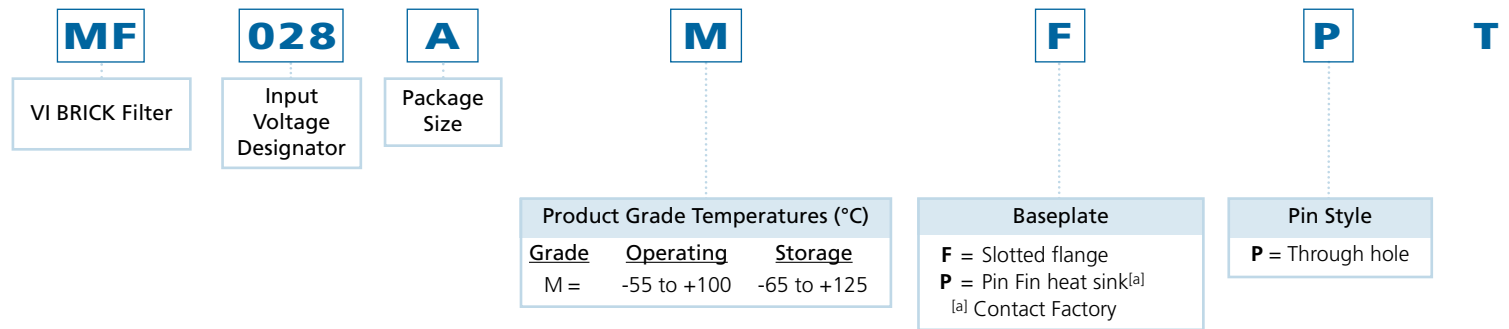


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SPECIFICATIONS

PART NUMBERING

**Input Specifications** (Conditions are at 28 Vin, full load, and 25°C baseplate unless otherwise specified)

Parameter	Min	Typ	Max	Unit	Notes
Input voltage range	16.5	28	50	Vdc	Operation to 13.5 V after start up ≥ 16.5 V
Input current			8	Adc	
Inrush limiting			0.01	A/μF	
Recommended external input capacitance		10		μF	C1 Figure 7
Transient Immunity			100	Vdc	50 ms per MIL-STD-1275A/B/D continuous operation
			250	Vdc	70 μs per MIL-STD-1275A/B/D continuous operation
			70	Vdc	20 ms per MIL-STD-704A continuous operation
			80	Vdc	100 ms per D0-160 E, sec.16, Cat. z cont. operation
			50	Vdc	12.5 ms per MIL-STD-704E/F continuous operation

Output Specifications (Conditions are at 28 Vin, full load, and 25°C baseplate unless otherwise specified)

Parameter	Min	Typ	Max	Unit	Note
Output voltage range	16.0	28	49.6	Vdc	
Internal voltage drop		0.4	0.85	Vdc	
Output current	0		8	Adc	Over input range
Efficiency					
Full load		99		%	
External output capacitance		1000		μF	Figure 7 C _{IN}

Safety Specifications

Parameter	Min	Typ	Max	Unit	Note
Dielectric withstand			None	Vrms	Input / Output
			707	Vdc	Input / Output to Base / EMI Pin

EMI

Standard	Test Procedure	Notes
MIL-STD-461E/F		
Conducted Emissions	CE101-4	Navy ASW & Army Aircraft, Curve #2 (28 Vdc)
	CE102-1	Basic curve, for all applications
Conducted Susceptibility	CS101-1	Curve #2, for all applications (28 Vdc)
	CS114-1	Conducted susceptibility, bulk cable injection, 10 KHz - 200 MHz, Curve #4
	CS115-1	Conducted susceptibility, bulk cable injection, impulse excitation, all applications

SPECIFICATIONS (CONT.)

