

Series AM3T-Z

3 Watt | DC-DC Converter



FEATURES:

- RoHS compliant
- Wide 2:1 input range
- High efficiency up to 82%
- Continuous short circuit protection
- Operating temperature -40°C to + 85°C
- Input / Output Isolation 1500 and 3500 VDC
- Pin compatible with multiple manufacturers
- Low profile metal package



Models

Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Capacitive load, max (µF)	Efficiency (%)
AM3T-1203SZ	9-18	3.3	800	1500	470	73
AM3T-1205SZ	9-18	5	600	1500	470	76
AM3T-1207SZ	9-18	7.2	417	1500	68	78
AM3T-1209SZ	9-18	9	333	1500	68	77
AM3T-1212SZ	9-18	12	250	1500	47	79
AM3T-1215SZ	9-18	15	200	1500	47	79
AM3T-1218SZ	9-18	18	167	1500	22	80
AM3T-1224SZ	9-18	24	125	1500	22	79
AM3T-2403SZ	18-36	3.3	800	1500	470	73
AM3T-2405SZ	18-36	5	600	1500	470	77
AM3T-2407SZ	18-36	7.2	417	1500	68	79
AM3T-2409SZ	18-36	9	333	1500	68	78
AM3T-2412SZ	18-36	12	250	1500	47	78
AM3T-2415SZ	18-36	15	200	1500	47	78
AM3T-2418SZ	18-36	18	167	1500	22	79
AM3T-2424SZ	18-36	24	125	1500	22	78
AM3T-4803SZ	36-72	3.3	800	1500	470	75
AM3T-4805SZ	36-72	5	600	1500	470	80
AM3T-4807SZ	36-72	7.2	417	1500	68	80
AM3T-4809SZ	36-72	9	333	1500	68	80
AM3T-4812SZ	36-72	12	250	1500	47	82
AM3T-4815SZ	36-72	15	200	1500	47	82
AM3T-4818SZ	36-72	18	167	1500	22	80
AM3T-4824SZ	36-72	24	125	1500	22	80
AM3T-1203SH35Z	9-18	3.3	800	3500	470	73
AM3T-1205SH35Z	9-18	5	600	3500	470	76
AM3T-1207SH35Z	9-18	7.2	417	3500	68	78
AM3T-1209SH35Z	9-18	9	333	3500	68	77
AM3T-1212SH35Z	9-18	12	250	3500	47	79
AM3T-1215SH35Z	9-18	15	200	3500	47	79
AM3T-1218SH35Z	9-18	18	167	3500	22	80
AM3T-1224SH35Z	9-18	24	125	3500	22	79
AM3T-2403SH35Z	18-36	3.3	800	3500	470	75
AM3T-2405SH35Z	18-36	5	600	3500	470	80
AM3T-2407SH35Z	18-36	7.2	417	3500	68	80
AM3T-2409SH35Z	18-36	9	333	3500	68	80
AM3T-2412SH35Z	18-36	12	250	3500	47	82
AM3T-2415SH35Z	18-36	15	200	3500	47	82
AM3T-2418SH35Z	18-36	18	167	3500	22	80
AM3T-2424SH35Z	18-36	24	125	3500	22	80
AM3T-4803SH35Z	36-72	3.3	800	3500	470	80
AM3T-4805SH35Z	36-72	5	600	3500	470	77
AM3T-4807SH35Z	36-72	7.2	417	3500	68	81
AM3T-4809SH35Z	36-72	9	333	3500	68	78
AM3T-4812SH35Z	36-72	12	250	3500	47	80
AM3T-4815SH35Z	36-72	15	200	3500	47	80

Models

Single output (continue)

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Capacitive load, max (μF)	Efficiency (%)
AM3T-4818SH35Z	36-72	18	167	3500	22	80
AM3T-4824SH35Z	36-72	24	125	3500	22	80

Models

Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Capacitive load, max (μF)	Efficiency (%)
AM3T-1203DZ	9-18	±3.3	±400	1500	±220	75
AM3T-1205DZ	9-18	±5	±300	1500	±220	78
AM3T-1207DZ	9-18	±7.2	±208	1500	±33	78
AM3T-1209DZ	9-18	±9	±167	1500	±33	79
AM3T-1212DZ	9-18	±12	±125	1500	±22	80
AM3T-1215DZ	9-18	±15	±100	1500	±22	80
AM3T-1218DZ	9-18	±18	±84	1500	±10	78
AM3T-1224DZ	9-18	±24	±63	1500	±10	80
AM3T-2403DZ	18-36	±3.3	±400	1500	±220	75
AM3T-2405DZ	18-36	±5	±300	1500	±220	77
AM3T-2407DZ	18-36	±7.2	±208	1500	±33	81
AM3T-2409DZ	18-36	±9	±167	1500	±33	78
AM3T-2412DZ	18-36	±12	±125	1500	±22	80
AM3T-2415DZ	18-36	±15	±100	1500	±22	80
AM3T-2418DZ	18-36	±18	±84	1500	±10	80
AM3T-2424DZ	18-36	±24	±63	1500	±10	80
AM3T-4803DZ	36-72	±3.3	±400	1500	±220	76
AM3T-4805DZ	36-72	±5	±300	1500	±220	78
AM3T-4807DZ	36-72	±7.2	±208	1500	±33	78
AM3T-4809DZ	36-72	±9	±167	1500	±33	79
AM3T-4812DZ	36-72	±12	±125	1500	±22	80
AM3T-4815DZ	36-72	±15	±100	1500	±22	80
AM3T-4818DZ	36-72	±18	±84	1500	±10	78
AM3T-4824DZ	36-72	±24	±63	1500	±10	80
AM3T-1203DH35Z	9-18	±3.3	±400	3500	±220	75
AM3T-1205DH35Z	9-18	±5	±300	3500	±220	78
AM3T-1207DH35Z	9-18	±7.2	±208	3500	±33	80
AM3T-1209DH35Z	9-18	±9	±167	3500	±33	79
AM3T-1212DH35Z	9-18	±12	±125	3500	±22	80
AM3T-1215DH35Z	9-18	±15	±100	3500	±22	80
AM3T-1218DH35Z	9-18	±18	±84	3500	±10	80
AM3T-1224DH35Z	9-18	±24	±63	3500	±10	80
AM3T-2403DH35Z	18-36	±3.3	±400	3500	±220	75
AM3T-2405DH35Z	18-36	±5	±300	3500	±220	78
AM3T-2407DH35Z	18-36	±7.2	±208	3500	±33	80
AM3T-2409DH35Z	18-36	±9	±167	3500	±33	79
AM3T-2412DH35Z	18-36	±12	±125	3500	±22	80
AM3T-2415DH35Z	18-36	±15	±100	3500	±22	80
AM3T-2418DH35Z	18-36	±18	±84	3500	±10	80
AM3T-2424DH35Z	18-36	±24	±63	3500	±10	80
AM3T-4803DH35Z	36-72	±3.3	±400	3500	±220	76
AM3T-4805DH35Z	36-72	±5	±300	3500	±220	78
AM3T-4807DH35Z	36-72	±7.2	±208	3500	±33	78
AM3T-4809DH35Z	36-72	±9	±167	3500	±33	79
AM3T-4812DH35Z	36-72	±12	±125	3500	±22	80

