

Not recommended for new design
Use AM10E-Z series

Series AM5E-FZ
5 Watt | DC-DC Converter



FEATURES:

- Over Load, Over Voltage Protection
- Wide 2:1 input range
- High efficiency up to 87%
- Pin compatible with multiple manufacturers
- Operating temperature -55°C to + 85°C
- Input/Output Isolation 1500VDC
- Continuous short circuit protection



Models
Single output

Model	Input Voltage (V)	Output Voltage (V)	Minimum Load Current (mA)	Output Current max (A)	Capacitance load, max (µF)	Efficiency (%)
AM5E-1203S-FZ	9-18	3.3	20	1.5	4700	78
AM5E-1205S-FZ	9-18	5	0	1.0	2200	80
AM5E-1212S-FZ	9-18	12	0	0.416	330	85
AM5E-1215S-FZ	9-18	15	0	0.333	220	85
AM5E-2403S-FZ	18-36	3.3	20	1.5	4700	79
AM5E-2405S-FZ	18-36	5	0	1.0	2200	82
AM5E-2412S-FZ	18-36	12	0	0.416	330	86
AM5E-2415S-FZ	18-36	15	0	0.333	220	87
AM5E-4803S-FZ	36-72	3.3	20	1.5	4700	77
AM5E-4805S-FZ	36-72	5	0	1.0	2200	82
AM5E-4812S-FZ	36-72	12	0	0.416	330	85
AM5E-4815S-FZ	36-72	15	0	0.333	220	86

Models
Dual output

Model	Input Voltage (V)	Output Voltage (V)	Minimum Load Current (mA)	Output Current max (A)	Capacitance load, max (µF)	Efficiency (%)
AM5E-1205D-FZ	9-18	±5	57	±0.5	1100	82
AM5E-1212D-FZ	9-18	±12	0	±0.208	100	84
AM5E-1215D-FZ	9-18	±15	0	±0.167	69	85
AM5E-2405D-FZ	18-36	±5	57	±0.5	990	83
AM5E-2412D-FZ	18-36	±12	0	±0.208	122	86
AM5E-2415D-FZ	18-36	±15	0	±0.167	147	87
AM5E-4805D-FZ	36-72	±5	57	±0.5	1000	82
AM5E-4812D-FZ	36-72	±12	0	±0.208	220	86
AM5E-4815D-FZ	36-72	±15	0	±0.167	13	86

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.

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	12	9-18		VDC
	24	18-36		
	48	36-72		
Filter	π(PI)			
Start up time		400		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
No Load Input Current		<3		mA
Input reflected current		250		mAp-p
Transient recovery deviation		±5		%of Vout

Input Specifications (continued)

Parameters	Nominal	Typical	Maximum	Units
Transient response time	50% load step change	300		μs

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/Ovoltage	3 sec		1500	VDC
Resistance		>1000		MOhm
Capacitance	24 Vin	580		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1		%
Short Circuit protection		Continuous		
Short circuit restart		Auto Recovery		
Over load protection		150		%
Over Voltage Protection		Zener Diode Clamp		
Line voltage regulation	LL-HL	±0.5		%
Load voltage regulation (Single)	25-100%	±0.5		%
Load voltage regulation (Dual)	10-100% Balanced	±0.5		%
	25-100% Unbalanced	±5		
Temperature coefficient		±0.02		% °C
Ripple & Noise	20MHz Bandwidth	75		mVp-p

