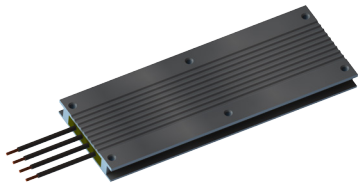
FHR 4-8065 80110 80216 80320 80370

FEATURES

- Resistances from 0.001Ohm to 500Ohms
- Power Rating to 2500Watt
- Resistance Tolerances to ±0.1%
- TCR to ±25ppm/K
- Load Stability to 0.1%
- Very Low Inductance (<50nH)



Pb-free Available

RoHS* COMPLIANT

TABLE 1—SPECIFICATIONS

TYPE		8065	80110	80216	80320	80370
Resistance Range (Ohms)		0.001 to 400	0.001 to 500	0.002 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 **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 (Q)** **Option (R) Extended Temperature Range**		±25ppm/K (20 to 60°C) ±50ppm/K (-40 to 130°C)				
Voltage Proof		1.5 kVDC (higher upon request)				
Maximum Current		60 A upon request special cable up to 250 A				
Inductivity		< 50 nH				
Capacity against housing		500 pF	850 pF	1.7 nF	2.5 nF	2.9 nF
Thermal EMF		< 1µV/K				
Operating Temperature Range		-40 to 130°C				
Resistor Material		CuNiMn-Foil				
Substrate		Anodized aluminium				
Housing		Anodized aluminium				
Connector Material		Cu / tinned				
Terminals		4				
Connector Material		Standard: Cu-Cable / 4mm² / 500mm lenght (D) (other upon request / AWG possible)				

ORDERING INFORMATION

Part Number - Resistance - Contact - Tolerance - TCR
FHR 4-80216 1R000 D 1% Q

FIGURE 1—TEMPERATURE COEFFICIENT

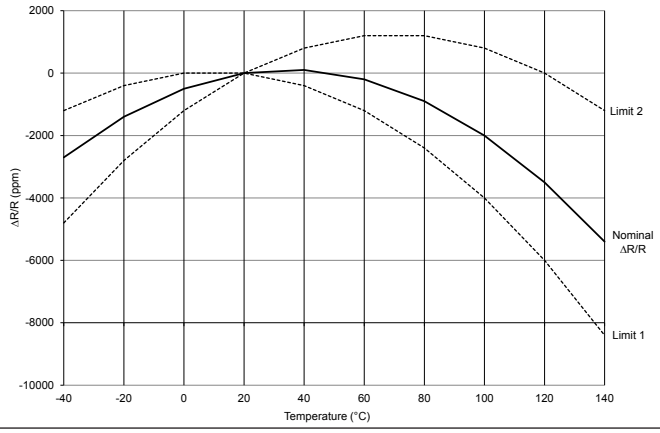
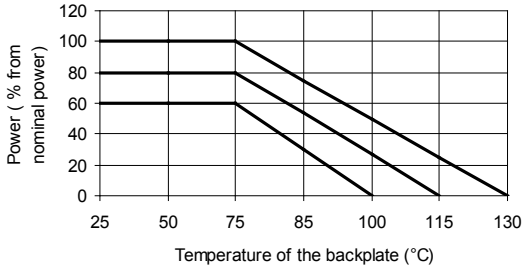


FIGURE 2—DERATING

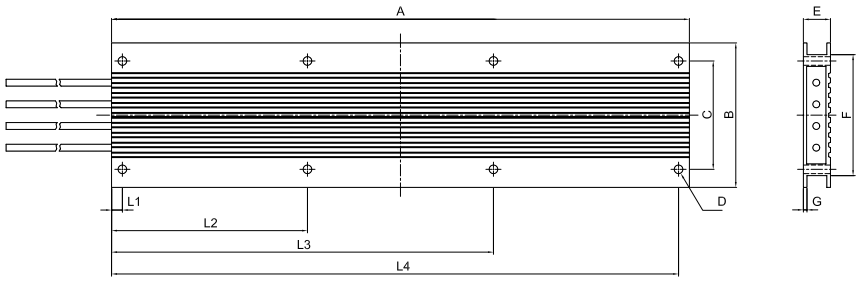


Power Rating Notes -
The FHR Series Resistors must be attached to a suitable heat-sink. The maximum internal resistor temperature is 130°C.
To specify an appropriate heatsink use the following formula :

