aimtec
Your Power Partner

Series AM3TW-NZ
3 Watt | DC-DC Converter

FEATURES:

- RoHS compliant
- 24 Pin DIP Package
- Ultra-wide 4:1 input range
- High efficiency up to 83%
- Operating temperature -40ºC to + 85ºC
- Input / Output Isolation 1500VDC
- Pin compatible with multiple manufacturers
- Continuous short circuit protection

RoHS

Models
Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max. Cap. Load (µF)	Efficiency (%)
AM3TW-2403S-NZ	9-36	3.3	909	1500	2700	75
AM3TW-2405S-NZ	9-36	5	600	1500	2200	80
AM3TW-2409S-NZ	9-36	9	333	1500	1000	80
AM3TW-2412S-NZ	9-36	12	250	1500	680	81
AM3TW-2415S-NZ	9-36	15	200	1500	680	82
AM3TW-2424S-NZ	9-36	24	125	1500	470	82
AM3TW-4803S-NZ	18-75	3.3	909	1500	2700	76
AM3TW-4805S-NZ	18-75	5	600	1500	2200	79
AM3TW-4809S-NZ	18-75	9	333	1500	1000	81
AM3TW-4812S-NZ	18-75	12	250	1500	680	82
AM3TW-4815S-NZ	18-75	15	200	1500	680	83
AM3TW-4824S-NZ	18-75	24	125	1500	470	81

NOTE: All specifications 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	24 Vin	9-36		VDC
	48 Vin	18-75		
Filter	π (Pi) Network			
Absolute maximum (1sec max)	24 Vin		-0.7 - 50	VDC
	48 Vin		-0.7 - 100	
Full load Input current	24 Vin	156		mA
	48 Vin	79		
Quiescent Input current	24 Vin	10		mA
	48 Vin	8		
Input Reflected Ripple current		30		mA

Isolation Specifications

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, <1mA	1500		VDC
Resistance	Isolation Voltage 500VDC	> 1000		MOhm
Capacitance	I/O 100KHz, 0.1V	120		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1	±3	%
Short Circuit protection	Continuous			
Short circuit restart	Auto-recovery			
Line voltage regulation	LL-HL, full load	±0.2	±0.5	%
Load voltage regulation	5% - 100% load	±0.2	±1	%
Temperature coefficient		±0.02	±0.03	%/ºC

Output Specifications (continued)

Parameters	Conditions	Typical	Maximum	Units
Ripple	20MHz bandwidth	45		mV p-p
Noise	20MHz bandwidth	85		mV p-p
Transient Recovery Time	25% Load Step	0.5	3	m sec
Transient Deviation	25% Load Step	±2	±5	%
Over load protection		>120		%

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load, PFM	250		KHz
Operating temperature	With derating above +71C	-40 to +85		°C
Storage temperature		-55 to +125		°C
Max Case temperature			100	°C
Temperature Rise	Full Load, 25°C	25°C		°C
Lead Temperature	1.5mm from case for 10 Seconds		300	°C
Cooling	Free air convection			
Humidity			95	% RH
Case material	Black Aluminum Alloy			
Weight		14		g
Dimensions (L x W x H)	1.26 x 0.80 x 0.42 inches 32.00 x 20.00 x 10.80mm			
MTBF	>1 000 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			

Safety Specifications

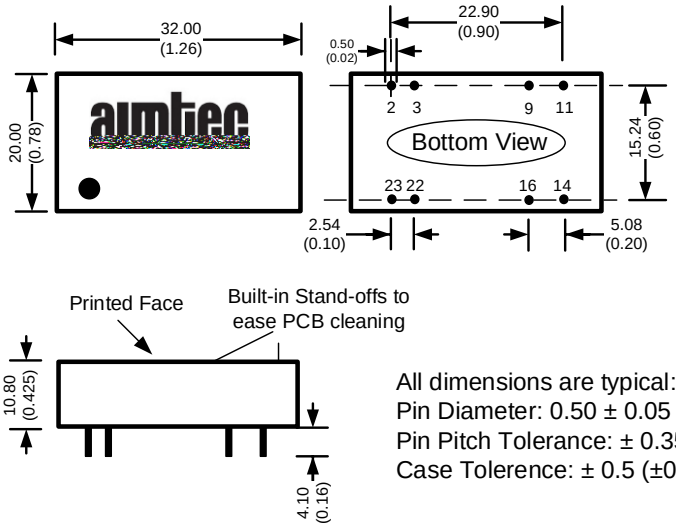
Parameters	
Standards	Designed to meet EN 55022, Class B, with external filter & EN 55024: 2010 IEC 61000-4-2, Contact ±4KV/Air ±8KV, Criteria B IEC 61000-4-3, 10V/m, Criteria A IEC 61000-4-4, ±2KV, Criteria B, with external filter IEC 61000-4-5, ±2KV, Criteria B, with external filter IEC 61000-4-6, 3Vrms, Criteria A IEC 61000-4-29, 0-70%, Criteria B

Pin Out Specifications

Pin	Single
2	-V Input
3	-V Input
9	No pin
11	N.C.
14	+V Output
16	-V Output
22	+V Input
23	+V Input

N.C.: not connected

Dimensions



All dimensions are typical: millimeters (inches)
Pin Diameter: 0.50 ± 0.05 (0.02 ± 0.002)
Pin Pitch Tolerance: ± 0.35 (±0.014)
Case Tolerence: ± 0.5 (±0.02)