



### 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-0505S-NZ	4.5-9	5	600	1500	4700	74
AM3T-0512S-NZ	4.5-9	12	250	1500	2700	77
AM3T-0515S-NZ	4.5-9	15	200	1500	2200	77
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-2409S-NZ	18-36	9	333	1500	2700	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
AM3T-4824S-NZ	36-75	24	125	1500	1000	84

### Models Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max. Cap. Load (µF)	Efficiency (%)
AM3T-0505D-NZ	4.5-9	±5	±300	1500	±2200	76
AM3T-0509D-NZ	4.5-9	±9	±166	1500	±1800	76
AM3T-0512D-NZ	4.5-9	±12	±125	1500	±1800	78
AM3T-0515D-NZ	4.5-9	±15	±100	1500	±1000	78
AM3T-1205D-NZ	9-18	±5	±300	1500	±2200	81
AM3T-1209D-NZ	9-18	±9	±166	1500	±1800	84
AM3T-1212D-NZ	9-18	±12	±125	1500	±1800	84
AM3T-1215D-NZ	9-18	±15	±100	1500	±1000	85
AM3T-2405D-NZ	18-36	±5	±300	1500	±2200	82
AM3T-2412D-NZ	18-36	±12	±125	1500	±1800	84
AM3T-2415D-NZ	18-36	±15	±100	1500	±1000	84
AM3T-4805D-NZ	36-75	±5	±300	1500	±2200	82
AM3T-4812D-NZ	36-75	±12	±125	1500	±1800	84
AM3T-4815D-NZ	36-75	±15	±100	1500	±1000	85
AM3T-4824D-NZ	36-75	±24	±63	1500	±680	84

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	5 Vin	4.5-9		VDC
	12 Vin	9-18		
	24 Vin	18-36		
	48 Vin	36-75		
Filter	□ (Pi) Network			
Absolute Maximum	5 Vin		12	VDC
	12 Vin		25	
	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	Black Anodized Aluminum			
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 000000 hrs(MIL-HDBK -217F, Ground Benign, t=+25°C)			

### Safety Specifications

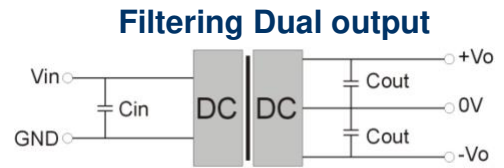
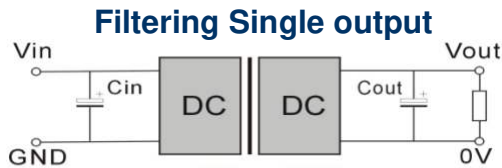
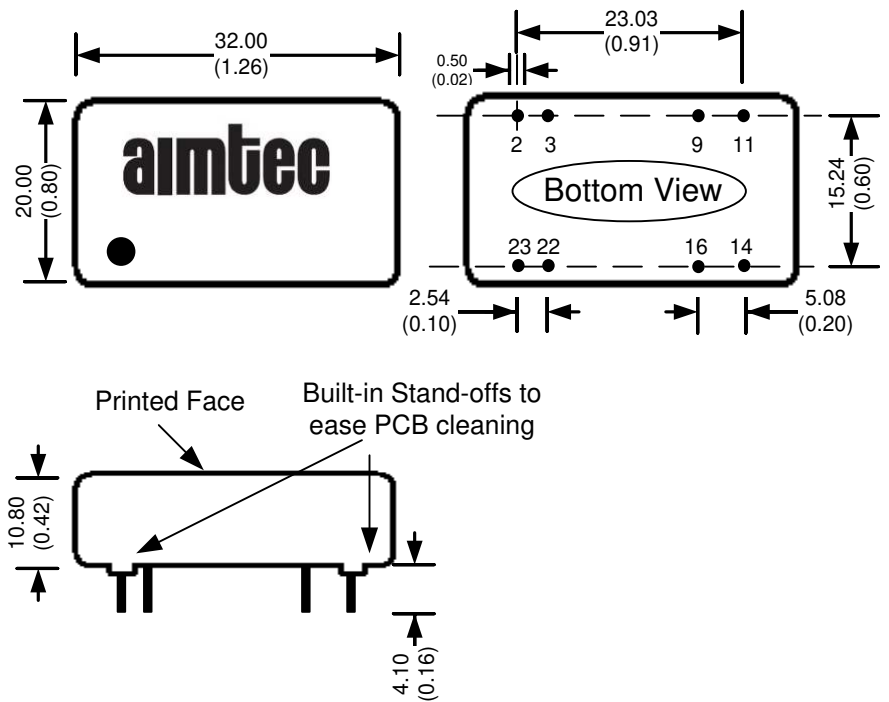
Parameters	
Agency approvals	cULus (AM3T-2405S-NZ and AM3T-2415S-NZ only)
Standards	UL 60950-1

