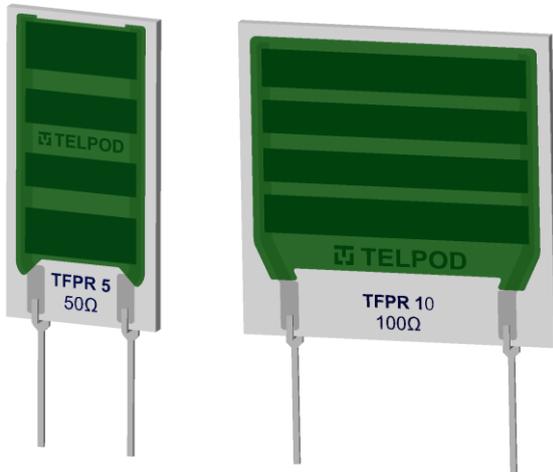


TFPR 5W & 10W

HIGH ENERGY THICK-FILM PLANAR, THROUGH HOLE RESISTOR SERIES

Characteristics



Features

- Non-Inductive planar package
- High power density
- Maximal energy withstanding capabilities
- Thin package for PCB instalation
- Power dissipated above the board
- RoHS, REACH compliant



Applications

- Power supply pre-load resistors
- UPS systems
- Pulse generator load resistors
- Bleeder Resistors
- In-rush current protection
- Snubber and pulse handling circuits

Description

TELPOD’s original Power Chip resistors feature our thick film on alumina substrate technology for surge energy and overload applications. they provide the impulse energy capability normally associated with wirewound or composition resistors. These planar packages yield space saving, over 10W/in² power densities that require over 50% less board space than other radial packages. Convection cooling is maximized by the planar package configuration which dissipates heat well above board level. TELPOD’s power resistors have a 130% higher operating temperature range than competitive product of similar design. Larger surface area and high efficiency of thick films mean that Surge Energy rating is up to 30% higher than competitor’s products. Refined design eliminating hot spots. Vertical mounting enhances board cooling due to natural convection airflow and minimises board area. Tinned copper leads are soldered on both sides in order to obtain a durable and stable connection.

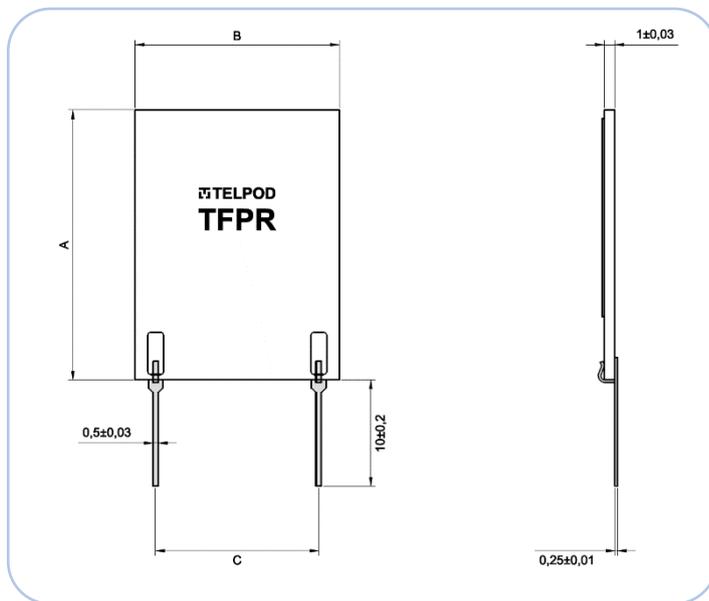
Technical parameters

	TFPR 5	TFPR 10
Resistance range	1 Ω ... 100 kΩ	
Resistance tolerance	±10%, 5%, 1%	
Rated power P _N	5 W	10 W
Impulse overload	24 x P _N – see page 2.	20 x P _N – see page 2. 25 x P _N – see page 2.
Surge Energy	72J ; 200ms pulse (see page 3.)	130J ; 100ms pulse (see page 3.)
Dielectric strenght	> 5kV	
Temperature coefficient of resistance	0 ±100 ppm/°C	
Working temperature range	-55°C ... +170°C	
Overglazing	Yes	

TFPR 5W & 10W

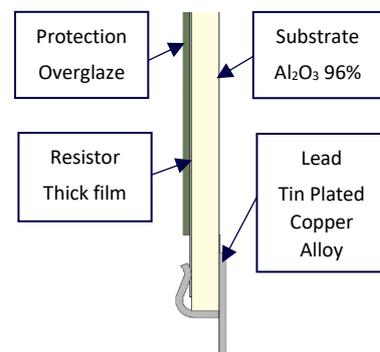
HIGH ENERGY THICK-FILM PLANAR, THROUGH HOLE RESISTOR SERIES

Dimensions and materials

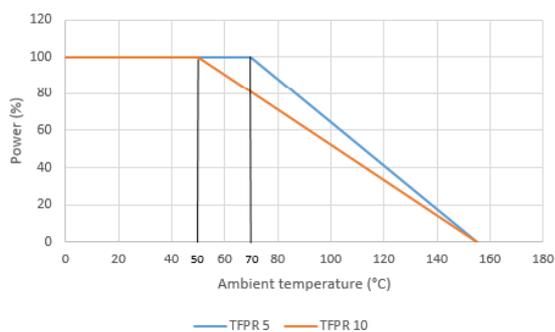


Dimensions in [mm]

