



FEATURES:

- RoHS compliant
- 24 Pin DIP Package
- Shielded metal package
- High efficiency up to 86%
- Wide 2:1 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. Cap. Load (µF)	Efficiency (%)
AM3T-1203S-NZ	9-18	3.3	909	1500	4700	74
AM3T-1205S-NZ	9-18	5	600	1500	4700	81
AM3T-1212S-NZ	9-18	12	250	1500	2700	83
AM3T-1215S-NZ	9-18	15	200	1500	2200	82
AM3T-1224S-NZ	9-18	24	125	1500	1800	82
AM3T-2403S-NZ	18-36	3.3	909	1500	4700	78
AM3T-2405S-NZ	18-36	5	600	1500	4700	81
AM3T-2412S-NZ	18-36	12	250	1500	2700	86
AM3T-2415S-NZ	18-36	15	200	1500	2200	86
AM3T-2424S-NZ	18-36	24	125	1500	1800	85
AM3T-4803S-NZ	36-75	3.3	909	1500	4700	76
AM3T-4805S-NZ	36-75	5	600	1500	4700	82
AM3T-4812S-NZ	36-75	12	250	1500	2700	86
AM3T-4815S-NZ	36-75	15	200	1500	2200	86

Models
Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Efficiency (%)
AM3T-1205D-NZ	9-18	±5	±300	1500	81
AM3T-1209D-NZ	9-18	±9	±166	1500	84
AM3T-1212D-NZ	9-18	±12	±125	1500	84
AM3T-1215D-NZ	9-18	±15	±100	1500	85
AM3T-2405D-NZ	18-36	±5	±300	1500	82
AM3T-2412D-NZ	18-36	±12	±125	1500	84
AM3T-2415D-NZ	18-36	±15	±100	1500	84
AM3T-4805D-NZ	36-75	±5	±300	1500	82
AM3T-4812D-NZ	36-75	±12	±125	1500	84
AM3T-4815D-NZ	36-75	±15	±100	1500	85

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	12	9-18		VDC
	24	18-36		
	48	36-75		
Filter	π (Pi) Network			
Absolute Maximum (1 sec max.)	12 Vin		25	VDC
	24 Vin		50	
	48 Vin		100	

Isolation Specifications

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec	1500		VDC
Resistance		> 1000		MOhm
Capacitance		120		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1		%
Dual Output Voltage Balance	Balanced Loads	±0.5		%
Short Circuit protection		Continuous		
Short circuit restart		Auto-recovery		
Line voltage regulation		±0.2		%
Load voltage regulation		±0.2		%
Temperature coefficient		±0.03		%/°C
Ripple & Noise	20MHz bandwidth	75		mV p-p
Transient Recovery Time	25% Load Step	0.5		m sec
Transient Deviation	25% Load Step	±2		%

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	200		KHz
Operating temperature	With derating above +85C	-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	%
Case material		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 10.80 mm	
MTBF		>1 000 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)		

Safety Specifications

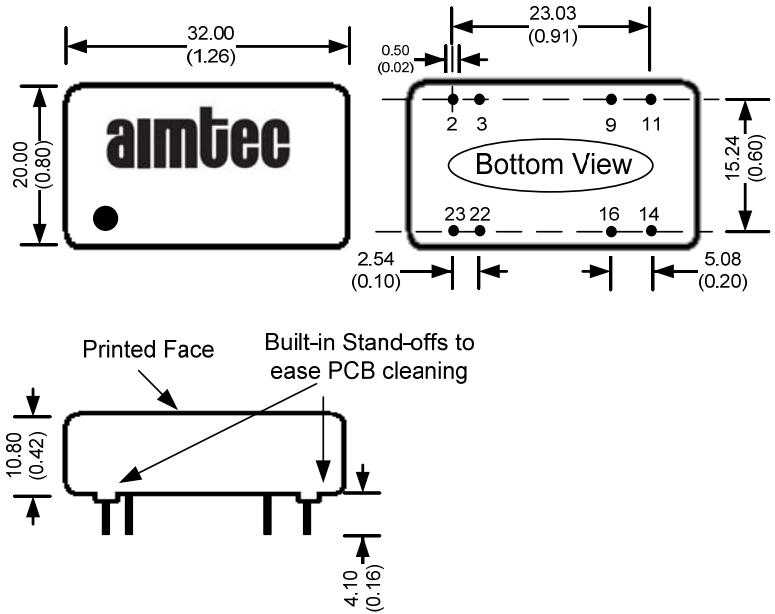
Parameters	
Agency approvals	cULus (AM3T-2405S-NZ and AM3T-2415S-NZ only)
Standards	UL 60950-1

