

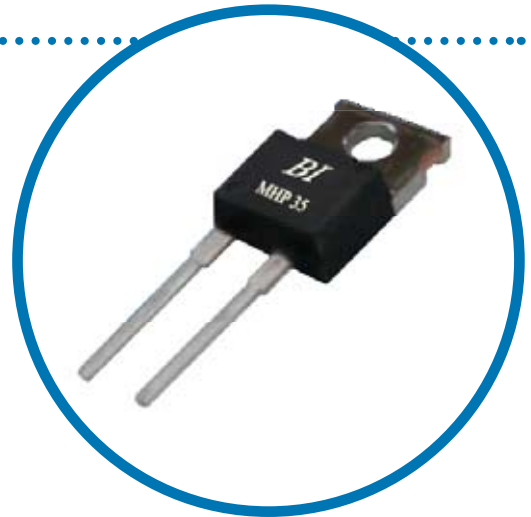
35W TO220

High Power Resistors

MHP 35

Features

- Non-inductive, thin film technology.
- Thermally enhanced Industry standard TO220 package.
- RoHS compliant.
- Low thermal resistance, 3.3 °C/W resistor hot spot to metal tab.
- Complete thermal flow design available for easy implementation.
- Superior vibration durability.
- Small thin package for high density PCB installation.
- AEC-Q200 Qualified



Applications

- High frequency circuits and high speed pulse designs.
- Switch mode power supplies.
- Motor control and drive circuits.
- Automotive.
- Industrial computing and measurement systems.

Specifications

Item	Specifications			Test Conditions
Power Rating	35 watts			-55 to 25 °C flange temperature
Power Rating	1.0 watt			Free air.
Thermal Resistance	3.3 °C/W			Hot spot to Tab
Resistance Range	0.01-0.09 Ω	0.1-9.1 Ω	10-51K Ω	Measured at 5.27 mm from body
Nominal Resistance Series	E6	E24	E24	2.5 Ω and 5.0 Ω also available
TCR	250 ppm/°C	100 ppm/°C	50 ppm/°C	See note 1
Tolerance	+/- 5% (J)	+/-1% (F) & 5% (J)	+/-1% (F)	
Operation Temp. Range	-55°C to +155°C			
Max. Operating Volt.	500V or P.R			
Dielectric Withstanding Voltage	2000 Volts AC			60 seconds.
Load Life ΔR	+/- (1.0 % + 0.05 Ω)			25 °C, 90 min. ON, 30 min. OFF, 1000 hours.
Humidity	ΔR +/- (1.0 % + 0.05 Ω)			40°C, 90-95% RH, DC 0.1 W, 1000 hours.
Temp. Cycle	ΔR +/- (0.25 % + 0.05 Ω)			-55 °C, 30 min., +155 °C, 30 min., 5 cycles
Soldering Heat (Max)	ΔR +/- (0.1 % + 0.05 Ω)			250 +/- 5 °C, 3 seconds,
Solderability	Over 95% of surface			230 +/- 5 °C, 3 seconds.
Insulation Resistance	Over 1,000 MΩ			Between terminals and tab.
Vibration	ΔR +/- (0.25 % + 0.05 Ω)			

Note:

1) TCR increased on low values: 300ppm/°C / 0.02Ω, 200ppm/°C / 0.05Ω, 140ppm/°C / 0.1Ω & 80ppm/°C / 0.2Ω typically
 Specifications subject to change without notice.

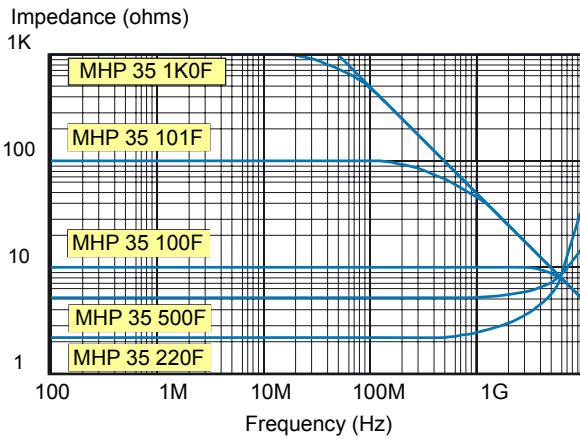
General Note

TT electronics reserves the right to make changes in product specification without notice or liability.
 All information is subject to TT electronics' own data and is considered accurate at time of going to print.

