Series AM3Q-Z

3 Watt | DC-DC Converter

FEATURES:

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

RoHS

Models
Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VAC)	Max Capacitive Load (uF)	Efficiency (%)
AM3Q-0505SZ	4.5-9	5	600	500	100	67
AM3Q-0512SZ	4.5-9	12	250	500	100	70
AM3Q-0515SZ	4.5-9	15	200	500	100	70
AM3Q-1205SZ	9-18	5	600	500	100	70
AM3Q-1212SZ	9-18	12	250	500	100	74
AM3Q-1215SZ	9-18	15	200	500	100	74
AM3Q-2405SZ	18-36	5	600	500	220	71
AM3Q-2412SZ	18-36	12	250	500	220	75
AM3Q-2415SZ	18-36	15	200	500	220	75
AM3Q-4805SZ	36-75	5	600	500	220	71
AM3Q-4812SZ	36-75	12	250	500	220	76
AM3Q-4815SZ	36-75	15	200	500	220	76

Models
Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VAC)	Max Capacitive Load (uF)	Efficiency (%)
AM3Q-0512DZ	4.5-9	±12	±130	500	±220	82
AM3Q-0515DZ	4.5-9	±15	±100	500	±100	82
AM3Q-1212DZ	9-18	±12	±130	500	±220	84
AM3Q-1215DZ	9-18	±15	±100	500	±100	85
AM3Q-2412DZ	18-36	±12	±130	500	±220	84
AM3Q-2415DZ	18-36	±15	±100	500	±100	85
AM3Q-4812DZ	36-75	±12	±130	500	±220	84
AM3Q-4815DZ	36-75	±15	±100	500	±100	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

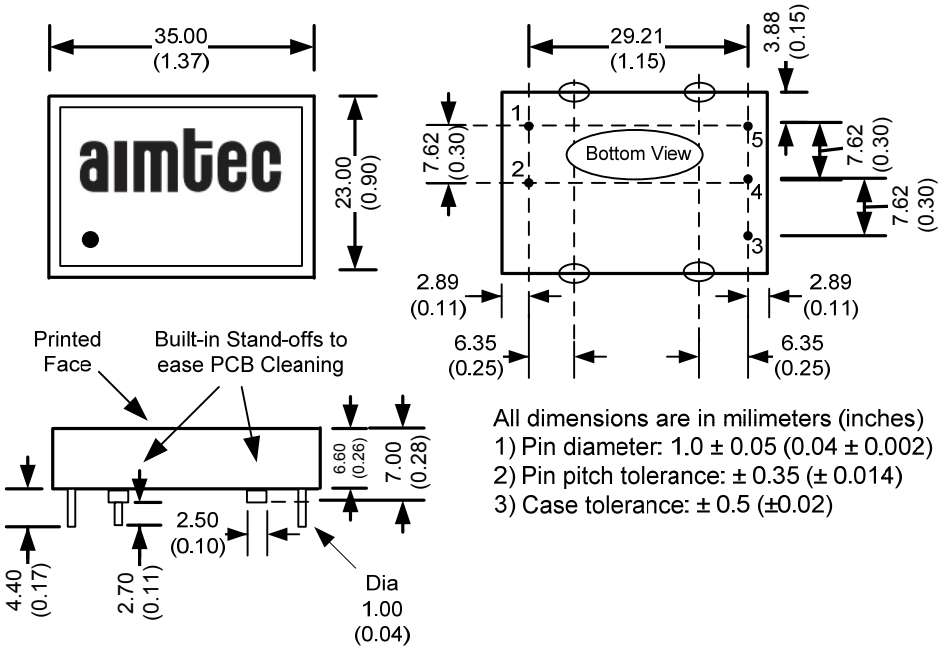
Parameters	
Standards	Designed to meet IEC/EN 60950-1

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

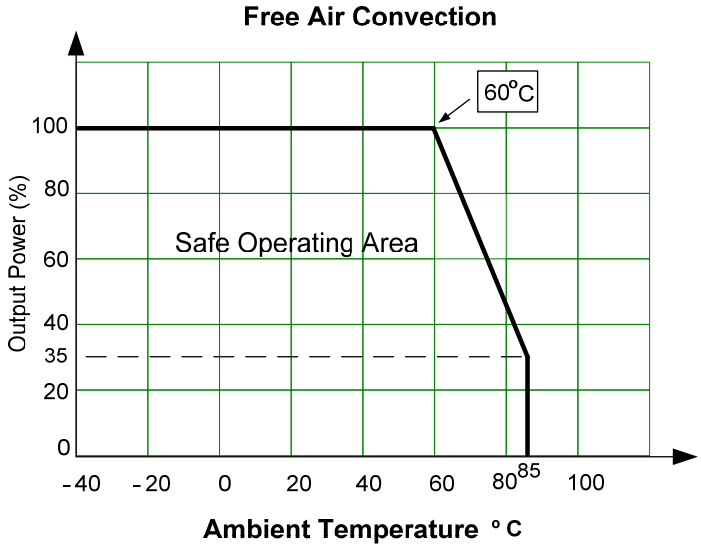
NP: Not Populated

Dimensions



All dimensions are in milimeters (inches)
1) Pin diameter: 1.0 ± 0.05 (0.04 ± 0.002)
2) Pin pitch tolerance: ± 0.35 (± 0.014)
3) Case tolerance: ± 0.5 (±0.02)

Derating



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