



FEATURES:

- RoHS Compliant
- Wide 2:1 input range
- High Efficiency up to 85%
- Continuous short circuit
- Operating Temperature -40°C to 85°C
- Input / Output Isolation of 500VAC
- No Tantalum capacitors used inside
- Over voltage protection



Models

Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VAC)	Efficiency (%)
AM3Q-0505SZ	4.5-9	5	600	500	67
AM3Q-0512SZ	4.5-9	12	250	500	70
AM3Q-0515SZ	4.5-9	15	200	500	70
AM3Q-1205SZ	9-18	5	600	500	70
AM3Q-1212SZ	9-18	12	250	500	74
AM3Q-1215SZ	9-18	15	200	500	74
AM3Q-2405SZ	18-36	5	600	500	71
AM3Q-2412SZ	18-36	12	250	500	75
AM3Q-2415SZ	18-36	15	200	500	75
AM3Q-4805SZ	36-75	5	600	500	71
AM3Q-4812SZ	36-75	12	250	500	76
AM3Q-4815SZ	36-75	15	200	500	76

Models

Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VAC)	Efficiency (%)
AM3Q-0512DZ	4.5-9	±12	±130	500	82
AM3Q-0515DZ	4.5-9	±15	±100	500	82
AM3Q-1212DZ	9-18	±12	±130	500	84
AM3Q-1215DZ	9-18	±15	±100	500	85
AM3Q-2412DZ	18-36	±12	±130	500	84
AM3Q-2415DZ	18-36	±15	±100	500	85
AM3Q-4812DZ	36-75	±12	±130	500	84
AM3Q-4815DZ	36-75	±15	±100	500	84

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	5	4.5-9		VDC
	12	9-18		
	24	18-36		
	48	36-75		
Filter	π (Pi) Network			
Start up time		20		ms
No Load Input Current		25		mA
Input reflected current		20		mA

Isolation Specifications

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	3sec	500		VAC
Resistance		50		MOhm
Capacitance			500	pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1		%
Cross Regulation (Dual Output Models)	25% load on one output 100% load on the other output	±5		%
Over voltage protection	Zener Diode Clamp	5	6.5	V
		12	12	
		15	18	
		±12	±15	
		±15	±18	
Short Circuit protection		Continuous		
Short circuit restart		Auto Recovery		
Line voltage regulation	LL-HL	±0.5		% of Vin
Load voltage regulation	Load:0-100% unbalanced	±1		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise	20MHz Bandwidth	50		mV p-p
Minimum Load Current		0		% of Max

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	100		KHz
Operating temperature	Derating above 60°C		-40 to +85	°C
Storage temperature		-40 to +125		°C
Maximum case temperature			100	°C
Cooling		Free Air Convection		
Humidity			95	% RH
Case material		Nickel Coated Copper		
Weight		16		g
Dimensions (L x W x H)		1.37 x 0.90 x 0.28 inches	35.00 x 23.00 x 7.00 mm	
MTBF		>1.6Mhrs (MIL-HDBK -217F, Ground Benign, t=+25°C)		
Transient recovery deviation		±3		%

Safety Specifications

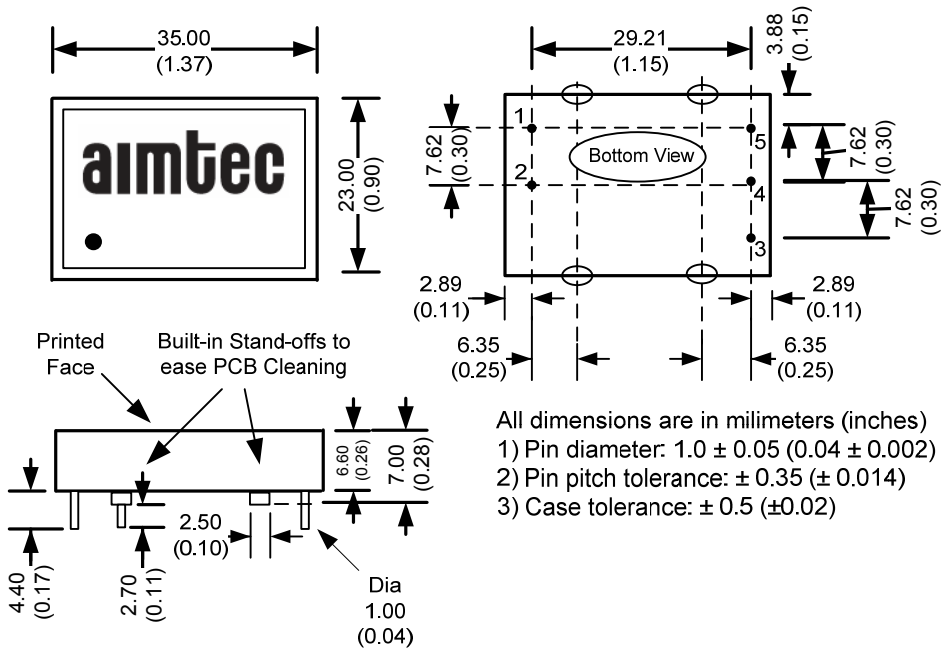
Parameters	
Standards	Designed to meet IEC/EN 60950-1

Pin Out Specifications

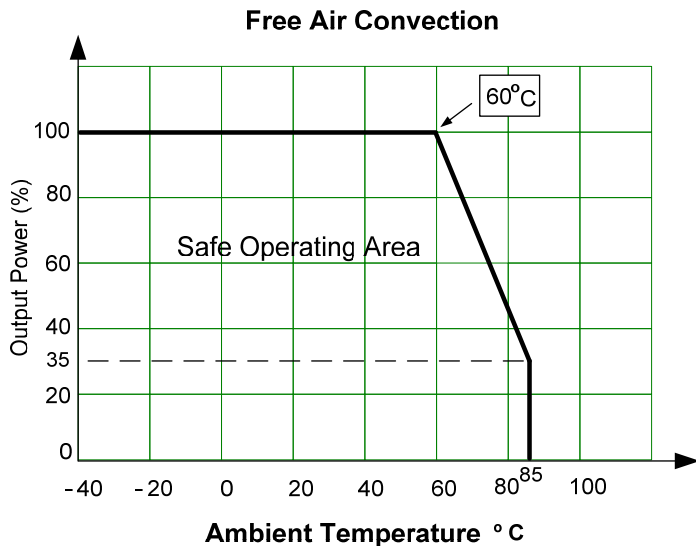
Pin	Single	Dual
1	-V Input	-V Input
2	+V Input	+V Input
3	+V Output	+V Output
4	NP	Common
5	-V Output	-V Output

NP: Not Populated

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.

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