

PFT0H020J8 20A 80V Filter Module



Features

- 80V maximum voltage
- 20A maximum current
- Suitable for most DC-DC converters
- Industry standard package
- Compact size: 2" x 1.6"
- Wide operating temperature range: -40°C to +100°C

Product Description

This PFT0H020J8 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	Vdc
Operating Voltage (< 100ms, operating)	-	100	Vdc
Isolation voltage from I/O to GND	-	2,250	Vdc
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	Vdc
Operating Current (RMS)	-	20	A
Resistance per leg	-	7.5	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	33	45	-	dB
	2MHz	42	56	-	dB
	30MHz	35	42	-	dB
Differential-mode 50Ω Circuit	500kHz	40	45	-	dB
	1MHz	48	53	-	dB
	30MHz	45	50	-	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

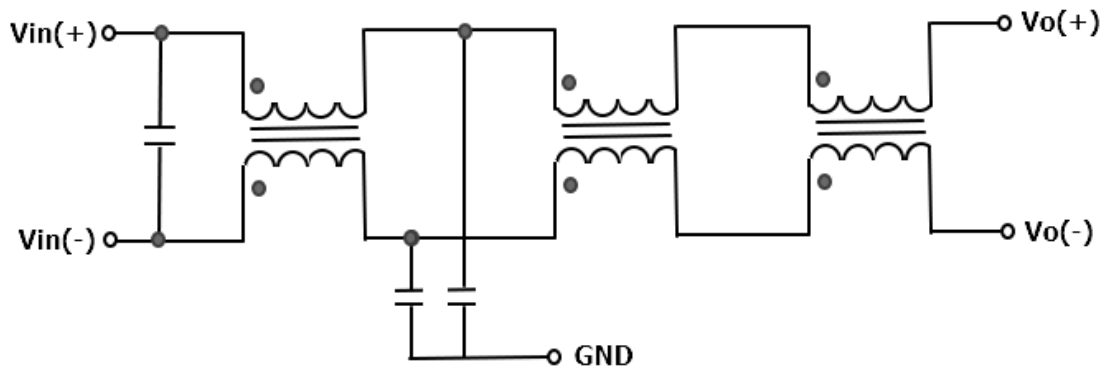


Figure 1. Internal Schematic



Characteristic Curves

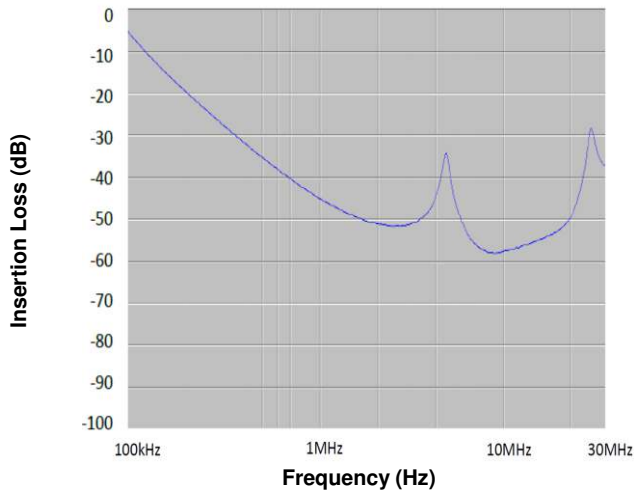


