

Series AM5T-FZ

5 Watt | DC-DC Converter



FEATURES:

- RoHS compliant
- 24 Pin DIP Package
- High efficiency up to 85%
- Wide 2:1 input range
- Operating temperature -40°C to + 85°C
- Input / Output isolation 4000 VACrms
- Pin compatible with multiple manufacturers
- OLP, OVP and SCP

Models Single Output



Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Capacitive load, max (μF)	Efficiency (%)	Isolation (VAC)
AM5T-1205SH40-FZ	9 -18	5	1000	2000	81	4000
AM5T-1212SH40-FZ	9 -18	12	500	470	83	4000
AM5T-1215SH40-FZ	9 -18	15	400	440	83	4000
AM5T-2405SH40-FZ	18 - 36	5	1000	2000	82	4000
AM5T-2412SH40-FZ	18 - 36	12	500	470	85	4000
AM5T-2415SH40-FZ	18 - 36	15	400	440	84	4000
AM5T-4805SH40-FZ	36 - 75	5	1000	2000	81	4000
AM5T-4812SH40-FZ	36 - 75	12	500	470	83	4000
AM5T-4815SH40-FZ	36 - 75	15	400	440	82	4000

Models Dual Output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Capacitive load, max (μF)	Efficiency (%)	Isolation (VAC)
AM5T-1212DH40-FZ	9 -18	±12	±250	±220	83	4000
AM5T-1215DH40-FZ	9 -18	±15	±200	±220	83	4000
AM5T-2412DH40-FZ	18 - 36	±12	±250	±220	84	4000
AM5T-2415DH40-FZ	18 - 36	±15	±200	±220	85	4000
AM5T-4812DH40-FZ	36 - 75	±12	±250	±220	83	4000
AM5T-4815DH40-FZ	36 - 75	±15	±200	±220	83	4000

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	12	9-18		VDC
	24	18-36		
	48	36-75		
Filter	Pi Type			
Turn on Transient process time (50% load step Change)			780	μs
Transient response over shoot	di/dt=0.8A/μs	<±5%		% of Vo
Input reflected ripple current	Vin nominal FL		76	mA p-p
Start up time			510	ms
Absolute Maximum Rating	12 Vin	-0.7-25		VDC
	24 Vin	-0.7-50		
	48 Vin	-0.7-100		
Peak Input Voltage time		100		ms

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Rated I/O voltage	60 sec		4000	VACrms
Tested I/O voltage	1sec flash test		6000	Vpk
Resistance	500VDC	> 1000		MOhm
Capacitance		12		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Over load protection		120%		of full load
Over voltage protection	Zener Diode Clamp	5V model = 6.2V 12V model = 15V 15V model = 18V		Vdc
Voltage accuracy	25% load to full load	±1		%
Short circuit protection		Continuous		
Short circuit restart		Autorecovery		
Line voltage regulation	LL to LH at Full Load	±0.5		%
Load voltage regulation (Single)	25% load to full load	±0.5		%
Load voltage regulation (Dual)	Balanced	±0.5		%
	Unbalanced load 25% to 100% full load	±3.0		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise (At 20MHz Bandwidth)	5V output 12V output 15V output	150 70 200		mV p-p

General Specifications

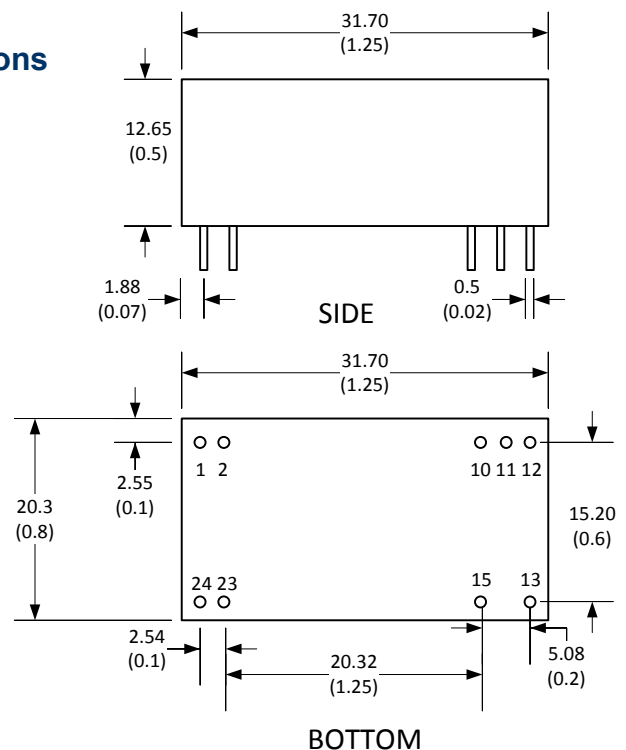
Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	150		KHz
Operating temperature	Full Load (with derating see chart)	-40 to +85		°C
Storage temperature		-50 to +125		°C
Max Case temperature			+95	°C
Cooling		Free air convection		
Humidity			95	%
Case material		Non-Conductive Plastic		
Weight		16		g
Dimensions(L x W x H)	Tolerance ±0.5 mm or ±0.02 inches	1.25 x 0.80 x 0.5 inches	31.7x 20.3 x 12.65 mm	
MTBF		>700 000 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.

