



PFT0H030J8 30A 80V Filter Module



Features

- 80V maximum voltage
- 30A maximum current
- Suitable for most DC-DC converters
- Industry standard package
- Compact size: 2.42" x 1.02"
- Wide operating temperature range: -40°C to +100°C



Product Description

This PFT0H030J8 filter attenuates both differential-mode and common-mode conducted noise generated by DC-DC converters. This multi-stage filter is optimized to provide high insertion loss over the entire frequency range regulated by FCC and CISPR for conducted emissions.

Absolute Maximum Rating

Excessive stresses over these absolute maximum ratings can cause permanent damage to the filter module. Operation should be limited to the conditions outlined under the Electrical Specification Section.

Parameter	Min	Max	Unit
Operating Voltage (continuous)	-	80	V
Operating Voltage (<100ms, operating)	-	100	V
Isolation voltage from I/O to GND	-	1500	V
Operating Case Temperature	-40	100	°C
Storage Temperature	-55	125	°C

Electrical Specifications

These specifications are valid over the full range of input voltage, operating temperature unless noted otherwise.

Parameter	Min	Max	Unit
Operating Voltage	0	80	V
Operating Current (RMS)	-	30	A
DC Resistance	-	5	mΩ

Note: The filter module is not internally fused. An input line fuse must always be used.



Attenuation Specifications

Parameter		Min	Typical	Max	Unit
Common-mode 50Ω Circuit	500kHz	30	35	-	dB
	1MHz	40	45	-	dB
	30MHz	30	35	-	dB
Differential-mode 50Ω Circuit	500kHz	50	55	-	dB
	1MHz	45	50	-	dB
	30MHz	30	35	-	dB

General Specifications

Parameter	Min	Typical	Max	Unit
Calculated MTBF (Telecordia SR-332, 2011, Issue 3), full load, 40°C, 60% upper confidence level, $V_{in} = 75V$	-	66	-	10^6 -hour

