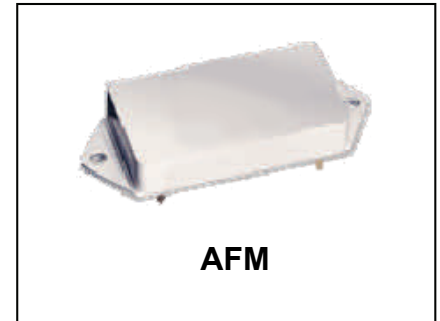


EMI FILTER PROTECTION HYBRID



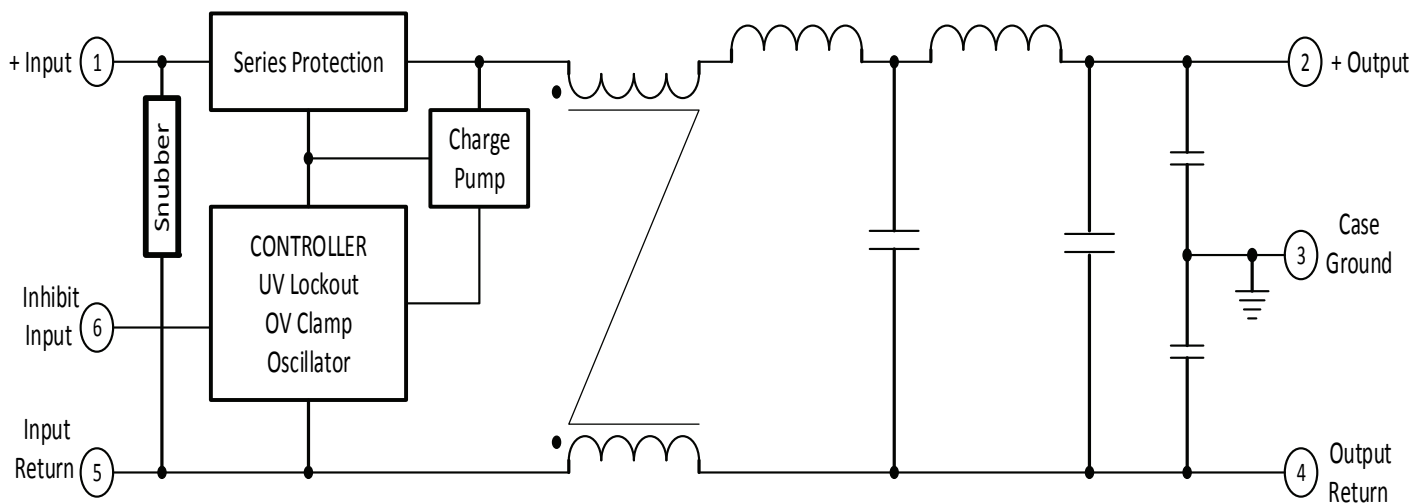
Description

The AFM704A is a combined EMI filter and protection module intended to be used with AHE, ATO, ATR, ATW, AHF, ASA, and AHV DC/DC converters to allow full compliance with the surge requirements of MIL-STD-704A. This device will reduce reflected ripple current to levels below the CEO3 limits and protect against voltage spikes required by CS06 testing as specified by MIL-STD-461. Four levels of military screening are available, including fully compliant (per MIL-PRF-38534) devices. Standard Military Drawings (SMDs) available.

Features

- 40 watts throughout
- 40 dB Noise Reduction@100 kHz
- -55°C to +125°C Operation
- Full Military Screening
- All Ceramic Capacitor Design
- Output Voltage Regulate to 50 Volts Maximum
- Inrush Current Limiting
- Under Voltage Lockout

AFM704A Block Diagram



Refer to page 3 for Pin Designation Table

Specifications T_{case} = -55°C to +125°C, V_{in} = +28V_{DC} unless otherwise specified

