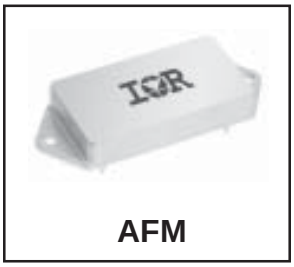
International
IOR Rectifier

PD - 94598

AFM704A SERIES

ADVANCED ANALOG
EMI FILTER / PROTECTION HYBRID



AFM

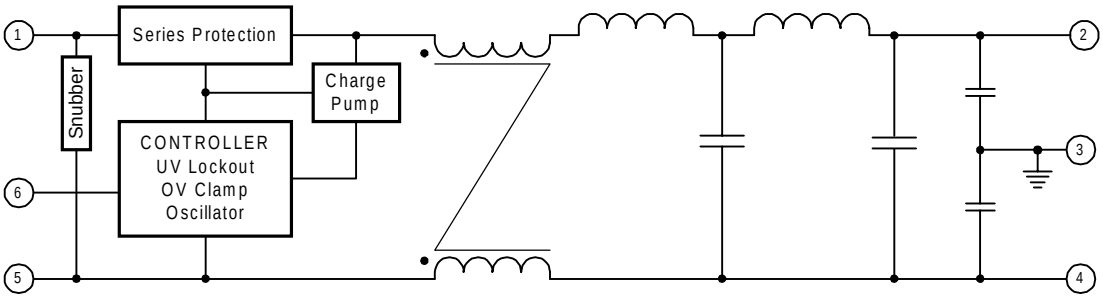
Description

The AFM704A is a combined EMI filter and protection module intended to be used with Advanced Analog AHE, ATO, ATR, ATW, AHF, ASA, and AHV DC/DC converters to allow full compliance with the surge requirements of MIL-STD-704.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 last page for Pin Designation

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 µs, 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	µA
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	µs
	40W load, 400V				
	0.5 ohm source			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 500VDC	100			MΩ
Weight				75	grams

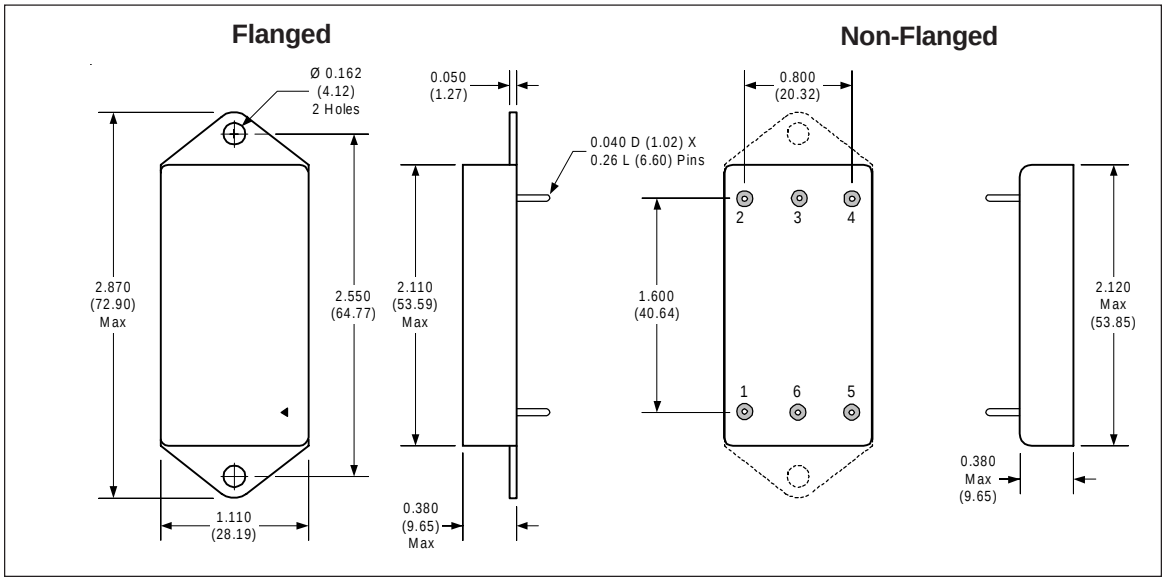
* Rs = Source Impedance

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 F / CH

- Model
- Applicable Military Test Standard
- Case Style — Omit for Standard
- Screening — –, ES, HB, CH

Available Standard Miliatary Drawing (SMD) Cross Reference

Standard Military Drawing PIN	Vendor CAGE Code	Vendor Similar PIN
95010-01HXA	52467	AFM704/CH
95010-01HZA	52467	AFM704A/CH

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