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

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

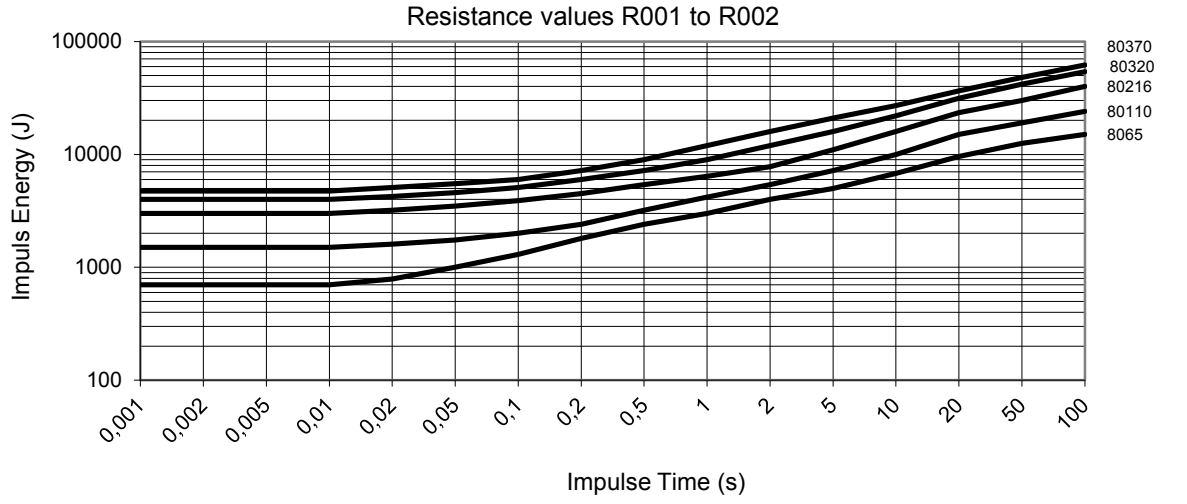
FIGURE 3—DIMENSIONS in mm (inches)