General Specifications

Parameter	Min	Typ	Max	Unit	Notes
MTBF					
MIL-HDBK-217F		12,933,333		hrs	25°C, GB
		2,327,752		hrs	50°C, NS
		1,823,912		hrs	65°C, AIC
Agency approvals		CE Mark			Low voltage directive (10 A external fuse required), EN60950-1
Mechanical parameters					See Mechanical Drawings, Figures 2 & 4
Weight		1.07/30,4		oz/g	
Dimensions					
Length		1.91/46,6		in/mm	
Width		1.09/27,7		in/mm	
Height		0.37/9,5		in/mm	
Thermal					
Thermal capacity		23.8		Ws/°C	
Baseplate to ambient		8.8		°C/W	
Baseplate to ambient; 1000 LFM		3.0		°C/W	
Baseplate to sink; flat, greased surface		0.40		°C/W	
Baseplate to sink; thermal pad		0.36		°C/W	

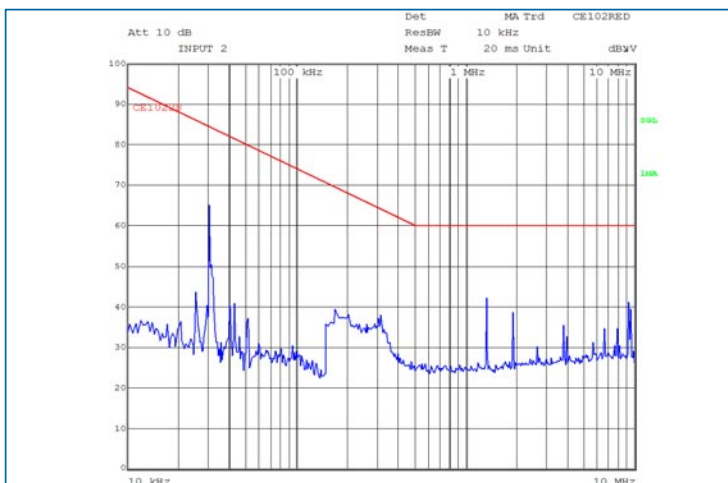


Figure 1 — Conducted Noise (CE 102); MF028AMFPT with PRM and VTM, 28 Vdc input, 12 Vdc output, 90% load.

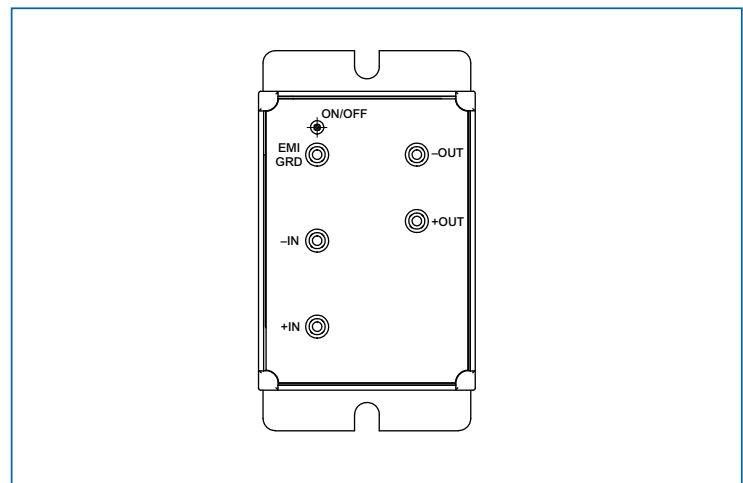


Figure 2 — MF028AMFPT pin configuration (viewed from pin side)

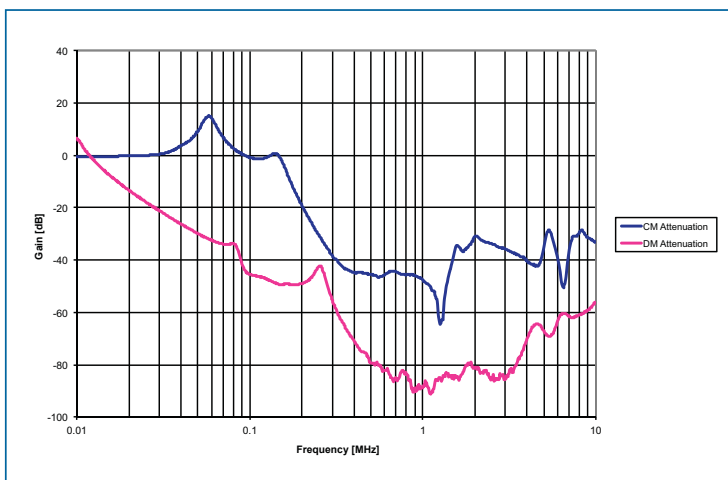


Figure 3 — MF028AMFPT insertion loss

SPECIFICATIONS (CONT.)