Internal Schematic

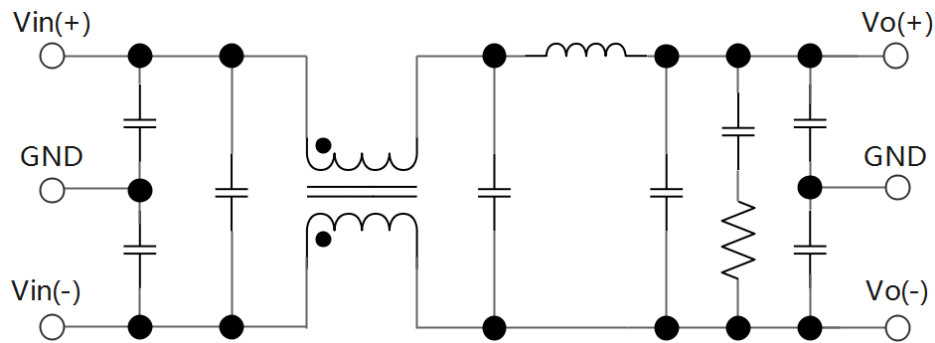


Figure 1. Internal Schematic



Characteristic Curves

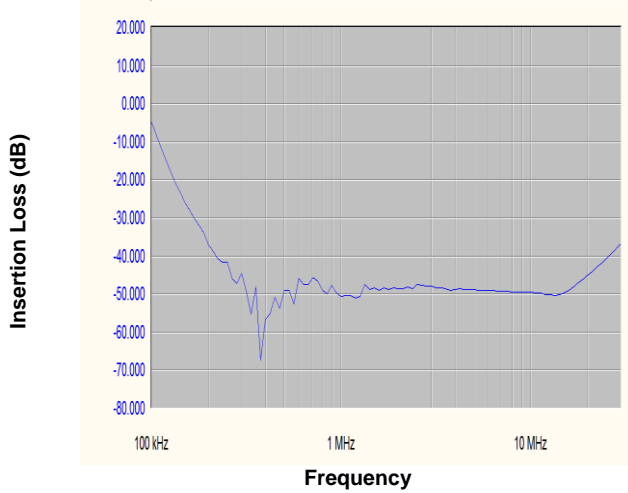


Figure 2. Differential-mode Insertion Loss in a 50Ω circuit

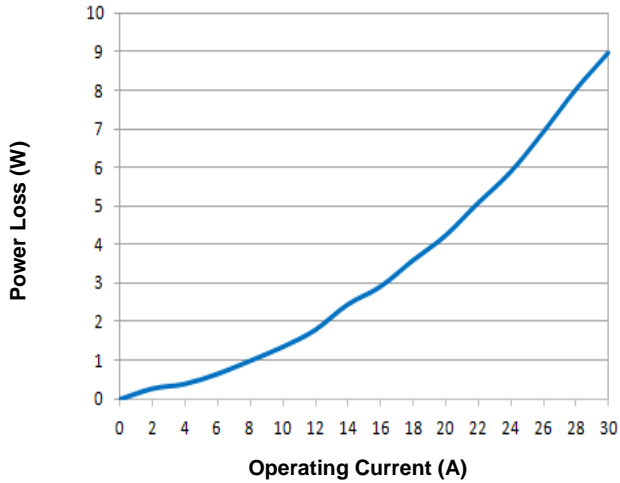


Figure 4. Power Loss vs. Operating Current

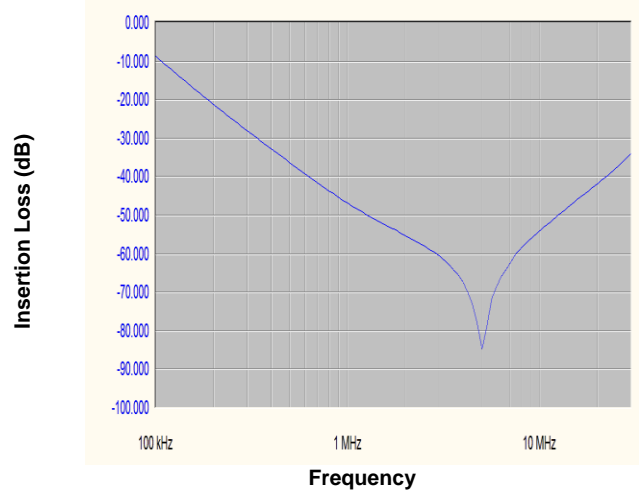


Figure 3. Common-mode Insertion Loss in a 50Ω circuit

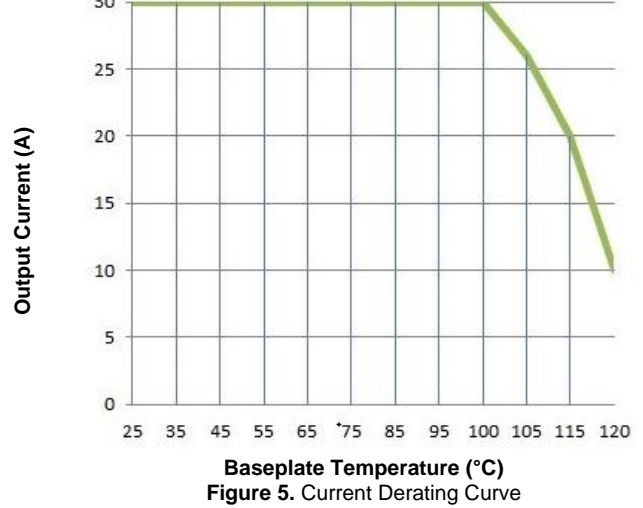
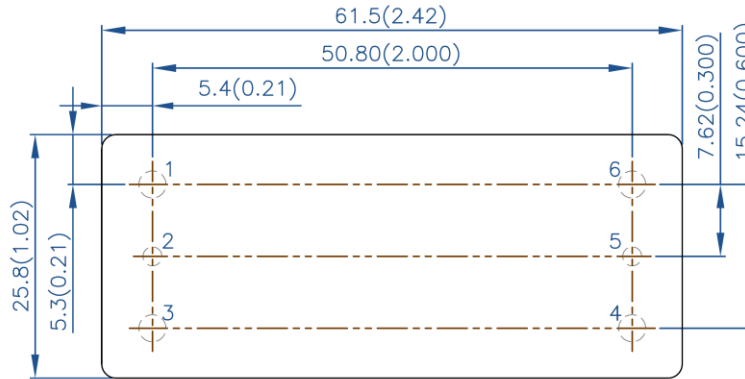


Figure 5. Current Derating Curve

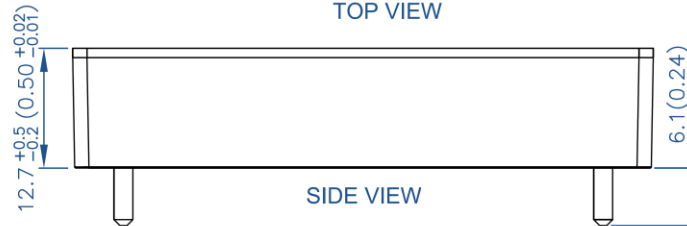


Mechanical Drawing

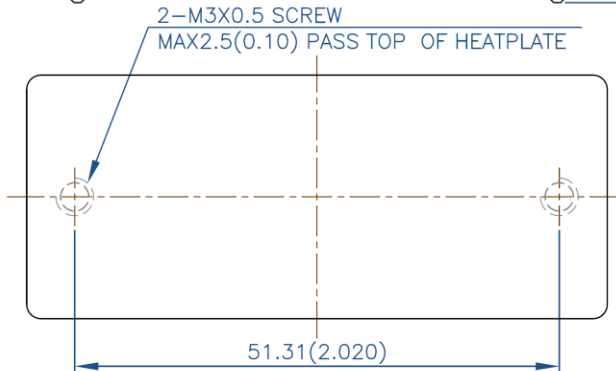


*Pin 1,3,4,6 are 2.03 (0.080) dia.
*Pin 2,5 are 1.02 (0.040) dia.

TOP VIEW



SIDE VIEW



BOTTOM VIEW

Base board mounting holes reference

Pin	Name	Function
1	Vin (+)	Positive input voltage
2	GND	Power ground
3	Vin (-)	Negative input voltage
4	Vout (-)	Negative output voltage
5	GND	Power ground
6	Vout (+)	Positive output voltage

Notes:

- 1) All dimensions in mm (inches)
- 2) Tolerances: .x ±.5 (.xx ± 0.02)
.xx ±.25 (.xxx ± 0.010)
- 3) Pin 1,3,4,6 are 2.03mm (0.080") dia. with +/- 0.10mm (0.004") tolerance, the recommended diameter of the receiving hole is 2.44mm (0.096").
- 4) Pin 2,5 are 1.02mm (0.040") dia. with +/- 0.10mm (0.004") tolerance, the recommended diameter of the receiving hole is 1.42mm (0.056").
- 5) All pins are Copper Alloy, Gold finish with Nickel under plating.
- 6) Workmanship meets or exceeds IPC-A-610 Class II.
- 7) If M3 screws are used to attach a heatsink to the baseplate, the screw length from the top surface of baseplate going down should not exceed 2.5 mm (0.10") max.