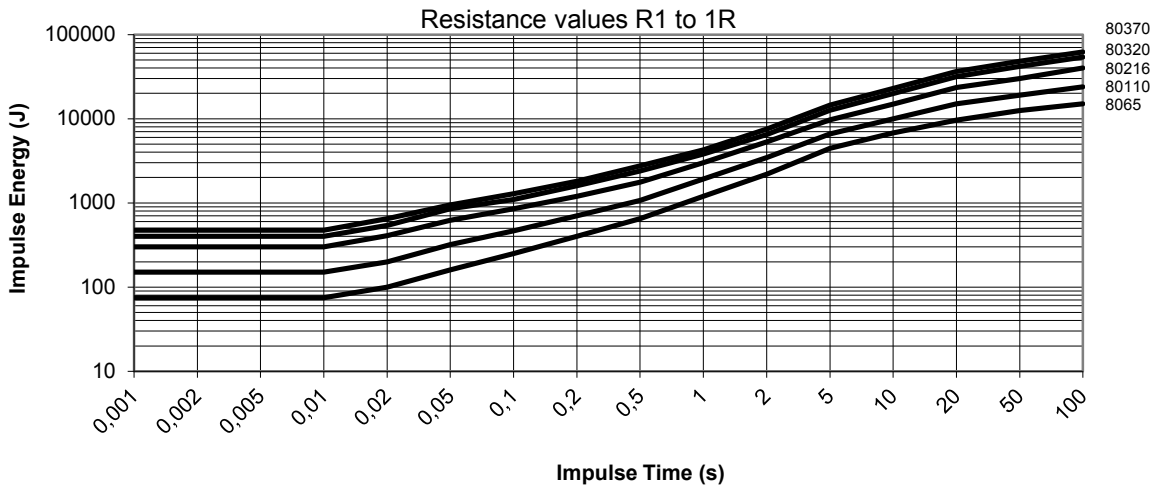
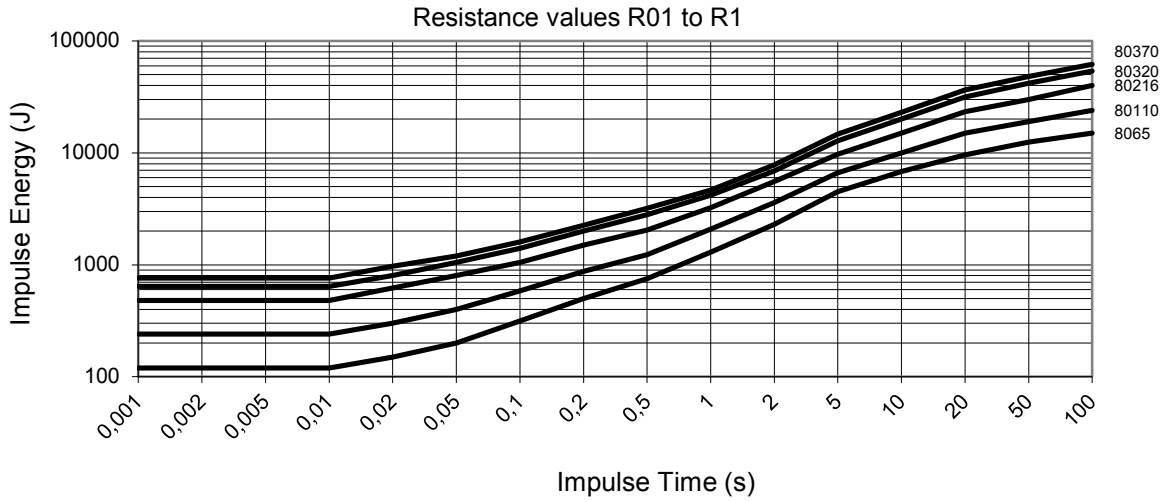
Dimension	
B ±0.3(±0.012)	80.00 (3.15)
C ±0.3(±0.012)	60.00 (2.36)
D ±0.2(±0.008)	Ø4.00 (Ø0.19)
E ±0.2(±0.008)	15.00 (0.59)
F ±0.3(±0.012)	67.00 (2.64)
G ±0.1(±0.004)	2.00 (0.08)