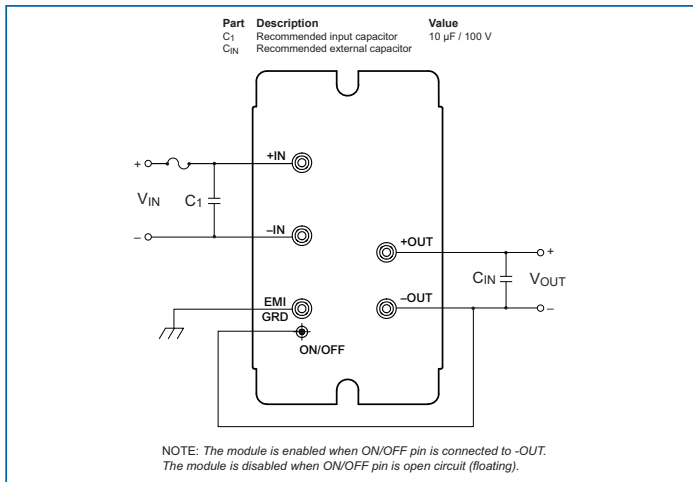


Figure 4 — Connection for filter enabled at turn on

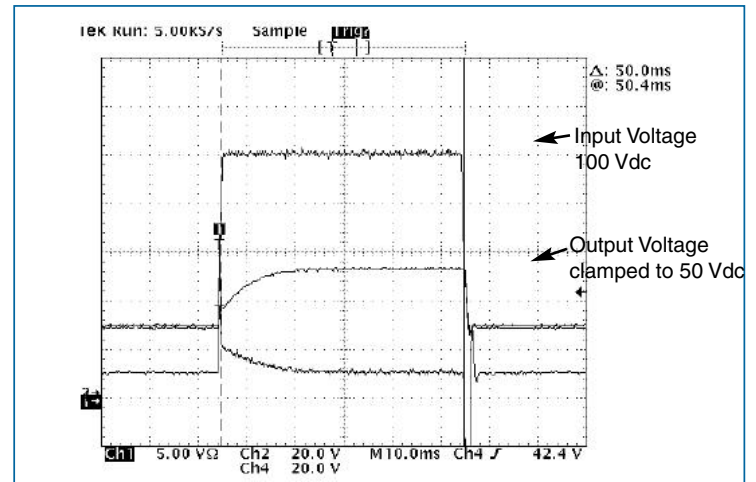


Figure 5 — Transient immunity; MF028AMFPT output response to an input transient. (28 VIN full load initial conditions, trace 1.5 A/div)