Models

Dual output (continue)

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Capacitive load, max (μF)	Efficiency (%)
AM3T-4815DH35Z	36-72	±15	±100	3500	±22	80
AM3T-4818DH35Z	36-72	±18	±84	3500	±10	78
AM3T-4824DH35Z	36-72	±24	±63	3500	±10	80

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	12	9-18		VDC
	24	18-36		
	48	36-72		
Filter	π (Pi) Network			
Turn on Transient process time			350	ms
Start up time		500		ms
Absolute Maximum Rating	12 Vin	-0.7-24		VDC
	24 Vin	-0.7-40		
	48 Vin	-0.7-80		
Peak Input Voltage time		100		ms

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3 sec		1500 and 3500	VDC
Resistance		> 1000		MOhm
Capacitance		470		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1		%
Voltage balance Dual output		±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

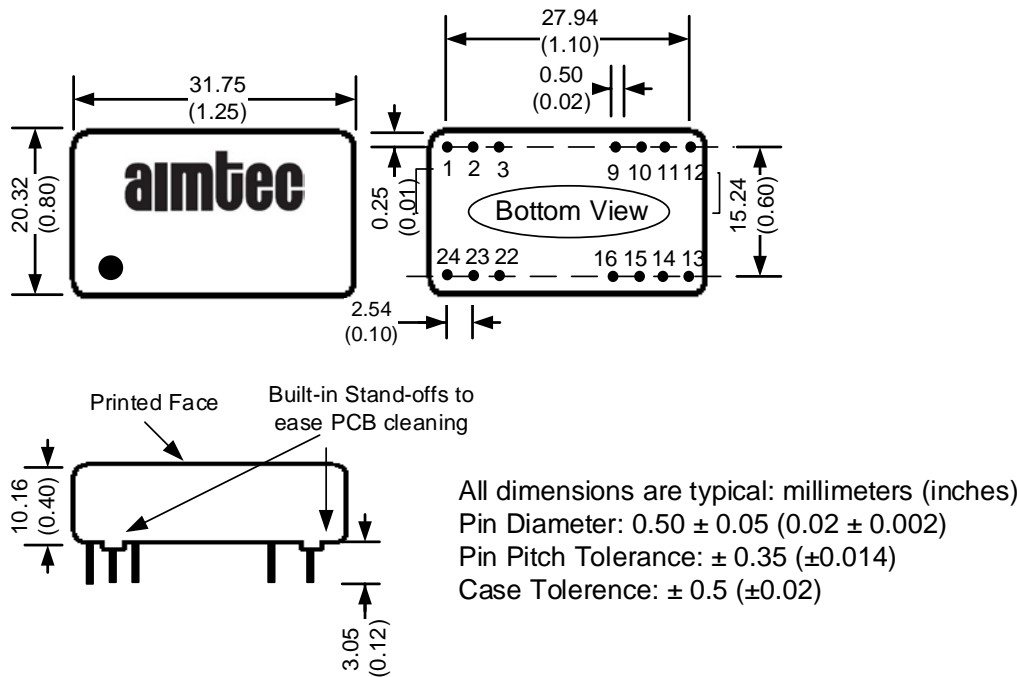
General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	266		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		17		g
Dimensions(L x W x H)	Tolerance ±0.5 mm or ±0.02 inches	1.28 x 0.84 x 0.41 inches	32.25 x 21.35 x 10.50mm	
MTBF		>1 039 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)		

Pin Out Specifications

Pin	1500VDC		3500VDC	
	Single	Dual	Single	Dual
1	+V Input	+V Input	No pin	No pin
2	N.C.	-V Output	-V Input	-V Input
3	N.C.	Common	-V Input	-V Input
9	No pin	No pin	No pin	Common
10	-V Output	Common	No pin	No pin
11	+V Output	+V Output	N.C.	-V Output
12/13	-V Input	-V Input	No pin	No pin
14	+V Output	+V Output	+V Output	+V Output
15	-V Output	Common	No pin	No pin
16	No pin	No pin	-V Output	Common
22	N.C.	Common	+V Input	+V Input
23	N.C.	-V Output	+V Input	+V Input
24	+V Input	+V Input	No pin	No pin

Dimensions



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