

**FEATURES:**

- RoHS compliant
- 24 Pin DIP Package
- Wide 2:1 input range
- High efficiency up to 86%
- Operating temperature -40°C to + 85°C
- Input / Output Isolation 1500VDC & 3000VDC
- 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-PNZ	4.5-9	5	600	1500	4700	74
AM3T-0512S-PNZ	4.5-9	12	250	1500	2700	77
AM3T-0515S-PNZ	4.5-9	15	200	1500	2200	77
AM3T-1203S-PNZ	9-18	3.3	909	1500	4700	74
AM3T-1205S-PNZ	9-18	5	600	1500	4700	81
AM3T-1212S-PNZ	9-18	12	250	1500	2700	83
AM3T-1215S-PNZ	9-18	15	200	1500	2200	82
AM3T-1224S-PNZ	9-18	24	125	1500	1800	83
AM3T-2403S-PNZ	18-36	3.3	909	1500	4700	78
AM3T-2405S-PNZ‡	18-36	5	600	1500	4700	81
AM3T-2409S-PNZ	18-36	9	333	1500	2700	81
AM3T-2412S-PNZ	18-36	12	250	1500	2700	86
AM3T-2415S-PNZ‡	18-36	15	200	1500	2200	86
AM3T-2424S-PNZ	18-36	24	125	1500	1800	85
AM3T-4803S-PNZ	36-75	3.3	909	1500	4700	76
AM3T-4805S-PNZ	36-75	5	600	1500	4700	82
AM3T-4812S-PNZ	36-75	12	250	1500	2700	86
AM3T-4815S-PNZ	36-75	15	200	1500	2200	86
AM3T-0505SH30-PNZ	4.5-9	5	600	3000	4700	74
AM3T-0512SH30-PNZ	4.5-9	12	250	3000	2700	77
AM3T-0515SH30-PNZ	4.5-9	15	200	3000	2200	77
AM3T-1203SH30-PNZ	9-18	3.3	909	3000	4700	74
AM3T-1205SH30-PNZ	9-18	5	600	3000	4700	81
AM3T-1212SH30-PNZ	9-18	12	250	3000	2700	83
AM3T-1215SH30-PNZ	9-18	15	200	3000	2200	82
AM3T-1224SH30-PNZ	9-18	24	125	3000	1800	83
AM3T-2403SH30-PNZ	18-36	3.3	909	3000	4700	78
AM3T-2405SH30-PNZ‡	18-36	5	600	3000	4700	81
AM3T-2412SH30-PNZ	18-36	12	250	3000	2700	86
AM3T-2415SH30-PNZ‡	18-36	15	200	3000	2200	86
AM3T-2424SH30-PNZ	18-36	24	125	3000	1800	85
AM3T-4803SH30-PNZ	36-75	3.3	909	3000	4700	76
AM3T-4805SH30-PNZ	36-75	5	600	3000	4700	82
AM3T-4812SH30-PNZ	36-75	12	250	3000	2700	86
AM3T-4815SH30-PNZ	36-75	15	200	3000	2200	86

‡ Reference in the Safety table.

Models**Dual output**

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max. Cap. Load (μF)	Efficiency (%)
AM3T-0505D-PNZ	4.5-9	±5	±300	1500	±2200	76
AM3T-0512D-PNZ	4.5-9	±12	±125	1500	±1800	78

AM3T-0515D-PNZ	4.5-9	±15	±100	1500	±1000	78
AM3T-1205D-PNZ	9-18	±5	±300	1500	±2200	81
AM3T-1209D-PNZ	9-18	±9	±166	1500	±1800	84
AM3T-1212D-PNZ	9-18	±12	±125	1500	±1800	84
AM3T-1215D-PNZ	9-18	±15	±100	1500	±1000	85
AM3T-2405D-PNZ	18-36	±5	±300	1500	±2200	82
AM3T-2412D-PNZ	18-36	±12	±125	1500	±1800	84
AM3T-2415D-PNZ	18-36	±15	±100	1500	±1000	84
AM3T-4805D-PNZ	36-75	±5	±300	1500	±2200	82
AM3T-4812D-PNZ	36-75	±12	±125	1500	±1800	84
AM3T-4815D-PNZ	36-75	±15	±100	1500	±1000	85
AM3T-0505DH30-PNZ	4.5-9	±5	±300	3000	±2200	76
AM3T-0512DH30-PNZ	4.5-9	±12	±125	3000	±1800	78
AM3T-0515DH30-PNZ	4.5-9	±15	±100	3000	±1000	78
AM3T-1205DH30-PNZ	9-18	±5	±300	3000	±2200	81
AM3T-1209DH30-PNZ	9-18	±9	±166	3000	±1800	84
AM3T-1212DH30-PNZ	9-18	±12	±125	3000	±1800	84
AM3T-1215DH30-PNZ	9-18	±15	±100	3000	±1000	85
AM3T-2405DH30-PNZ	18-36	±5	±300	3000	±2200	82
AM3T-2412DH30-PNZ	18-36	±12	±125	3000	±1800	84
AM3T-2415DH30-PNZ	18-36	±15	±100	3000	±1000	84
AM3T-4803DH30-PNZ	36-75	±3.3	±454	3000	±2200	76
AM3T-4805DH30-PNZ	36-75	±5	±300	3000	±2200	82
AM3T-4812DH30-PNZ	36-75	±12	±125	3000	±1800	84
AM3T-4815DH30-PNZ	36-75	±15	±100	3000	±1000	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	5 Vin	4.5-9		VDC
	12 Vin	9-18		
	24 Vin	18-36		
	48 Vin	36-75		
Filter	π (Pi) Network			
Absolute Maximum (1sec max)	5 Vin		12	VDC
	12 Vin		25	
	24 Vin		50	
	48 Vin		100	
Input Reflected Ripple current		30		mA