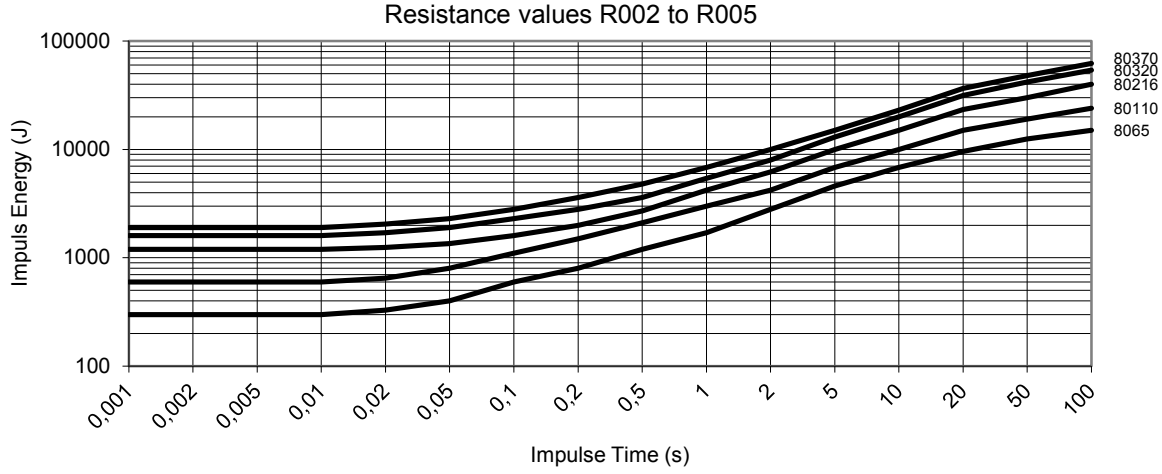


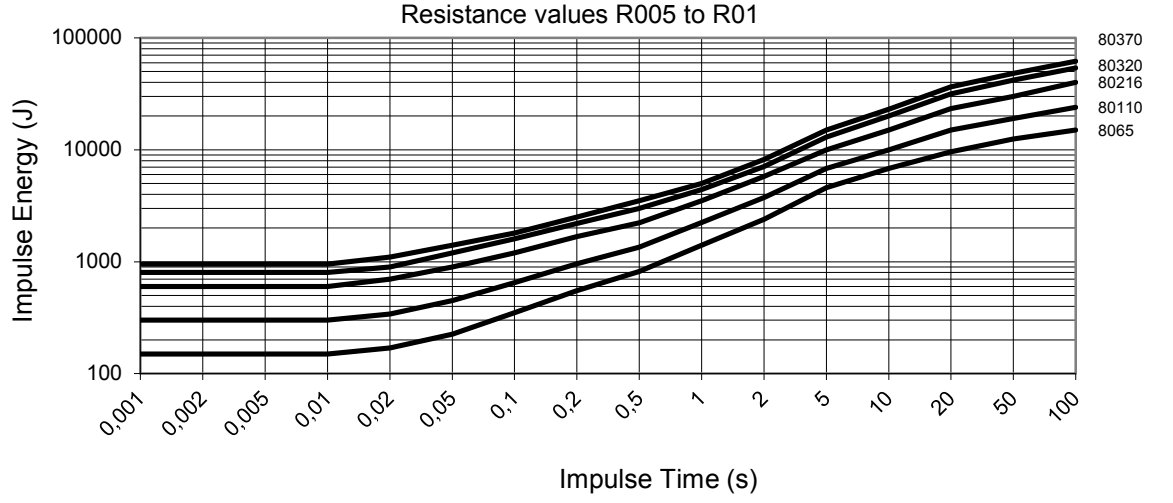
Dimension	mm
B ±0.3 (±0.012)	80.00 (3.15)
C ±0.3 (±0.012)	60.00 (2.36)
D ±0.2 (±0.008)	Ø4.75 (Ø0.19)
E ±0.2 (±0.008)	15.00 (0.59)
F ±0.3 (±0.012)	67.00 (2.64)
G ±0.1 (±0.004)	2.00 (0.08)

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)







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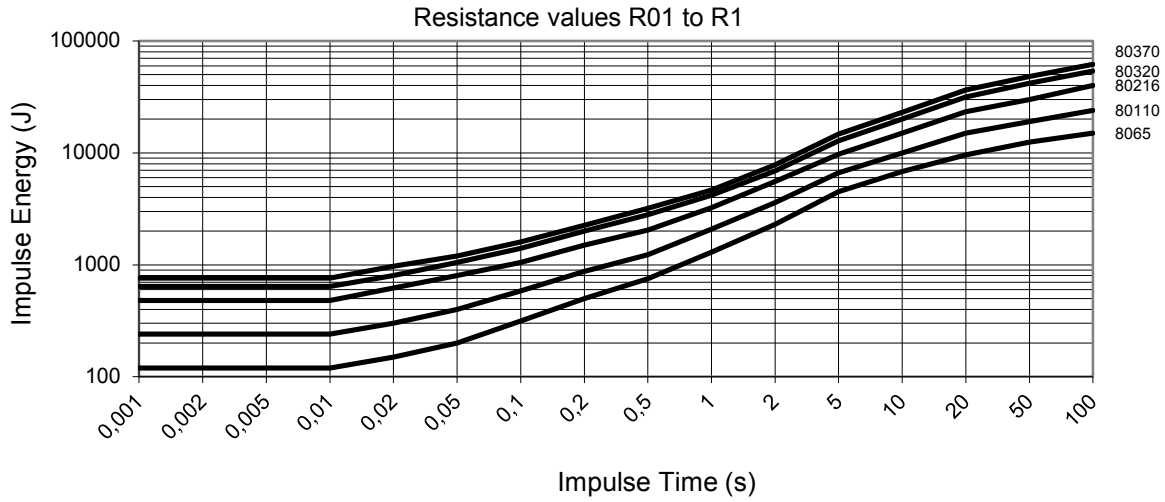