### 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

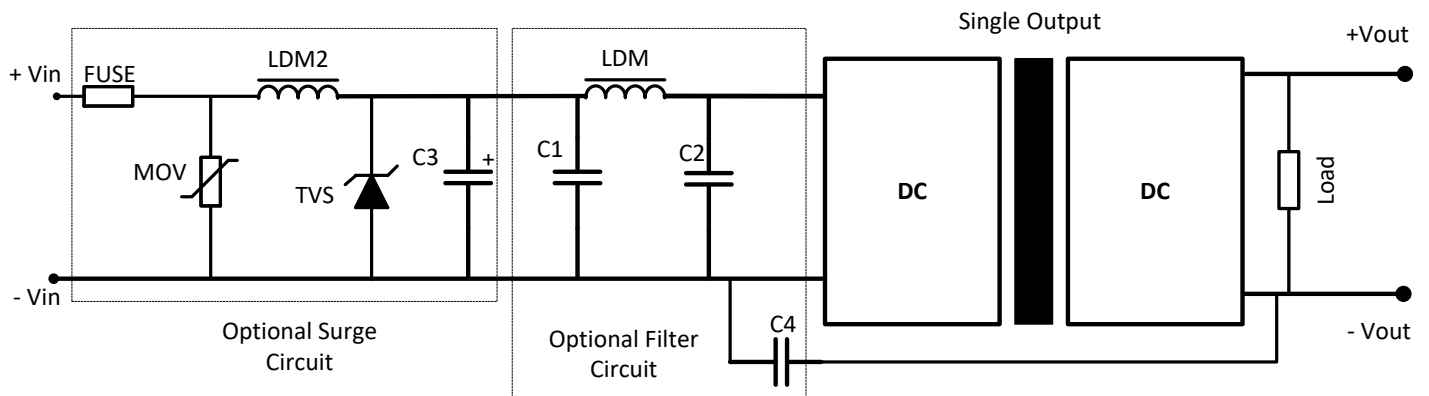
### Dimensions



### External capacitors

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

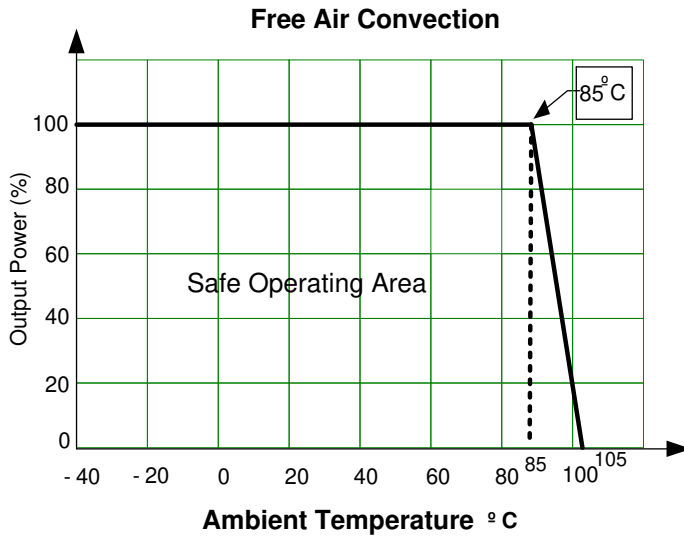
### Recommended Circuit



Model	C1	C2	C4	LDM	MOV	TVS	C3	LDM2
5 Vin	4.7 $\mu$ F / 50V	4.7 $\mu$ F / 50V	1 nF / 2KV	12 $\mu$ H	-	SMCJ16A	680 $\mu$ F / 25V	-
12 Vin	4.7 $\mu$ F / 50V	4.7 $\mu$ F / 50V	1 nF / 2KV	12 $\mu$ H	-	SMCJ28A	680 $\mu$ F / 25V	-
24 Vin	4.7 $\mu$ F / 50V	4.7 $\mu$ F / 50V	1 nF / 2KV	12 $\mu$ H	S14K35	SMCJ48A	330 $\mu$ F / 50V	56 $\mu$ H
48 Vin	4.7 $\mu$ F / 100V	4.7 $\mu$ F / 100V	1 nF / 2KV	12 $\mu$ H	S14K60	SMCJ90A	330 $\mu$ F / 100V	56 $\mu$ H

Note: Fuse is user selectable

## Derating



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