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)

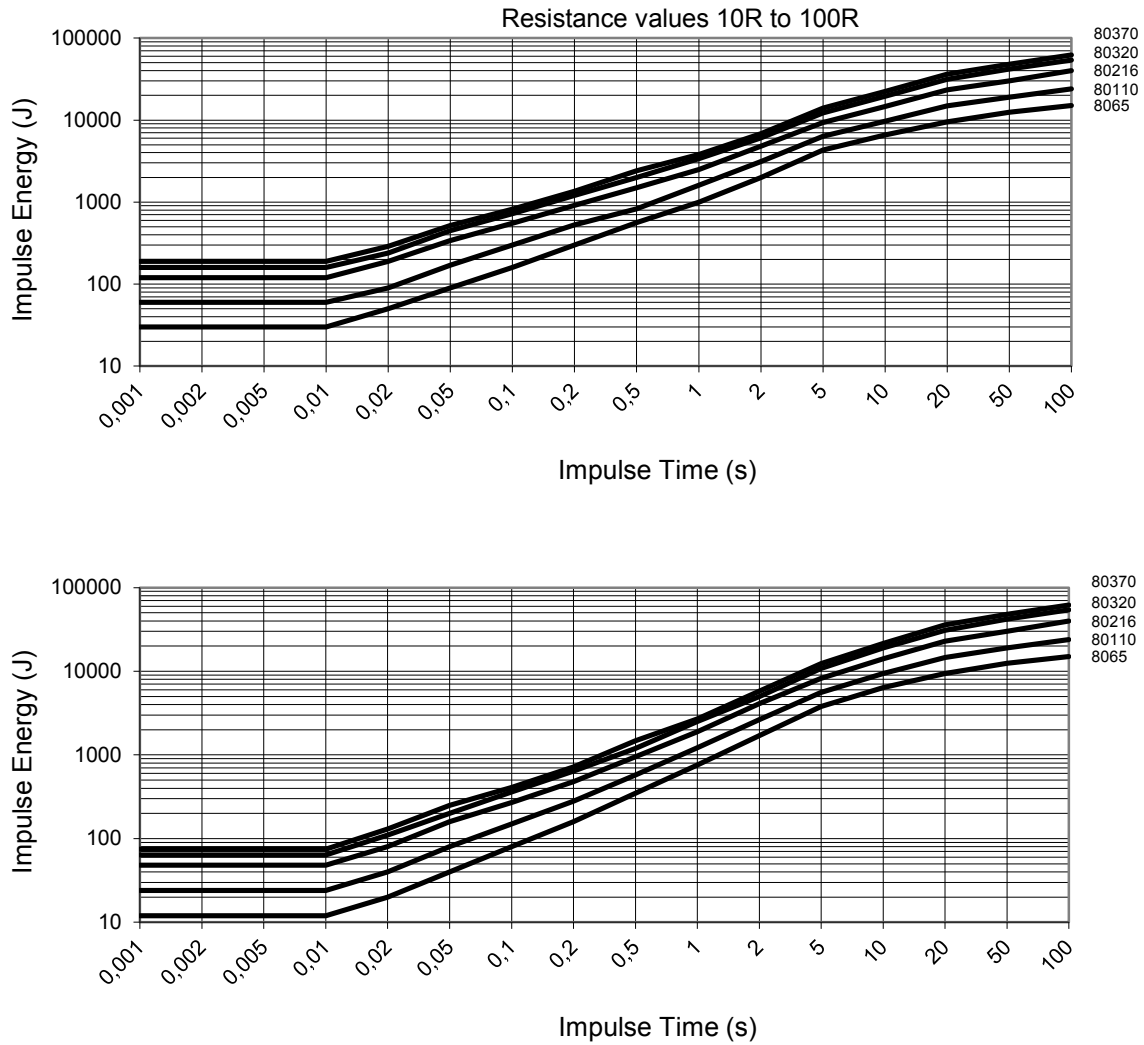
**FIGURE 4—STABILITY AGAINST IMPULSES** Reference values without heatsink



**FIGURE 4—STABILITY AGAINST IMPULSES** Reference values without heatsink



**FIGURE 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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