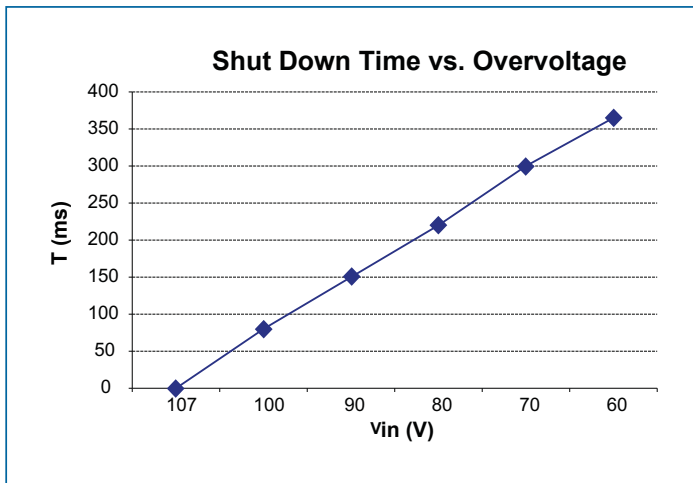


Figure 6 — Shutdown time vs. overvoltage

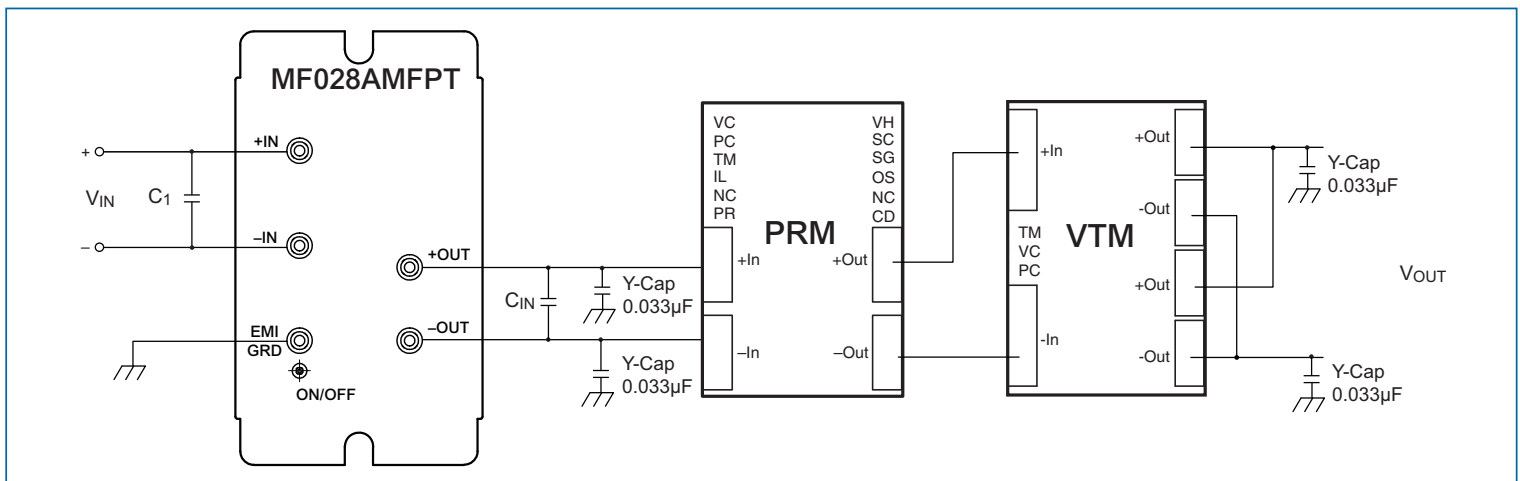
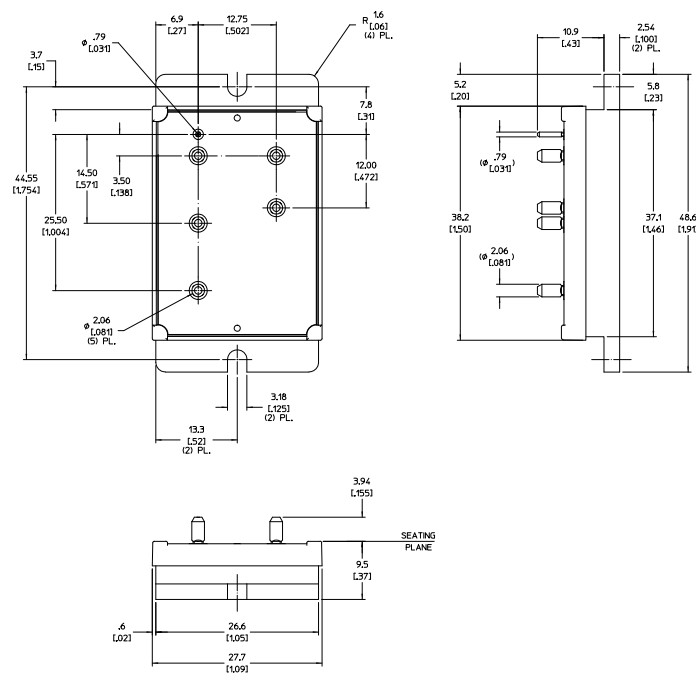
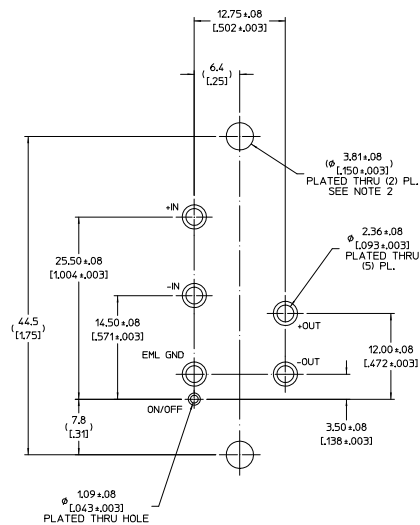


Figure 7 — Recommended circuit for EMI

Baseplate - Slotted Flange



Recommended PCB Pattern
(Component side shown)



Note:

2. PLATED THROUGH HOLES SHALL BE USED WITH VIBRICK STANDOFF KITS TO GROUND THE BASEPLATE TO THE CUSTOMERS PCB AND/OR COLD PLATE.

BRICK
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