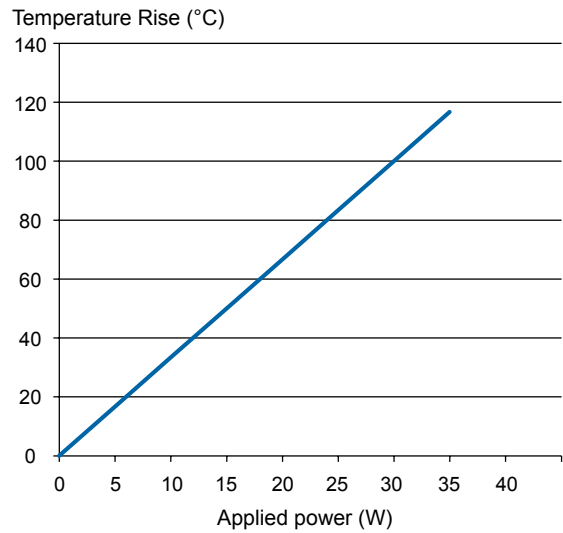
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Electrical Performance

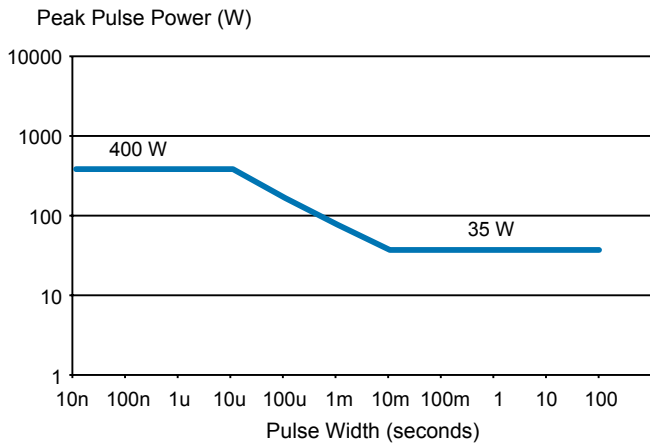
Frequency Characteristics



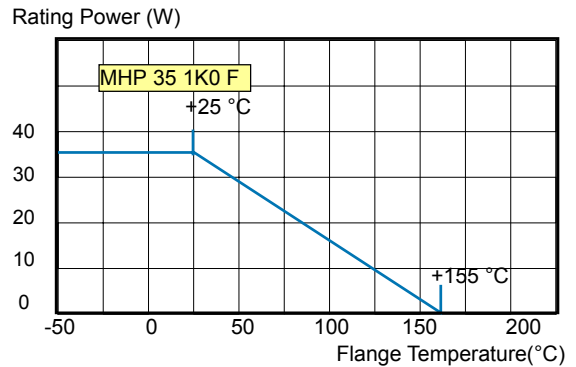
Thermal characteristics



Pulse Energy Durability



Derating Curve



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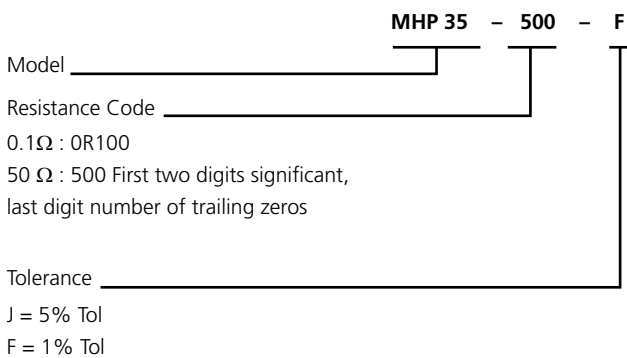
Dimension

	Dimension mm	Tolerance +/- mm
A	10.1	0.2
B	15.0	0.2
C	4.5	0.2
D	3.6	0.1
E	15.0	0.2
F	4.0	0.5
G	3.0	0.2
H	2.75	0.2
J	0.5	0.05
K	0.75	0.05
L	1.5	0.05
M	5.08	0.1
N	1.5	0.05
P	16.0	0.5

Notes:

- (1) Electrically isolated metal tab.
- (2) Recommend the use of thermal grease between metal tab and heat sink.
- (3) Thermal design should account for a thermal resistance between resistor and tab of 3.3°C/W and a maximum resistor temperature of 155°C.
- (4) Surface mount package also available, please call factory.
- (5) Current rating: 25A maximum.

Ordering Procedure



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