aimtec
Your Power Partner

Series AM3TW-RZ
3 Watt | DC-DC Converter



FEATURES:

- RoHS compliant
- 24 Pin DIP Package
- High efficiency up to 82%
- Wide 4:1 input range
- Operating temperature -40°C to + 85°C
- Input / Output Isolation 1500VDC
- Pin compatible with multiple manufacturers
- Continuous short circuit protection

Models
Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max Capacitive Load (uF)	Efficiency (%)
AM3TW-2403S-RZ	9-36	3.3	900	1500	680	75
AM3TW-2405S-RZ	9-36	5	600	1500	470	78
AM3TW-2407S-RZ	9-36	7.2	417	1500	100	78
AM3TW-2409S-RZ	9-36	9	334	1500	100	79
AM3TW-2412S-RZ	9-36	12	250	1500	68	81
AM3TW-2415S-RZ	9-36	15	200	1500	47	81
AM3TW-2418S-RZ	9-36	18	167	1500	47	81
AM3TW-2424S-RZ	9-36	24	125	1500	22	81
AM3TW-4803S-RZ	18-72	3.3	900	1500	680	76
AM3TW-4805S-RZ	18-72	5	600	1500	470	80
AM3TW-4807S-RZ	18-72	7.2	417	1500	100	78
AM3TW-4809S-RZ	18-72	9	334	1500	100	82
AM3TW-4812S-RZ	18-72	12	250	1500	68	80
AM3TW-4815S-RZ	18-72	15	200	1500	47	80
AM3TW-4818S-RZ	18-72	18	167	1500	47	80
AM3TW-4824S-RZ	18-72	24	125	1500	22	81

Models
Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max Capacitive Load (uF)	Efficiency (%)
AM3TW-2403D-RZ	9-36	±3.3	±450	1500	±330	76
AM3TW-2405D-RZ	9-36	±5	±300	1500	±220	79
AM3TW-2407D-RZ	9-36	±7.2	±208	1500	±47	78
AM3TW-2409D-RZ	9-36	±9	±167	1500	±47	79
AM3TW-2412D-RZ	9-36	±12	±125	1500	±33	80
AM3TW-2415D-RZ	9-36	±15	±100	1500	±22	80
AM3TW-2418D-RZ	9-36	±18	±84	1500	±22	81
AM3TW-2424D-RZ	9-36	±24	±63	1500	±10	80
AM3TW-4803D-RZ	18-72	±3.3	±400	1500	±330	76
AM3TW-4805D-RZ	18-72	±5	±300	1500	±220	81
AM3TW-4807D-RZ	18-72	±7.2	±208	1500	±47	78
AM3TW-4809D-RZ	18-72	±9	±167	1500	±47	82
AM3TW-4812D-RZ	18-72	±12	±125	1500	±33	81
AM3TW-4815D-RZ	18-72	±15	±100	1500	±22	82
AM3TW-4818D-RZ	18-72	±18	±84	1500	±22	81
AM3TW-4824D-RZ	18-72	±24	±63	1500	±10	81

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	24 48	9-36 18-72		VDC
Filter		π (Pi) Network		
Turn on Transient process time			350	ms
Start up time		500		ms

Input Specifications (continued)

Parameters	Nominal	Typical	Maximum	Units
Absolute Maximum Rating	24 Vin 48 Vin	-0.7-40 -0.7-80		VDC
Peak Input Voltage time		100		ms
Tested I/O voltage	3 sec		1500	VDC
Resistance		> 1000		MOhm
Capacitance		500		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1		%
Voltage balance (Dual Output Model)	Balanced Load	±1		%
Short Circuit protection	Continuous			
Short circuit restart	Auto Recovery			
Line voltage regulation (Single)	LL-HL	±0.5		%
Line voltage regulation (Dual)	LL-HL	±0.5		%
Load voltage regulation (Single)	Load: 10…100%	±0.5		%
Load voltage regulation (Single) 3.3V output model	Load: 10…100%	±1.5		%
Load voltage regulation (Dual)	Load: 10…100%	±0.5		%
Load voltage regulation (Dual) ±3.3V output model	Load: 10…100%	±1.5		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise	At 20MHz Bandwidth	60		mV p-p
Rising time		10		ms

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	260		KHz
Operating temperature	Full Load without Derating	-40 to +85		°C
Storage temperature		-40 to +125		°C
Max Case Temperature			100	°C
Cooling	Free air convection			
Humidity			90	%
Case material	Nickel coated copper			
Weight		21		g
Dimensions (L x W x H)	Tolerance ±0.5 mm or ±0.02 inches	1.25 x 0.80 x 0.40 inches		31.8 x 20.30 x 10.20 mm
MTBF	>1 050 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			

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.

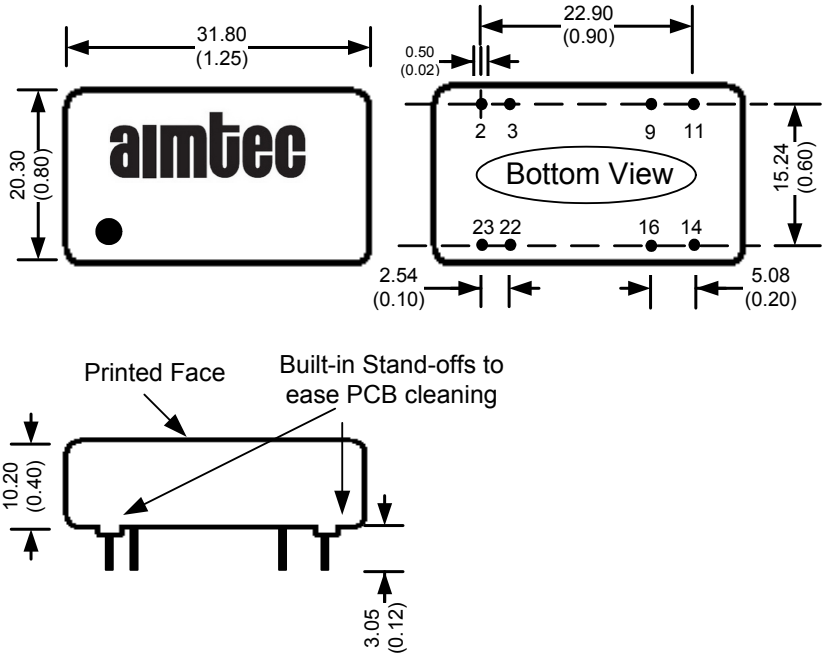
Safety Specifications

Parameters	
Agency Approval	CE
Safety Standards	EN55022 Class A, EN55024
	IEC61000-4-2, Perf. Criteria B
	IEC61000-4-3, Perf. Criteria A
	IEC61000-4-4, Perf. Criteria B
	IEC61000-4-5, Perf. Criteria B
	IEC61000-4-6, Perf. Criteria A
	IEC61000-4-8, Perf. Criteria A
	NOTE: also designed to meet IEC 60950-1:2001

Pin Out Specifications

Pin	1500VDC	
	Single	Dual
2	-V Input	-V Input
3	-V Input	-V Input
9	No pin	Common
11	N.C.	-V Output
14	+V Output	+V Output
16	-V Output	Common
22	+V Input	+V Input
23	+V Input	+V Input

Dimensions



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