

FEATURES:



- RoHS Compliant
- Wide 2:1 input range
- High Efficiency up to 86%
- 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)	Max Capacitive Load(uF)	Efficiency (%)
AM6Q-0503SZ	4.5-9	3.3	1000	500	1000	73
AM6Q-0505SZ	4.5-9	5	1000	500	1000	76
AM6Q-0512SZ	4.5-9	12	500	500	500	79
AM6Q-0515SZ	4.5-9	15	400	500	400	79
AM6Q-1203SZ	9-18	3.3	1000	500	1000	76
AM6Q-1205SZ	9-18	5	1200	500	1200	81
AM6Q-1212SZ	9-18	12	500	500	500	85
AM6Q-1215SZ	9-18	15	400	500	400	85
AM6Q-2403SZ	18-36	3.3	1200	500	1200	73
AM6Q-2405SZ	18-36	5	1200	500	1200	80
AM6Q-2412SZ	18-36	12	500	500	500	84
AM6Q-2415SZ	18-36	15	400	500	400	86
AM6Q-4803SZ	36-75	3.3	1200	500	1200	74
AM6Q-4805SZ	36-75	5	1200	500	1200	80
AM6Q-4812SZ	36-75	12	500	500	500	84
AM6Q-4815SZ	36-75	15	400	500	400	85

Models Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VAC)	Max Capacitive Load(uF)	Efficiency (%)
AM6Q-0512DZ	4.5-9	±12	±250	500	±250	82
AM6Q-0515DZ	4.5-9	±15	±200	500	±200	82
AM6Q-1212DZ	9-18	±12	±250	500	±250	88
AM6Q-1215DZ	9-18	±15	±200	500	±200	88
AM6Q-2412DZ	18-36	±12	±250	500	±250	88
AM6Q-2415DZ	18-36	±15	±200	500	±200	88
AM6Q-4812DZ	36-75	±12	±250	500	±250	87
AM6Q-4815DZ	36-75	±15	±200	500	±200	88

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		45		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	6.2	V
		12	15	
		15	18	
		±12	±15	
		±15	±18	
Over Current Protection	FL	185		%
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	75		mV p-p
Minimum Load Current		0		% of Max

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	330		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		25		g
Dimensions (L x W x H)		1.75 x 1.10 x 0.28 inches	44.50 x 28.00 x 7.00 mm	
MTBF	>1.28Mhrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			
Transient recovery deviation		±3		%

Safety Specifications

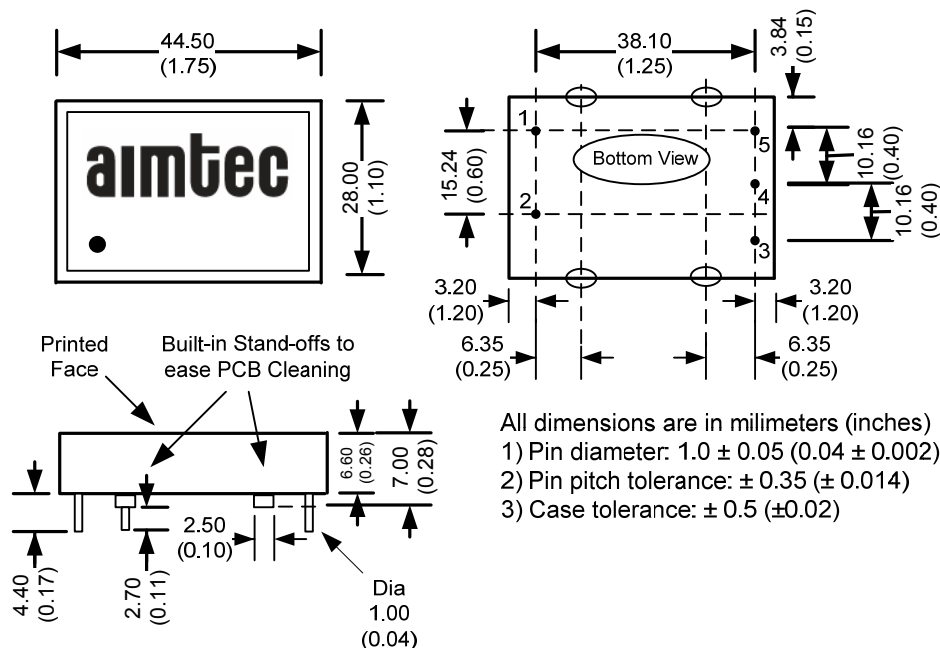
Parameters	
Standards	Designed to meet IEC/EN 60950-1

Pin Out Specifications

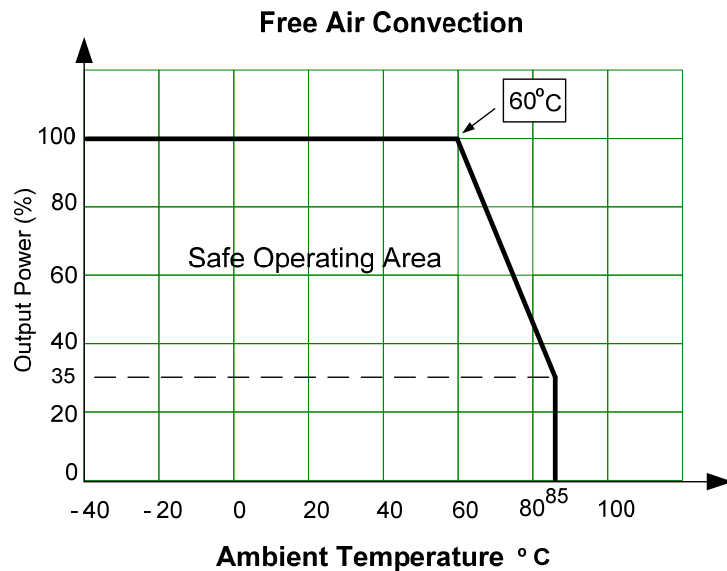
Pin	Single	Dual
1	-V Input	-V Input
2	+V Input	+V Input
3	+V Output	+V Output
4	NP	Common
5	-V Output	-V Output

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 Aimatec; refer to www.imatec.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.** Aimatec 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 Aimatec's standard Terms of Sale available at www.imatec.com.