Type HCF Series

Key Features

High Power overload capability

Low Profile – 15mm thick

IP54 ingress protection

PTFE insulated Flying Leads for flexibility of connection



TE Connectivity are pleased to introduce this new wire wound power resistor. Designed and tested to absorb high power overloads they are ideally suited to braking applications. In addition, with a thickness of only 15mm they would be invaluable where space is at a premium.

Characteristics – Electrical

Feature	Specification
Power Rating	See Performance Specification
Tolerance	±5%, ±10%
Maximum Working Voltage*	1100V
Insulation Resistance	≥1000MΩ @ 1000VDC
Dielectric Strength	3500VAC for 1m Terminal – Aluminium Body
TCR	±200ppm/°C
Resistor Element	Wire Wound
Flying Lead	300 mm Standard; PTFE Insulated; 600V; 200°C
Resistor Body	Anodized extruded Aluminium Profile
Ingress Protection	IP54
Vibration	IEC60068-2-6

*Rated Continuous Working voltage (RCWV) = √P*R unless this exceeds the stated Maximum Working Voltage, in which case the lower of the two should always be used.

Performance Specification

Type	HCF80	HCF110	HCF166	HCF216
Power Rating (W) @40°C	75	100	160	200
Max. Temperature °C	200	260	265	275
Resistance Range	4.7Ω - 1KΩ	6.8Ω - 1KΩ	10Ω - 1KΩ	10Ω - 1KΩ
For Higher / Lower Resistance Value please enquire				

Overload Rating

HCF80

Type	Value (Ω)	Power Rating @ 40°C	Pulse load (W) 40°C 120s Duty Cycle		
			1.2s Pulse	7.2s Pulse	48s Pulse
HCF80	4.7	75	1650	615	165
HCF80	10	75	1650	615	165
HCF80	22	75	1650	615	165
HCF80	33	75	1650	615	165
HCF80	47	75	1650	615	165
HCF80	68	75	1650	615	165
HCF80	100	75	1650	615	165
HCF80	150	75	1650	615	165
HCF80	220	75	1300	615	150
HCF80	330	75	1300	615	150
HCF80	470	75	1100	550	150
HCF80	680	75	900	550	150
HCF80	1000	75	1000	550	150

HCF110

Type	Value (Ω)	Power Rating @ 40°C	Pulse load (W) 40°C 120s Duty Cycle		
			1.2s Pulse	7.2s Pulse	48s Pulse
HCF110	6.8	100	2200	1025	245
HCF110	10	100	2200	1025	245
HCF110	22	100	2200	1025	245
HCF110	33	100	2200	1025	245
HCF110	47	100	1900	975	245
HCF110	68	100	1900	950	245
HCF110	100	100	1600	875	245

HCF110 (continued)

Type	Value (Ω)	Power Rating @ 40°C	Pulse load (W) 40°C 120s Duty Cycle		
			1.2s Pulse	7.2s Pulse	48s Pulse
HCF110	150	100	1600	850	245
HCF110	220	100	1600	875	245
HCF110	330	100	1600	850	245
HCF110	470	100	1600	850	245
HCF110	680	100	1600	910	245
HCF110	1000	100	1200	800	175

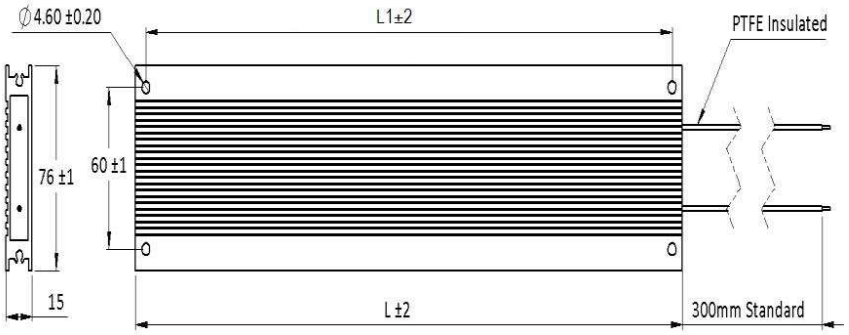
HCF166

Type	Value (Ω)	Power Rating @ 40°C	Pulse load (W) 40°C 120s Duty Cycle		
			1.2s Pulse	7.2s Pulse	48s Pulse
HCF166	10	160	5700	1650	390
HCF166	22	160	5700	1650	390
HCF166	33	160	5700	1600	390
HCF166	47	160	5700	1650	390
HCF166	68	160	5700	1600	390
HCF166	100	160	5000	1500	390
HCF166	150	160	5000	1500	390
HCF166	220	160	5000	1500	390
HCF166	330	160	5000	1500	390
HCF166	470	160	4500	1500	390
HCF166	680	160	4000	1500	390
HCF166	1000	160	3500	1500	390

HCF216

Type	Value (Ω)	Power Rating @ 40°C	Pulse load (W) 40°C 120s Duty Cycle		
			1.2s Pulse	7.2s Pulse	48s Pulse
HCF216	10	200	10500	2200	500
HCF216	22	200	8800	2200	500
HCF216	33	200	8800	2200	500
HCF216	47	200	8800	2200	500
HCF216	68	200	8800	2200	500
HCF216	100	200	8800	2200	500
HCF216	150	200	7000	2200	500
HCF216	220	200	7000	2200	500
HCF216	330	200	7000	2200	500
HCF216	470	200	7000	2200	500
HCF216	680	200	7000	2200	500
HCF216	1000	200	5000	2000	500

Dimensions



Type	L (mm)	L1 (mm)
HCF80	80	56
HCF110	110	98
HCF166	166	154
HCF216	216	204

Environmental Characteristics

Characteristic	Requirement	Test Method
Load Life	ΔR ±10%	Resistors mounted in vertical orientation, leads downwards. RCWV 1000Hrs – 90 minutes on, 30 minutes off
Damp Heat Steady State	ΔR ±1%	Humidity chamber 40°C/95% humidity for 56 days
Insulation Resistance	>2000MΩ	Tested for insulation resistance with a calibrated meter at 1000V
Dielectric Strength	Leakage Current <500µA	3500VAC for 1m Terminal – Aluminium Body
Pulse Overload	No Physical Damage ΔR ±5%	Specified overload power applied for 1.2, 7.2 and 48 seconds within a 120 seconds cycle comprising of both on and off periods. Test cycle repeated 10,000 times
Ingress Protection	IP54	IP Testing carried out at a NABL accredited test lab. The resistors were tested for dust and moisture ingress resistance under clauses 13.5.1, 13.5.2 and 14.2.4 and 14.3. Resistors passed the test without any issues.

Characteristic	Requirement	Test Method
Vibration	IEC 60068-2-6: Test Fc	The samples were mounted on a vibration table. The frequency from 2-200-2 Hz was traversed with one octave per minute. In the frequency interval 2-9 Hz the samples were vibrated with an amplitude of 3.0 mm, above 9 Hz frequency with an acceleration of 1 g. The duration was 10 sweeps in each of the three mutually perpendicular axes. Passed with no issues.

Packaging

Resistors will be packaged individually in boxes.

Marking

Resistors will be marked with Type, Resistance value, Tolerance Code and date / batch code.

HCF80J4R7J

How To Order

HCF	80	J	4R7	J
Series	**Size**	**Tolerance**	**Value**	**Connection**
HCF - Aluminium Housed Breaking Resistor	80 – 75W 110 – 100W 166 – 160W 216 – 200W	J – 5% K – 10%	10R - 10Ω 100R - 100Ω 1K0 – 1KΩ	J – Flying leads