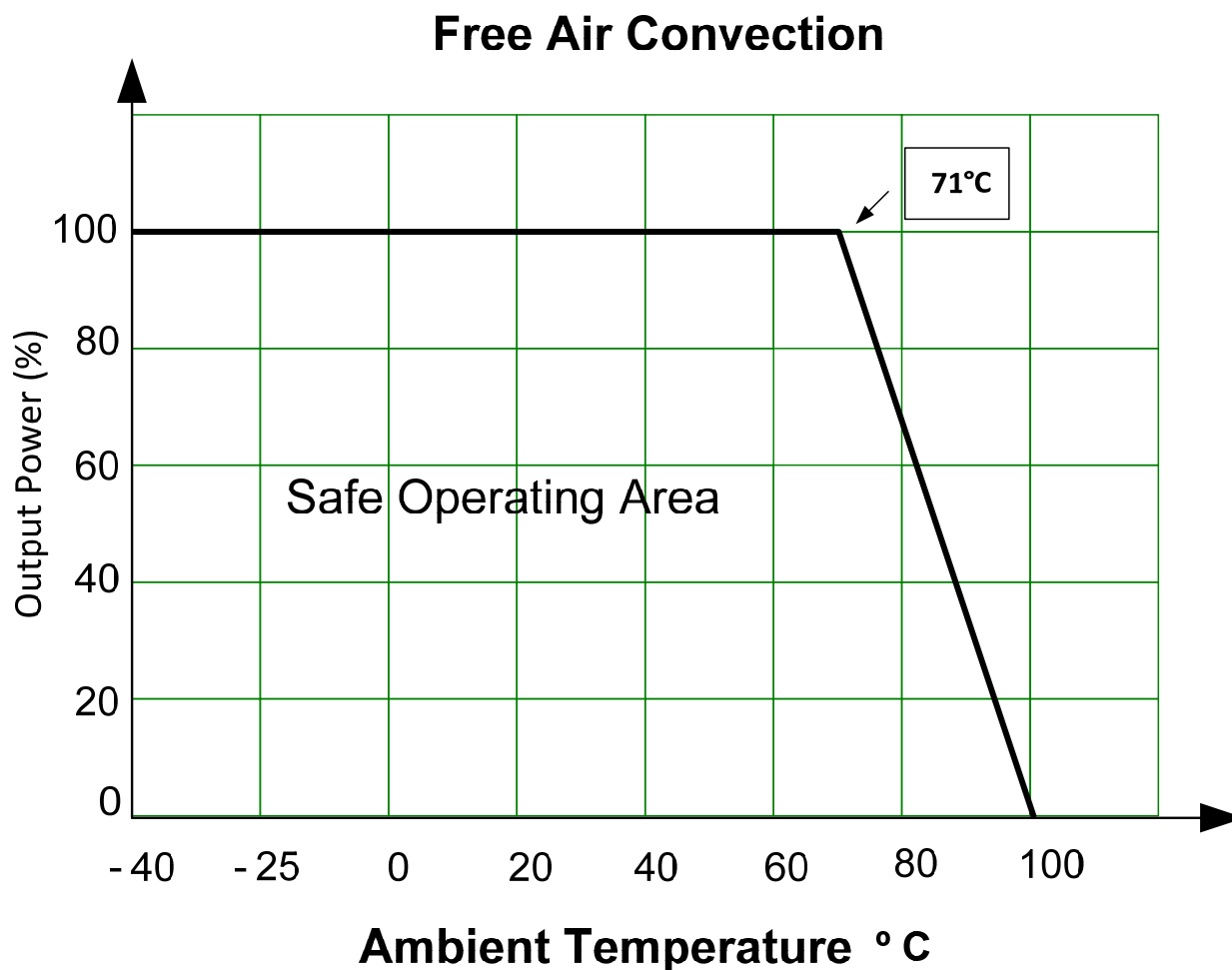
Pin Out Specifications

Pin	Single	Dual
1	+V Input	+V Input
2	+V Input	+V Input
10	N. C.	Common
11	N.C.	Common
12	-V output	N. C.
13	+Voutput	-V output
15	N. C.	+V output
23	-V Input	-V Input
24	-V Input	-V Input

Dimensions



Derating



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 than the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.