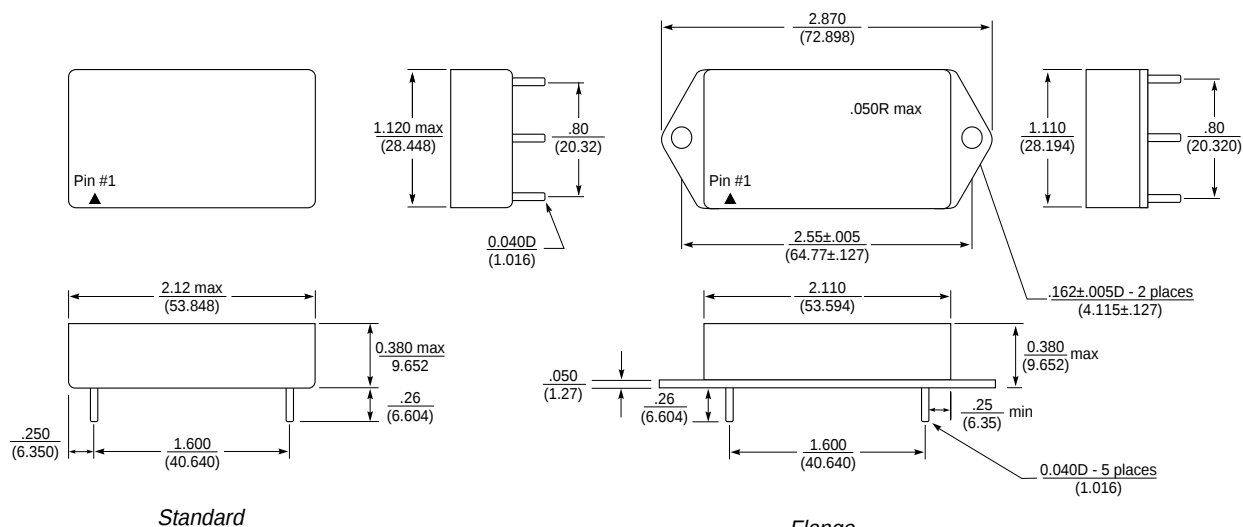


AFM704A Series EMI Filter/Protection Hybrid

DESCRIPTION

The AFM704A is a combined EMI filter and protection module intended to be used with Lambda 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 CE03 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.

- 40 watt throughput
- 40 dB noise reduction @ 100 KHz
- -55°C to +125°C operation
- Full military screening
- All ceramic capacitor design
- Output voltage regulated to 50 volt maximum
- Inrush current limiting
- Under voltage lockout



Pin Assignment

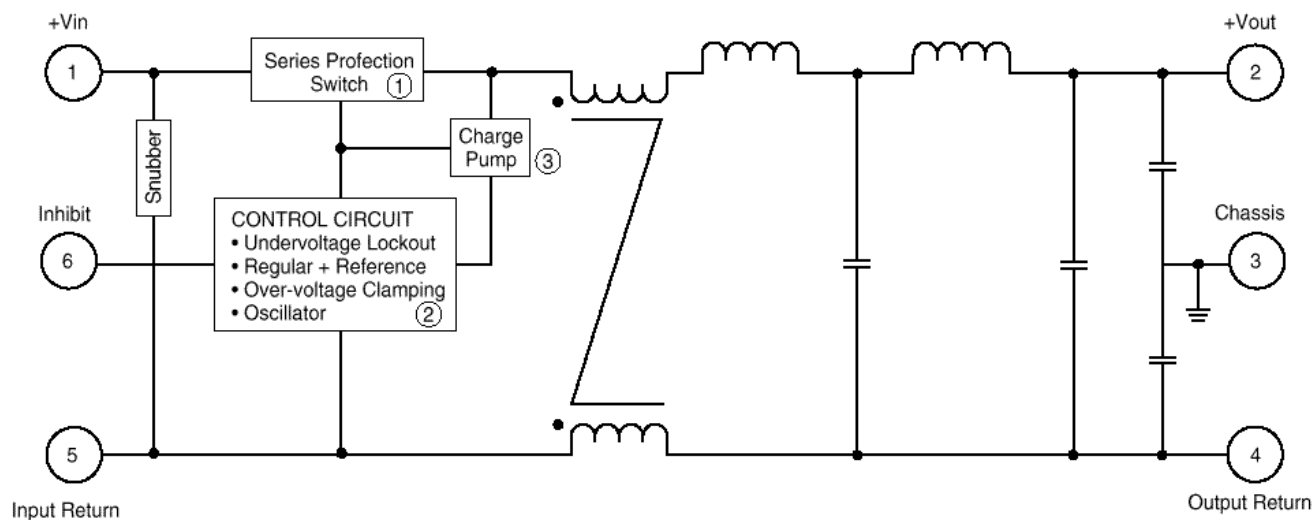
- #1 - Positive input
- #2 - Positive output
- #3 - Case ground
- #4 - Output return
- #5 - Input return
- #6 - Inhibit input

SPECIFICATIONS

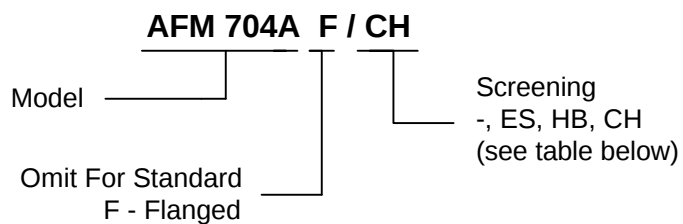
Tcase = -55°C to +125°C Vin = +28Vdc Unless otherwise specified

Parameter	Condition	Min	Typ	Max	Unit
Input Voltage	Continuous				
	No load	0	28	40	Vdc
	40 watt load	16	28	40	Vdc
	Transient				
	100 ms, Rs = 0			80	Vdc
	60ms, Rs = .5			100	Vdc
	20us, Rs = 50			600	Vdc
Undervoltage Lockout		13		15	Vdc
Input Current	No load			5	mA
	Inhibited			2	mA
Inhibit Pin Voltage	Open circuit		4.0	5.2	Vdc
Inhibit Pin Current	Vin = 0 to 0.8V			-300	uA
Output Power	Vin = 16 to 40V			40	Watts
Power Dissipation	Continuous			15	Watts
	Peak			200	Watts
DC Resistance	Vin = 16 to 40 Tc = 25°C			.45	Ohm
Output Clamp Voltage		40		50	Vdc
Input Surge Limit	40W load, 80V 100V			100	ms
				80	ms
Input Spike Limit	40W load, 600V			20	us
	50 ohm source				
	40W load, 400V			20	us
Noise Reduction	100 KHz	40	60		dB
	200 KHz – 50 MHz	50			dB
Capacitance	Pin to case		10,000		pF
Isolation	Pin to case 500Vdc	100			M-ohms
Weight				75	grams

BLOCK DIAGRAM



PART NUMBERING SYSTEM



SCREENING DETAILS

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	*	✓	✓	✓
Temperature Cycle	1010		Cond B	Cond C	Cond C
Constant Acceleration	2001		500g	Cond A	Cond A
Burn-in	1015		96hrs @ 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	*	✓	✓	✓

* per Commercial Standards

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The information in this data sheet has been carefully checked and is believed to be accurate; however no responsibility is assumed for possible errors. These specifications are subject to change without notice.

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LAMBDA ADVANCED ANALOG INC. 

MIL-PRF-38534 Certified
ISO9001 Registered

2270 Martin Avenue
Santa Clara CA 95050-2781
(408) 988-4930 FAX (408) 988-2702