Pin Out Specifications

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

N.C.: not connected

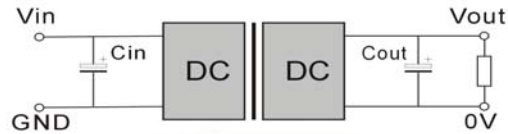
Dimensions



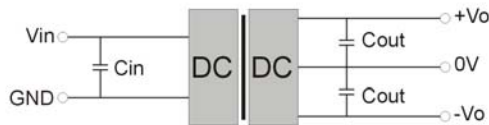
External capacitors

Vin (VDC)	Cin (uF)	Vout (VDC)	Cout (uF)
12	100	3.3	10
		5	10
		12	10
		15	10
24 & 48	10-47	±5	10
		±12	10
		±15	10

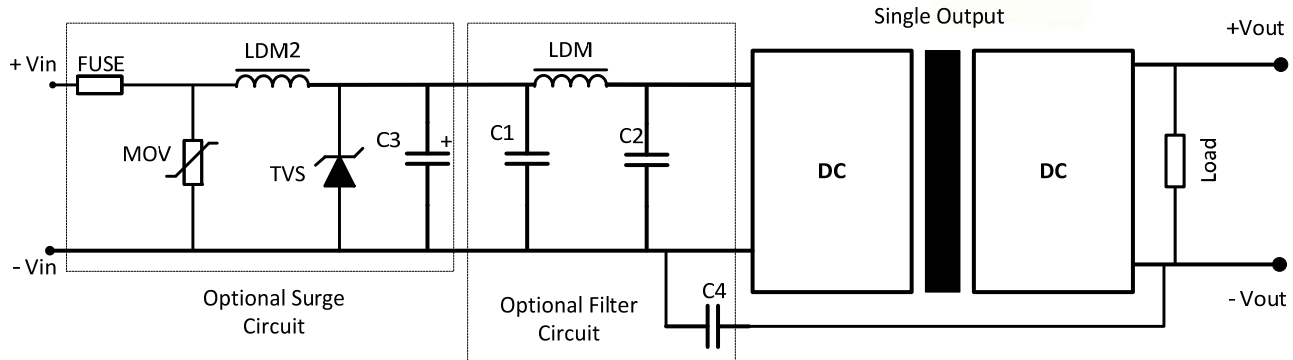
Filtering Single output



Filtering Dual output



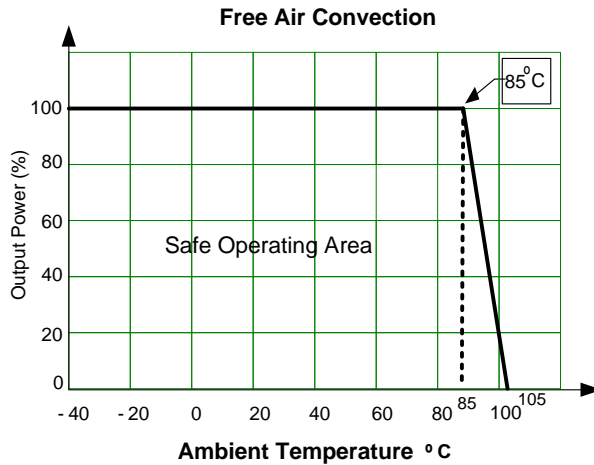
Recommended Circuit



Model	C1	C2	C4	LDM	MOV	TVS	C3	LDM2
12 Vin	4.7 μ F / 50V	4.7 μ F / 50V	1 nF / 2KV	12 μ H	-	SMCJ28A	680 μ F / 25V	-
24 Vin	4.7 μ F / 50V	4.7 μ F / 50V	1 nF / 2KV	12 μ H	S14K35	SMCJ48A	330 μ F / 50V	56 μ H
48 Vin	4.7 μ F / 100V	4.7 μ F / 100V	1 nF / 2KV	12 μ H	S14K60	SMCJ90A	330 μ F / 100V	56 μ H

Note: Fuse is user selectable

Derating



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