

Series AM3F-Z

3 Watt | DC-DC Converter



FEATURES:

- RoHS compliant
- 12 Pin SIP Package
- Low ripple and noise
- High efficiency up to 72%
- Operating temperature -25°C to + 71°C
- Input / Output isolation 1000, 3000 and 5200VDC
- Pin compatible with multiple manufacturers
- Regulated single output

Models

Single output



Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max Capacitive Load (uF)	Efficiency (%)
AM3F-0503SZ	4.5-5.5	3.3	800	1000	470	53
AM3F-0505SZ	4.5-5.5	5	600	1000	470	67
AM3F-0507SZ	4.5-5.5	7.2	417	1000	470	64
AM3F-0509SZ	4.5-5.5	9	333	1000	470	67
AM3F-0512SZ	4.5-5.5	12	250	1000	470	72
AM3F-0515SZ	4.5-5.5	15	200	1000	470	72
AM3F-0518SZ	4.5-5.5	18	167	1000	470	65
AM3F-0524SZ	4.5-5.5	24	125	1000	470	70
AM3F-1203SZ	10.8-13.2	3.3	800	1000	470	55
AM3F-1205SZ	10.8-13.2	5	600	1000	470	67
AM3F-1207SZ	10.8-13.2	7.2	417	1000	470	64
AM3F-1209SZ	10.8-13.2	9	333	1000	470	67
AM3F-1212SZ	10.8-13.2	12	250	1000	470	72
AM3F-1215SZ	10.8-13.2	15	200	1000	470	72
AM3F-1218SZ	10.8-13.2	18	167	1000	470	66
AM3F-1224SZ	10.8-13.2	24	125	1000	470	70
AM3F-2403SZ	21.6-26.4	3.3	800	1000	470	55
AM3F-2405SZ	21.6-26.4	5	600	1000	470	65
AM3F-2407SZ	21.6-26.4	7.2	417	1000	470	61
AM3F-2409SZ	21.6-26.4	9	333	1000	470	65
AM3F-2412SZ	21.6-26.4	12	250	1000	470	70
AM3F-2415SZ	21.6-26.4	15	200	1000	470	70
AM3F-2418SZ	21.6-26.4	18	167	1000	470	66
AM3F-2424SZ	21.6-26.4	24	125	1000	470	72
AM3F-0503SH30Z	4.5-5.5	3.3	800	3000	470	53
AM3F-0505SH30Z	4.5-5.5	5	600	3000	470	67
AM3F-0507SH30Z	4.5-5.5	7.2	417	3000	470	64
AM3F-0509SH30Z	4.5-5.5	9	333	3000	470	67
AM3F-0512SH30Z	4.5-5.5	12	250	3000	470	72
AM3F-0515SH30Z	4.5-5.5	15	200	3000	470	72
AM3F-0518SH30Z	4.5-5.5	18	167	3000	470	65
AM3F-0524SH30Z	4.5-5.5	24	125	3000	470	70
AM3F-1203SH30Z	10.8-13.2	3.3	800	3000	470	55
AM3F-1205SH30Z	10.8-13.2	5	600	3000	470	67
AM3F-1207SH30Z	10.8-13.2	7.2	417	3000	470	64
AM3F-1209SH30Z	10.8-13.2	9	333	3000	470	67
AM3F-1212SH30Z	10.8-13.2	12	250	3000	470	72
AM3F-1215SH30Z	10.8-13.2	15	200	3000	470	72
AM3F-1218SH30Z	10.8-13.2	18	167	3000	470	66
AM3F-1224SH30Z	10.8-13.2	24	125	3000	470	70
AM3F-2403SH30Z	21.6-26.4	3.3	800	3000	470	55
AM3F-2405SH30Z	21.6-26.4	5	600	3000	470	65
AM3F-2407SH30Z	21.6-26.4	7.2	417	3000	470	61
AM3F-2409SH30Z	21.6-26.4	9	333	3000	470	65
AM3F-2412SH30Z	21.6-26.4	12	250	3000	470	70

Models

Single output (Continue)

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max Capacitive Load (uF)	Efficiency (%)
AM3F-2415SH30Z	21.6-26.4	15	200	3000	470	70
AM3F-2418SH30Z	21.6-26.4	18	167	3000	470	66
AM3F-2424SH30Z	21.6-26.4	24	125	3000	470	72
AM3F-0503SH52Z	4.5-5.5	3.3	800	5200	470	53
AM3F-0505SH52Z	4.5-5.5	5	600	5200	470	67
AM3F-0507SH52Z	4.5-5.5	7.2	417	5200	470	64
AM3F-0509SH52Z	4.5-5.5	9	333	5200	470	67
AM3F-0512SH52Z	4.5-5.5	12	250	5200	470	72
AM3F-0515SH52Z	4.5-5.5	15	200	5200	470	72
AM3F-0518SH52Z	4.5-5.5	18	167	5200	470	65
AM3F-0524SH52Z	4.5-5.5	24	125	5200	470	70
AM3F-1203SH52Z	10.8-13.2	3.3	800	5200	470	55
AM3F-1205SH52Z	10.8-13.2	5	600	5200	470	67
AM3F-1207SH52Z	10.8-13.2	7.2	417	5200	470	64
AM3F-1209SH52Z	10.8-13.2	9	333	5200	470	67
AM3F-1212SH52Z	10.8-13.2	12	250	5200	470	72
AM3F-1215SH52Z	10.8-13.2	15	200	5200	470	72
AM3F-1218SH52Z	10.8-13.2	18	167	5200	470	66
AM3F-1224SH52Z	10.8-13.2	24	125	5200	470	70
AM3F-2403SH52Z	21.6-26.4	3.3	800	5200	470	55
AM3F-2405SH52Z	21.6-26.4	5	600	5200	470	65
AM3F-2407SH52Z	21.6-26.4	7.2	417	5200	470	61
AM3F-2409SH52Z	21.6-26.4	9	333	5200	470	65
AM3F-2412SH52Z	21.6-26.4	12	250	5200	470	70
AM3F-2415SH52Z	21.6-26.4	15	200	5200	470	70
AM3F-2418SH52Z	21.6-26.4	18	167	5200	470	66
AM3F-2424SH52Z	21.6-26.4	24	125	5200	470	72