Figure 2. Differential-mode Insertion Loss in a 50Ω circuit

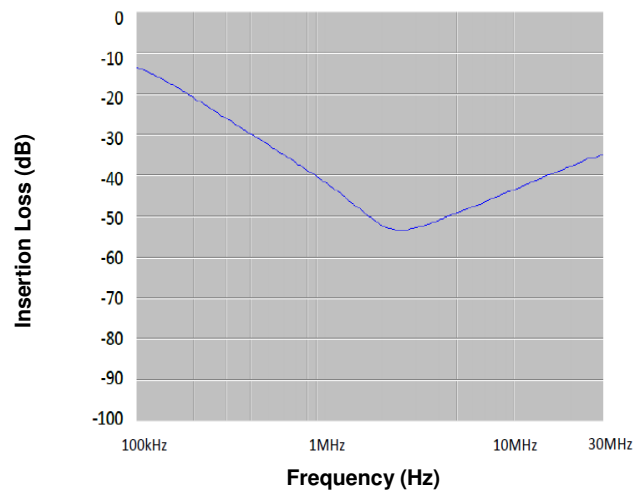


Figure 3. Common-mode Insertion Loss in a 50Ω circuit

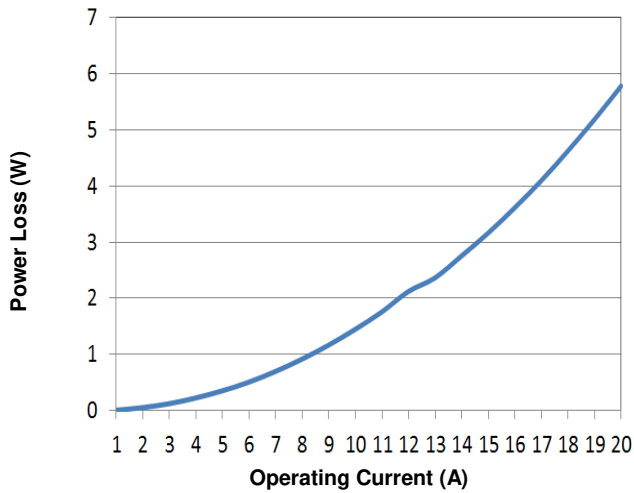
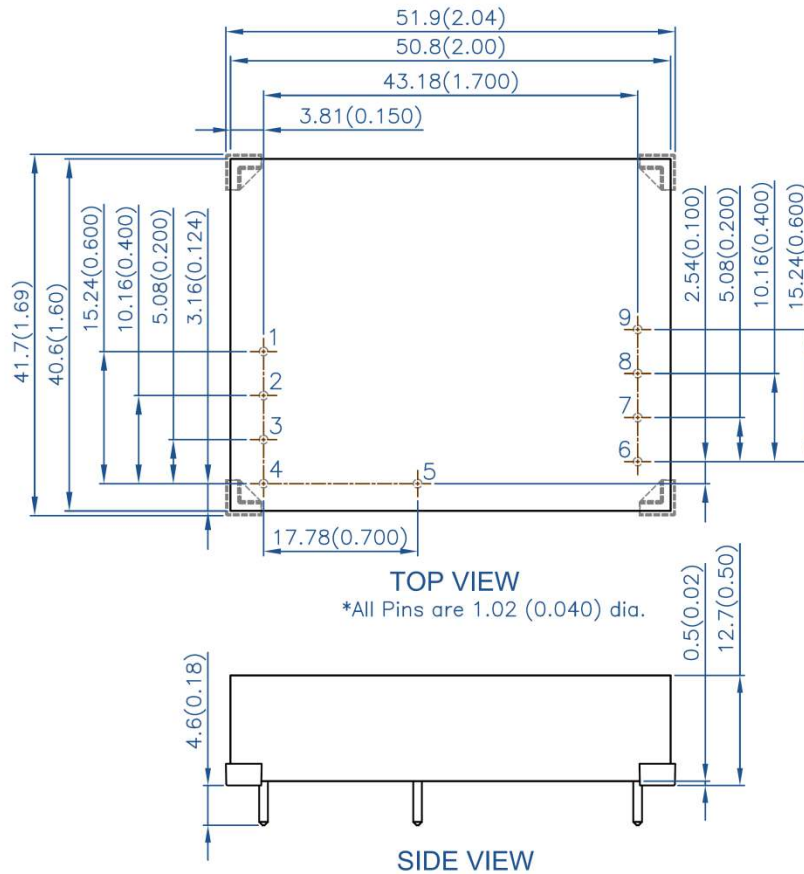


Figure 4. Power Loss vs. Operating Current



Mechanical Drawing



Pin	Name	Function
1,2	Vin (+)	Positive input voltage
3,4	Vin (-)	Negative input voltage
5	GND	Power ground
6,7	Vout (-)	Negative output voltage
8,9	Vout (+)	Positive output voltage

Notes:

- 1) All dimensions in mm (inches)
Tolerances: .x ± .5 (.xx ± 0.02)
.xx + .25 (.xxx ± 0.010)
- 2) All pins are 1.02mm (0.040") dia. with +/- 0.10mm (0.004") tolerance; the standoff shoulders are 1.65mm (0.065") dia. with +/- 0.15mm (0.006") tolerance.
- 3) Gold or Matte Tin finish with Nickel under plating.
- 4) Weight: 56g
- 5) Workmanship meets or exceeds IPC-A-610 Class II.