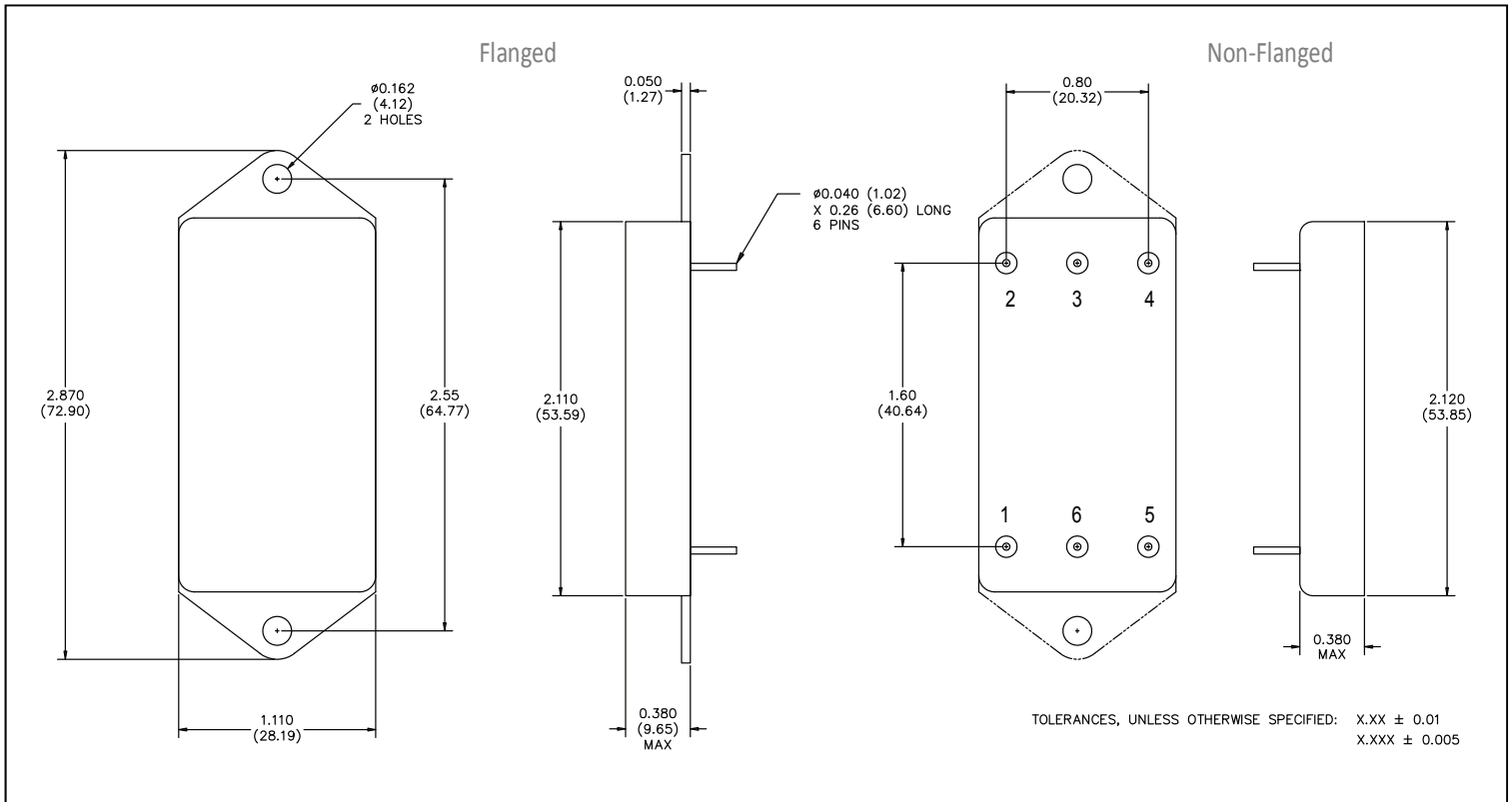
Parameter	Condition	Min.	Typ.	Max.	Unit
Input voltage	Continuous	0	28	40	V _{DC}
	No load	16	28	40	V _{DC}
	40 watt				
	Transient			80	V _{DC}
	100 ms, R _s *= 0 Ohms			100	V _{DC}
	60 ms, R _s *= 0.5 Ohms			600	V _{DC}
	20 μs, R _s *= 50 Ohms				
Under voltage lockout		13		15	V _{DC}
Input current	No load			5.0	mA
	Inhibited			2.0	mA
Inhibit pin voltage	Open circuit		4.0	5.2	V _{DC}
Inhibit pin current	V _{IN} = 0 to 0.8V			-300	μA
Output power	V _{IN} = 16 to 40V			40	watts
Power dissipation	Continuous			15	watts
	Peak			200	watts
DC resistance	V _{IN} = 16 to 40V T _C = 25°C			0.45	Ω
Output clamp voltage		40		50	V _{DC}
Input surge limit	40W load, 80V 100V			100	ms
				80	ms
Input spike limit	40W load, 600V 50 Ω source 40W load, 400V 0.5 Ω source			20	μs
				20	μs
Noise reduction	100 kHz	40			dB
	200 kHz – 50 MHz	50	60		dB
Capacitance	Pin to case		10,000		pF
Isolation	Pin to case 500V _{DC}	100			MΩ
Weight				75	grams

* R_s = Source Impedance

Available Standard Military Drawing (SMD) Cross Reference

Standard Military Drawing PIN	Vendor CAGE Code	Vendor Similar PIN
95010-01HXA	52467	AFM704AN/CH
95010-01HZA	52467	AFM704A/CH

Mechanical Outline



Pin Designation

Pin #	Designation
1	+ Input
2	+ Output
3	Case Ground
4	Output Return
5	Input Return
6	Inhibit Input

Available Screening Levels and Process Variations

Requirement	MIL-STD-883 Method	No Suffix	ES Suffix	HB Suffix	CH Suffix
Temperature Range	—	-20 to +85°C	-55°C to +125°C	-55°C to +125°C	-55°C to +125°C
Element Evaluation	—	—	—	—	MIL-PRF-38534
Internal Visual	2017	*	Yes	Yes	Yes
Temperature Cycle	1010	—	Cond B	Cond C	Cond C
Constant Acceleration	2001	—	500g	Cond A	Cond A
Burn-in	1015	48hrs @ 85°C	48hrs @ 125°C	160hrs @ 125°C	160hrs @ 125°C
Final Electrical (Group A)	MIL-PRF-38534 & Specification	25°C	25°C	-55°C, +25°C, +125°C	-55°C, +25°C, +125°C
Seal, Fine & Gross	1014	Cond A	Cond A, C	Cond A, C	Cond A, C
External Visual	2009	*	Yes	Yes	Yes

* Per Commercial Standards.

Part Numbering