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	5 12 24	4.5-5.5 10.8-13.2 21.6-26.4		VDC
Filter	Capacitor			
Turn on Transient process time			100	ms
Start up time		300		ms
Absolute Maximum Rating	5 Vin 12 Vin 24 Vin	0-7 0-15 0-28		VDC
Peak Input Voltage time		100		ms

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3 sec		1000, 3000 and 5200	VDC
Resistance		> 1000		MOhm
Capacitance		60		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Short Circuit protection	Continuous			
Short circuit restart	Auto-recovery			
Line voltage regulation (Single)		±0.5		%
Load voltage regulation (Single)	0 to 100% load	±0.5		%

Output Specifications (continued)

Parameters	Conditions	Typical	Maximum	Units
Load voltage regulation (Single) 3.3V output model	0 to 100% load	±1.5		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise	At 20MHz Bandwidth	75		mV p-p
Rising time		150		ms

General Specifications

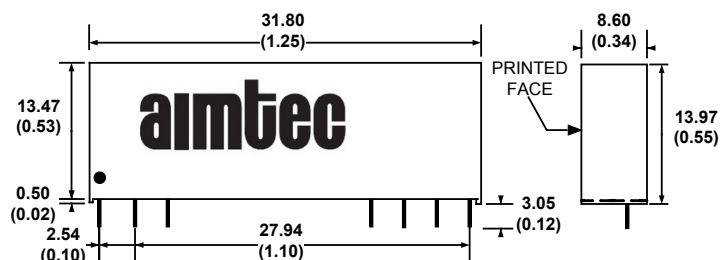
Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	50		KHz
Operating temperature		-25 to +71		°C
Storage temperature		-40 to +125		°C
Max Case temperature			100	°C
Cooling	Free air convection			
Humidity			90	%
Case material	Non-conductive black plastic			
Weight		10.7		g
Dimensions (L x W x H)		1.25 x 0.34 x 0.53 inches	31.80 x 8.60 x 13.47 mm	
MTBF	>1,200,000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			

NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified

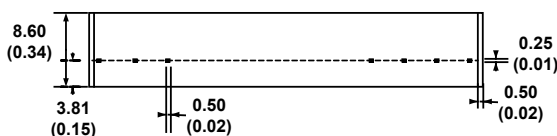
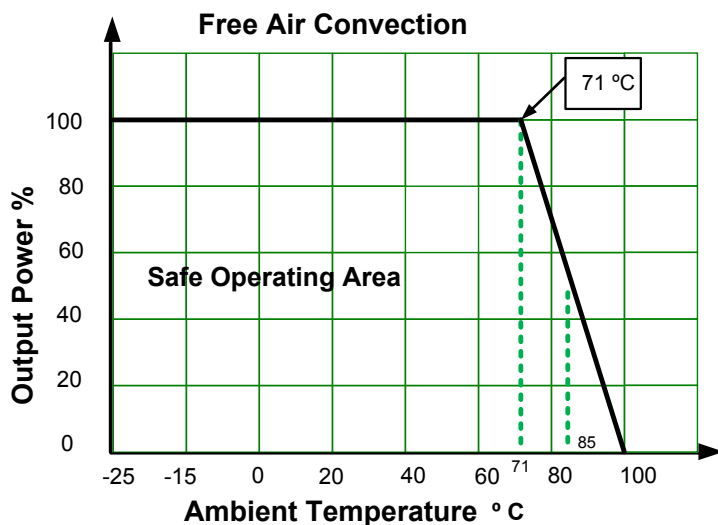
Pin Out Specifications

Pin	1000VDC	3000 & 5200VDC
1	+V Input	+V Input
2	N.C.	-V Input
3	N.C.	N.C.
9	N.C.	N.C.
10	-V Output	-V Output
11	+V output	+V output
12	-V Input	N.C.

Dimensions



Dimensions



NOTE: 1. Datasheets are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, datasheets are no longer controlled by Aimtec; refer to www.aimtec.com for the most current product specifications. 2. Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured. 3. Mechanical drawings and specifications are for reference only. 4. All specifications are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified. 5. Aimtec may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release. 6. This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.