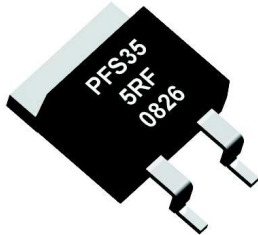


# PFS35

Power SMD Film Resistors



- TO-263 Housing (D-Pak)
- Resistances from 0.01Ohm to 51kOhms
- Power Rating to 35Watt
- Resistance Tolerances to  $\pm 1\%$
- TCR to  $\pm 50\text{ppm}/^\circ\text{C}$
- Load Stability to 1%
- Solder Reflow Secure at  $260^\circ\text{C} / 20\text{s}$
- Isolated Back Plate

## SPECIFICATIONS

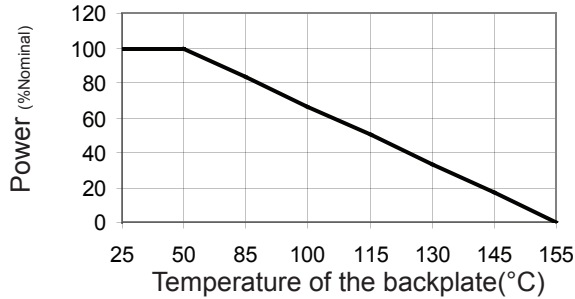
Type	PFS35		
Terminals	2		
Terminal Finish	Tin Plated Copper		
Power Rating (with heatsink)	35 W ( 2W on Simple Solder Pad )		
Thermal Resistance Rthj-c	3.3 K/W		
Resistance Range	0.01 to 0.099Ohms	0.1 to 9.9Ohms	10 to 51KOhms
Tolerances (others upon request)	5%	1% / 5%	1%
Temperature Coefficient	$\pm 250\text{ ppm}/^\circ\text{C}$	$\pm 100\text{ ppm}/^\circ\text{C}$	$\pm 50\text{ ppm}/^\circ\text{C}$
Operating Temperature	$-55^\circ\text{C}$ to $155^\circ\text{C}$		
Max Operating Voltage	500V		
Inductance	8.4 nH		
Voltage Proof	2.0kV DC		
Insulation Resistance	Over 1,000 Megohm		
Resistor Material	Thin Film		
Load Life	$\pm 1\%$	90 min ON, 30 min OFF, 1000 hrs @ 25C	
Humidity	$\pm 1\%$	90-95% RH, 0.1W, 1000 hrs @ 40C	
Temperature Cycle	$\pm 0.25\%$	$-55\text{C}$ for 30 min, $+155\text{C}$ for 30 min, 5 cycles	
Solder Heat	$\pm 0.1\%$	$350\text{C} \pm 5\text{C}$ for 3 seconds	
Vibration	$\pm 0.25\%$	IEC60068-2-6	
Reflow soldering	lead-free soldering $260^\circ\text{C} / 20\text{s}$		

## Ordering Information

Part Description: Part Type - Resistance - Tolerance  
PFS35 10 Ohms 1%

### SPECIFICATIONS (continued)

#### Derating Curve



#### Power Rating Notes -

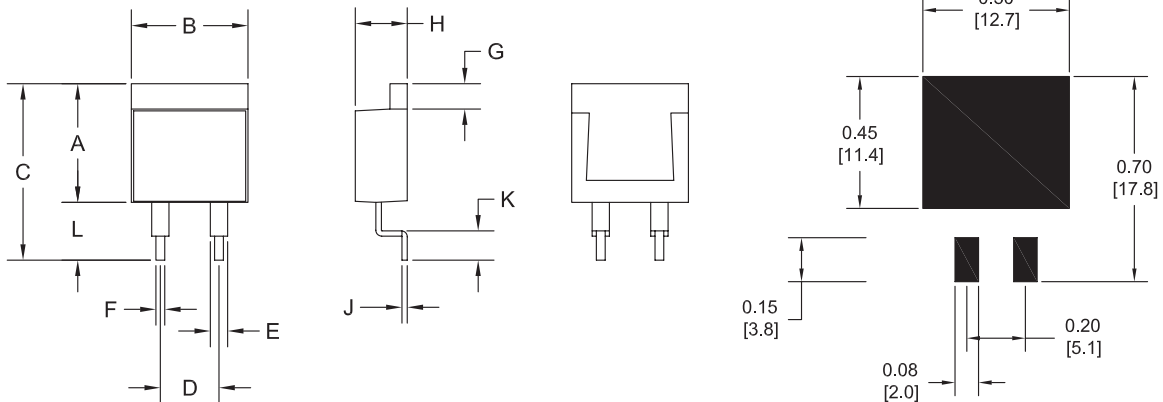
The PFS35 Series Resistors must be attached to a suitable heatsink. The maximum internal resistor temperature is 175°C. To specify an appropriate heatsink use the following formula :

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

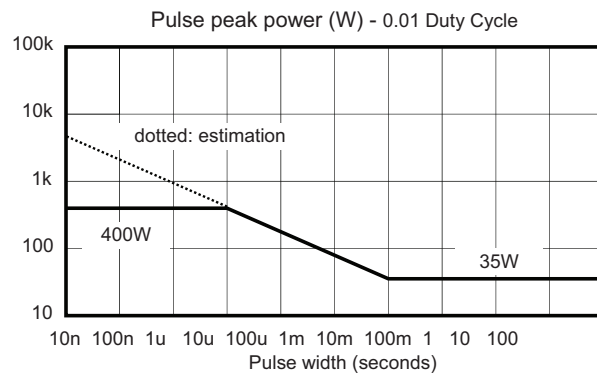
Where:  $R_{\theta H}$  = Thermal Resistance of Heatsink ( K/W )  
 $R_{\theta R}$  = Thermal Resistance of Resistor ( K/W )  
 $T_{MAX}$  = Maximum Temperature of Resistor  
 $T_A$  = Ambient Temperature of Heatsink ( °C )  
 $P$  = Power Through Resistor ( W )

### DIMENSIONS

Back plate is isolated from both pins.



Dimension	mm	tol. (±mm)	inches	tol. (±inches)
A	10.3	0.2	0.405	0.008
B	10.1	0.2	0.400	0.008
C	15.3	1.0	4.54	0.04
D	5.08	0.1	0.200	0.004
E	1.5	0.05	0.060	0.002
F	0.75	0.05	0.030	0.002
G	2.2	0.2	0.087	0.008
H	4.5	0.2	0.177	0.008
J	0.5	0.05	0.020	0.002
K	2.5	0.5	0.10	0.02
L	5.0	1.0	0.20	0.04



Load life test will be necessary in actual equipment.