Symbol	TFPR 5	TFPR 10
A	25,4 (1,00")	25,4 (1,00")
B	12,7 (0,50")	25,4 (1,00")
C	7,62 (0,30")	17,78 (0,70")



Derating curve



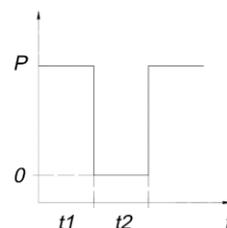
Overload

Pulse loading of the resistor with constant power after stabilizing the temperature (without a heat sink)

Pulse shape: rectangle

Pulse time: t_1

Pulse pause: t_2



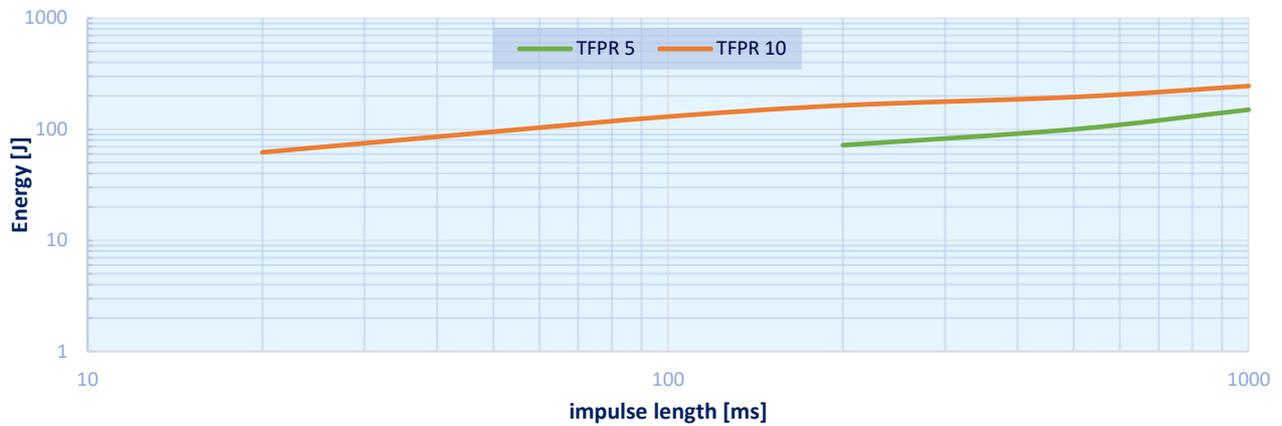
	P [W]	t_1 [ms]	t_2 [ms]
TFPR 5	120	2	10
TFPR 10	200	2	10
	250	2	20

For more information, please contact the technical department.

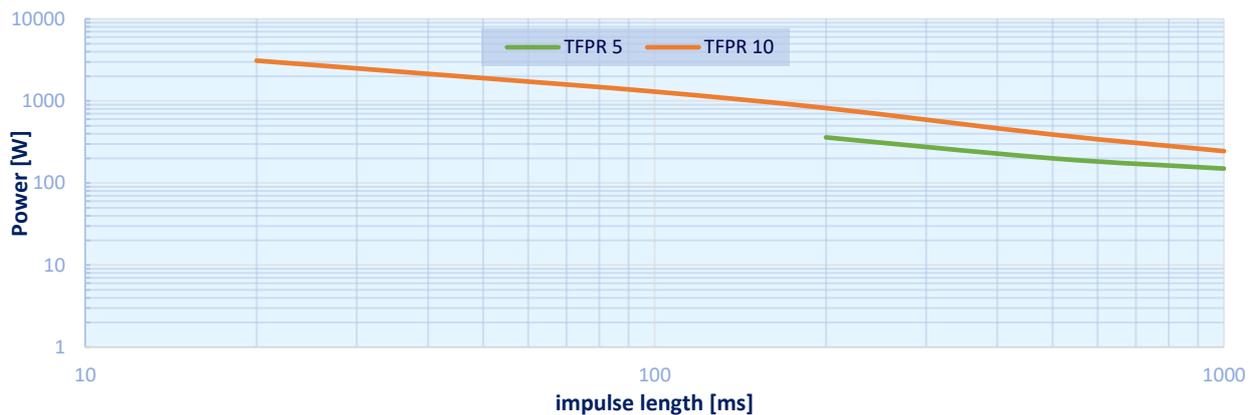
TFPR 5W & 10W

HIGH ENERGY THICK-FILM PLANAR, THROUGH HOLE RESISTOR SERIES

Pulse Energy



Power overload



Ordering informations

Series	Resistance	Tolerance
TFPR 5	1Ω,...,100kΩ	K = ±10 % (standard) J = ±5%, F = ±1%
TFPR 10	xRx < 10Ω < xxR < 1kΩ xkx < 10kΩ xxK	

Example: TFPR5 100R K

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