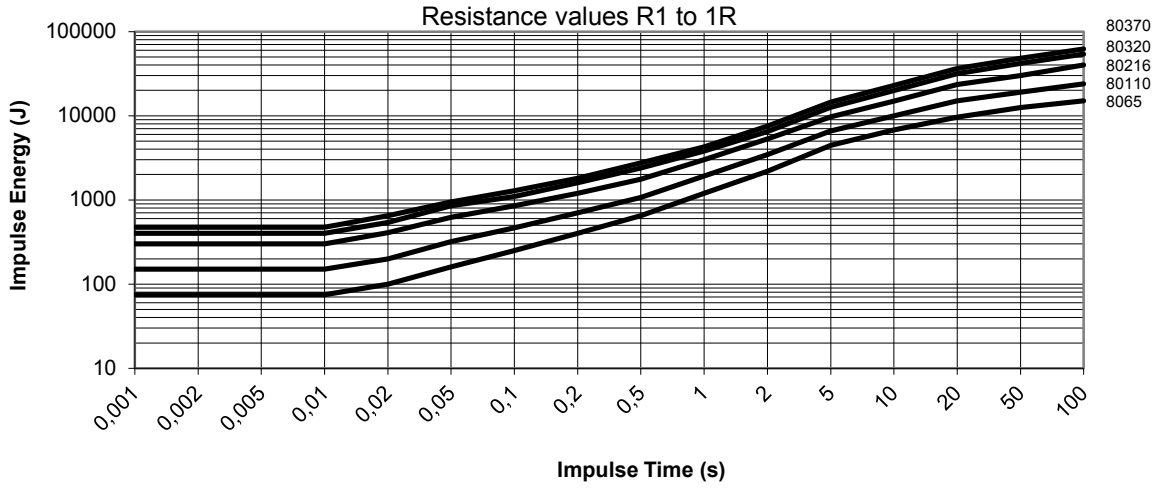

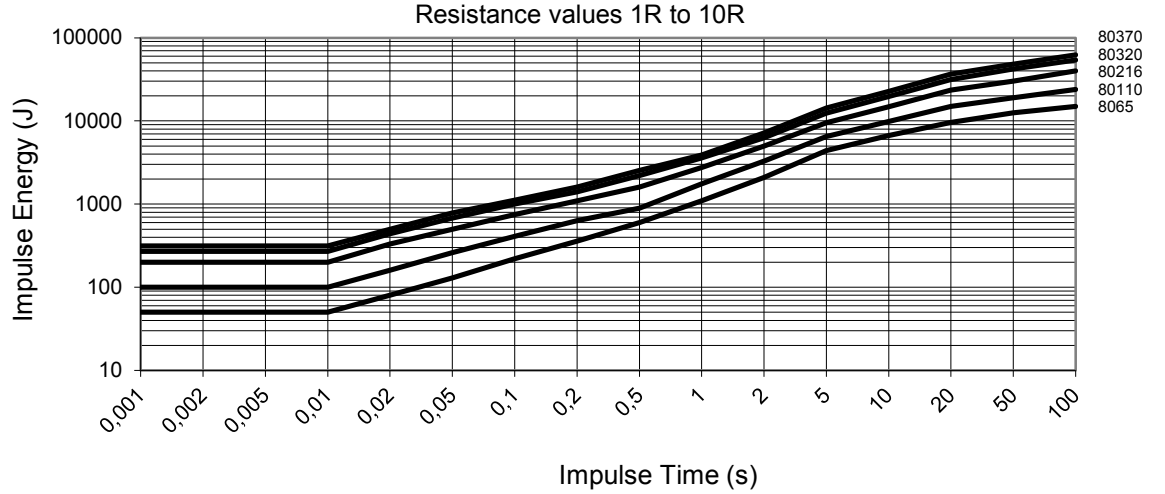

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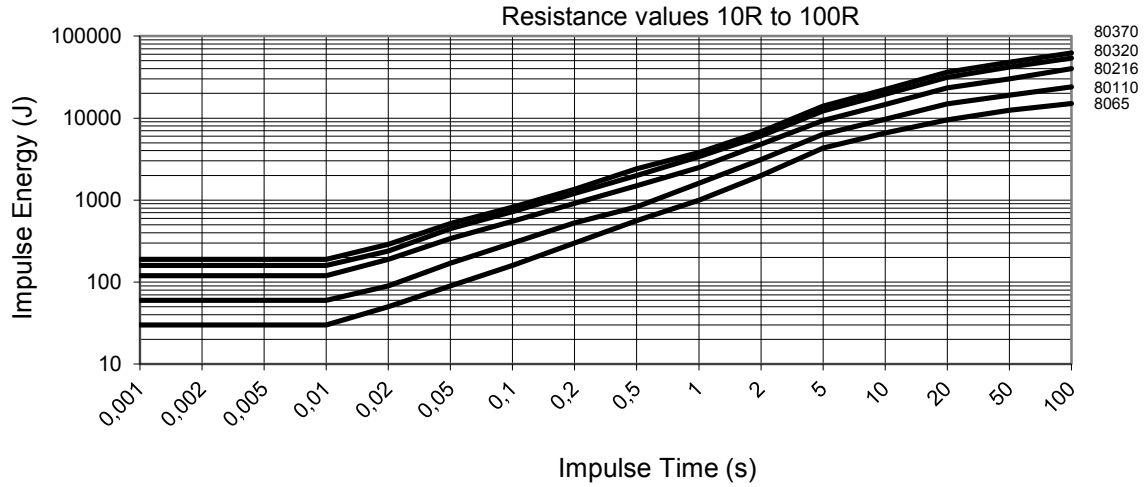

