

AFM704A SERIES

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.

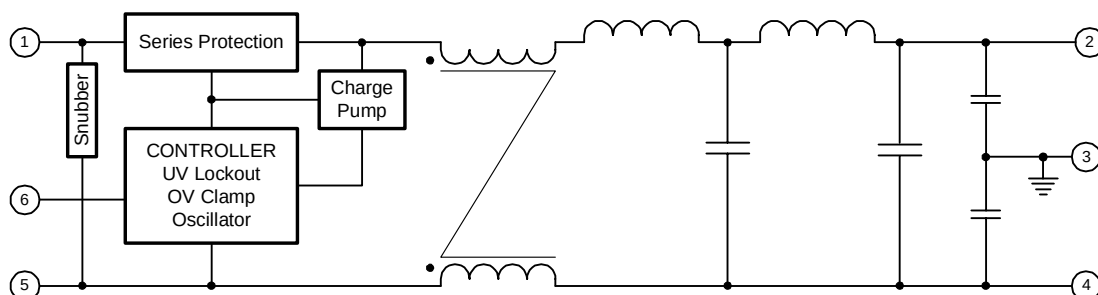


AFM

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 last page for Pin Designation

AFM704A Series

International
IRF Rectifier

Specifications

Tcase = -55°C to +125°C, Vin = +28VDC Unless otherwise specified

Parameter	Condition	Min	Typ	Max	Unit
Input Voltage	Continuous				
	No load	0	28	40	VDC
	40 watt	16	28	40	VDC
	Transient				
	100 ms, Rs*= 0 Ohms			80	VDC
	60 ms, Rs*= 0.5 Ohms			100	VDC
	20 μ s, Rs*= 50 Ohms			600	VDC
Undervoltage Lockout		13		15	VDC
Input Current	No load			5.0	mA
	Inhibited			2.0	mA
Inhibit Pin Voltage	Open circuit		4.0	5.2	VDC
Inhibit Pin Current	Vin = 0 to 0.8V			-300	μ A
Output Power	Vin = 16 to 40V			40	watts
Power Dissipation	Continuous			15	watts
	Peak			200	watts
DC Resistance	Vin = 16 to 40V				
	Tc = 25°C			0.45	Ohms
Output Clamp Voltage		40		50	VDC
Input Surge Limit	40W load, 80V			100	ms
	100V			80	ms
Input Spike Limit	40W load, 600V				
	50 ohm source			20	μ s
	40W load, 400V				
	0.5 ohm source			20	μ s
Noise Reduction	100 KHz	40			dB
	200 KHz – 50 MHz	50	60		dB
Capacitance	Pin to case		10,000		pf
Isolation	Pin to case 500VDC	100			M Ω
Weight				75	grams

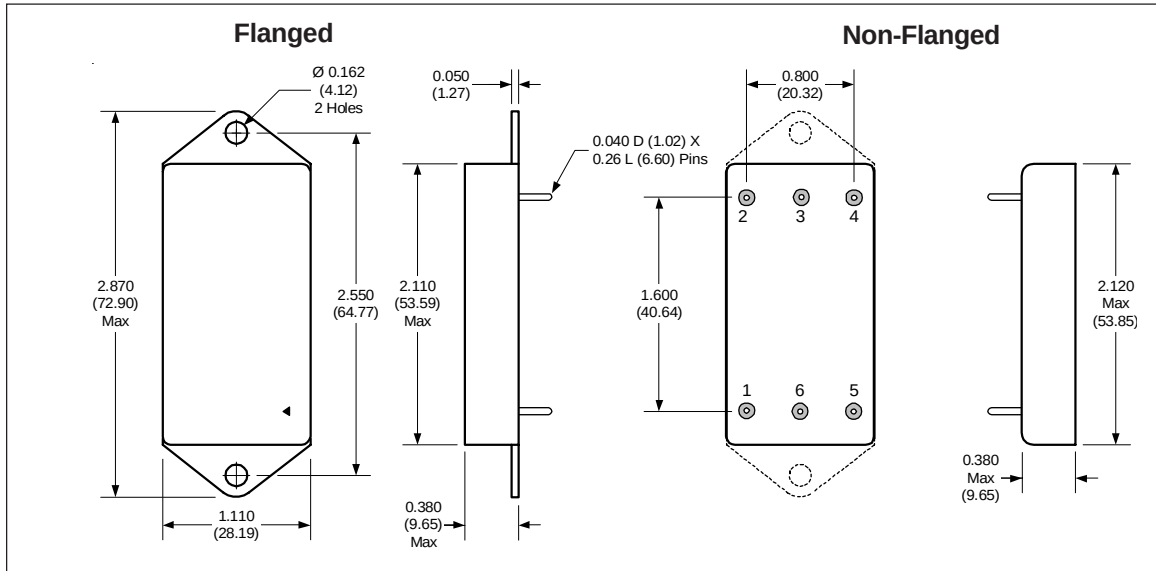
* Rs = Source Impedance

Available Screening Levels and Process Variations for AFM704A Series

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, +25, +125°C	-55, +25, +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

AFM704A Case Outlines



Pin Designation

Pin No.	Designation
1	Positive Input
2	Positive Output
3	Case
4	Output Return
5	Input Return
6	Inhibit Input

Part Numbering

AFM 704A N /CH

Model ———
Applicable Military Test Standard ———
Screening Blank, ES, HB, CH ———
Case Style
Blank = Flanged
N = Non-Flanged

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

International
IOR Rectifier

IR WORLD HEADQUARTERS: 233 Kansas St., El Segundo, California 90245, USA Tel: (310) 252-7105

IR SANTA CLARA : 2270 Martin Av., Santa Clara, California 95050, Tel: (408) 727-0500

TAC Fax: (310) 252-7903

Visit us at www.irf.com for sales contact information.

Data and specifications subject to change without notice. 03/2006