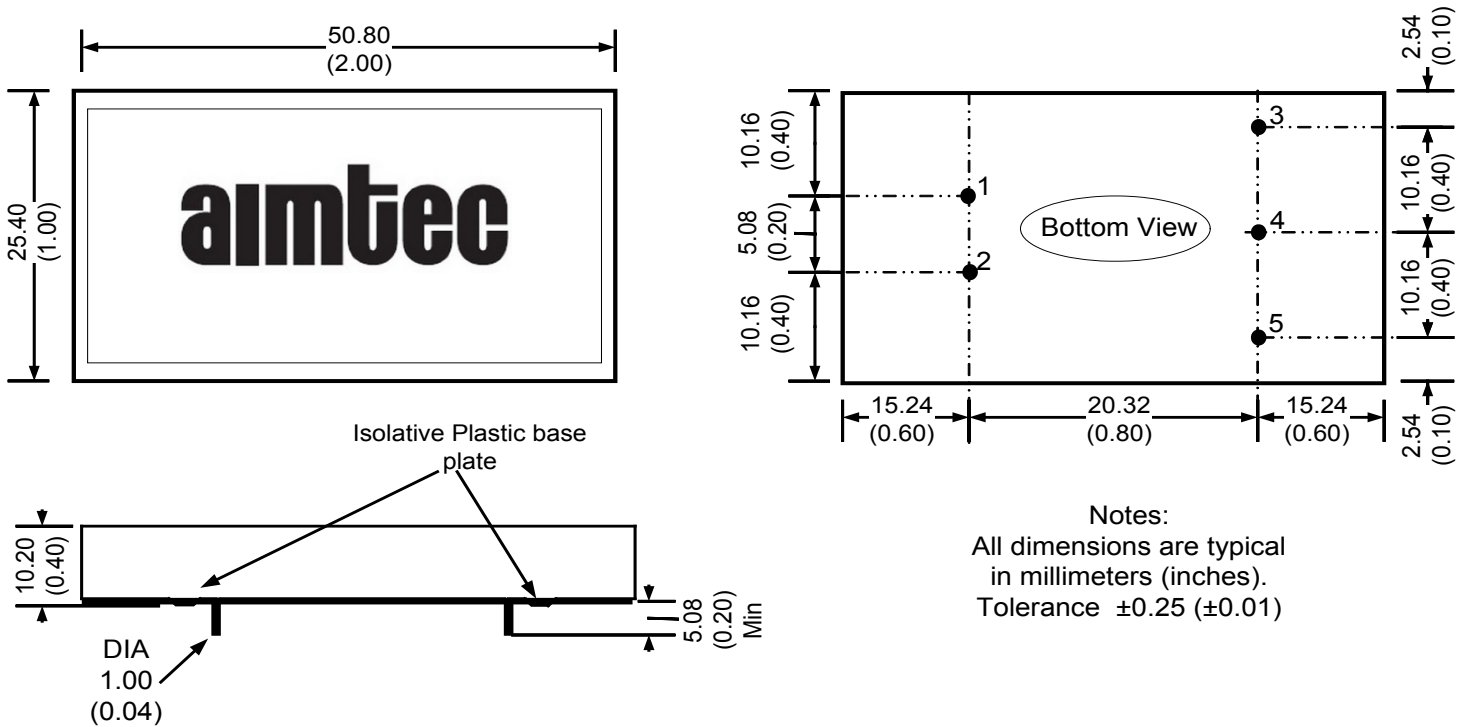
General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency		300		KHz
Operating temperature		-55 to +85		°C
Storage temperature		-55 to +125		°C
Maximum case temperature			100	°C
Cooling		Free air convection		
Humidity			95	%
Case material		Nickel coated copper		
Weight		30		g
Dimensions (L x W x H)	Tolerance ±0.5mm	2.00 x 1.00 x 0.40 inches	50.80 x 25.40 x 10.20 mm	
MTBF		>1,960,000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)		
Maximum soldering temperature	1.5mm from case max 10 sec		260	°C

Pin Out Specifications

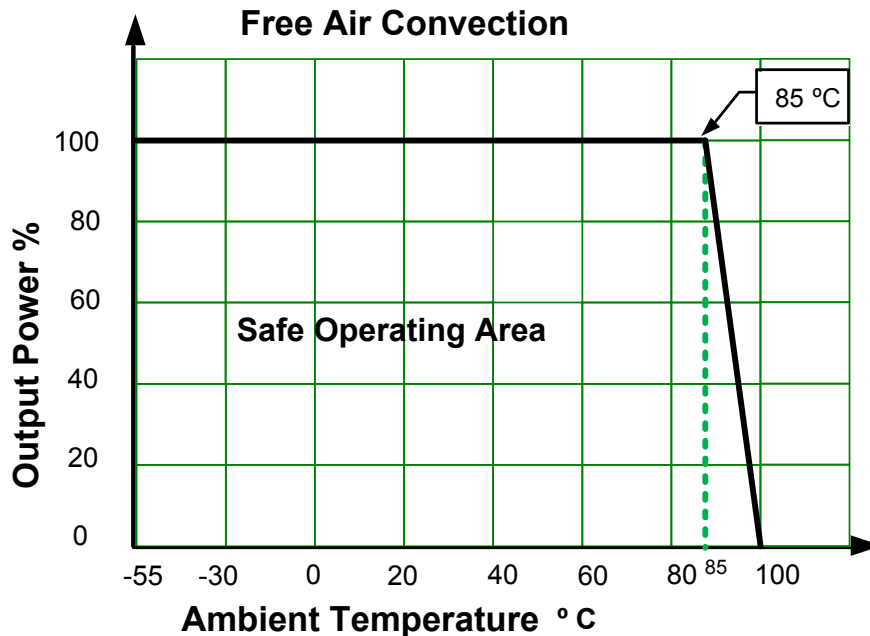
Pin	Single	Dual
1	+V Input	+V Input
2	-V Input	-V Input
3	+V Output	+V Output
4	No Pin.	Common.
5	-V Output	-V Output

Dimensions



Notes:
All dimensions are typical in millimeters (inches).
Tolerance ± 0.25 (± 0.01)

Derating



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