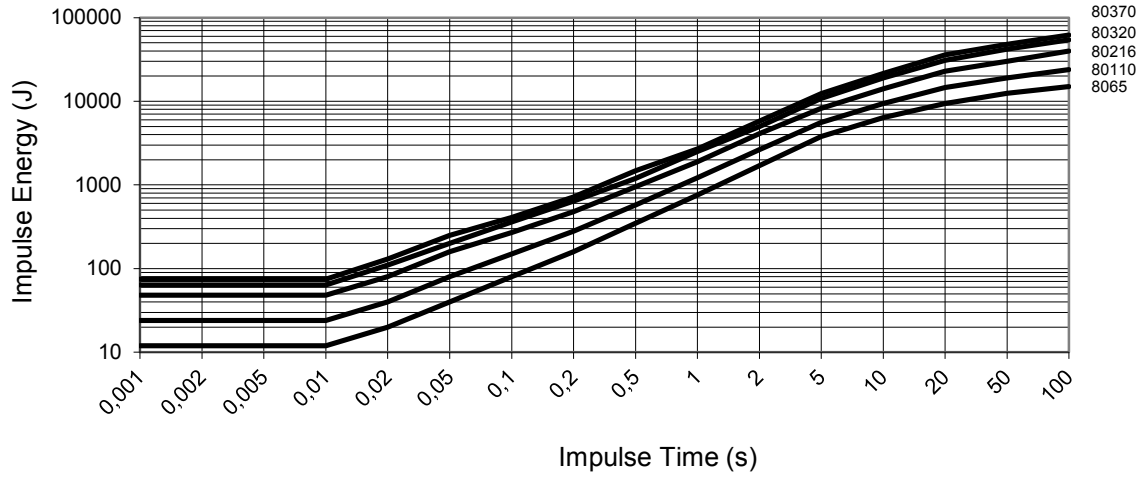

FIGURE 5—LEAD VARIATIONS

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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