Isolation Specifications

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, <1mA	1500 & 3000		VDC
Resistance	Isolation Voltage 500VDC	> 1000		MOhm
Capacitance	I/O 1500VDC, 100KHz, 0.1V	120	50	pF
	I/O 3000VDC, 100KHz, 0.1V	30		

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1	±3	%
Dual Output Voltage Balance	Balanced Loads	±0.5	±1	%
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	±0.5	%
Temperature coefficient			±0.03	%/°C
Ripple& Noise	20MHz bandwidth	80		mV p-p

Transient Recovery Time	25% Load Step	0.5	2	ms
Transient Deviation	25% Load Step	±2	±5	%

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load, PFM	200		KHz
Operating temperature	No derating	-40 to +85		°C
Storage temperature		-55 to +125		°C
Max Case temperature			100	°C
Lead Temperature	1.5mm from case for 10 Seconds		300	°C
Cooling	Free air convection			
Humidity			95	%
Case material	Black plastic (UL94-V0)			
Weight		14		g
Dimensions (L x W x H)	1.24 x 0.80 x 0.40 inches 31.60 x 20.30 x 10.20mm			
MTBF	>1 000 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			

Safety Specifications

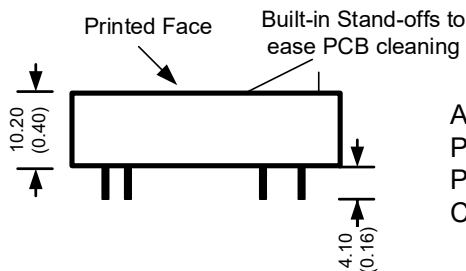
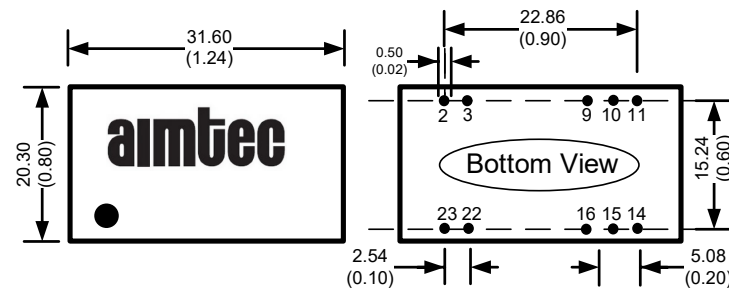
Parameters	
Approval	Design to meet UL (± models)
Standards	IEC/EN/UL60950-1 EN 55022, Class B, with external filter & EN 55024: 2010 IEC 61000-4-2, Contact ±4KV/Air ±8KV, Criteria B IEC 61000-4-3, 10V/m, Criteria A IEC 61000-4-4, ±2KV, Criteria B, with external filter IEC 61000-4-5, ±2KV, Criteria B, with external filter IEC 61000-4-6, 3Vrms, Criteria A IEC 61000-4-29, 0-70%, Criteria B

Pin Out Specifications

Pin	Single	Dual
2	-V Input	-V Input
3	-V Input	-V Input
9	N.C.	Common
10	N.C.	N.C.
11	N.C.	-V Output
14	+V Output	+V Output
15	N.C.	N.C.
16	-V Output	Common
22	V+ Input	+V Input
23	V+ Input	+V Input

N.C.: not connected

Dimensions



All dimensions are typical: millimeters (inches)

Pin Diameter: 0.50 ± 0.10 (0.02 ± 0.004)

Pin Pitch Tolerance: ± 0.35 (±0.014)

Case Tolerance: ± 0.5 (±0.02)

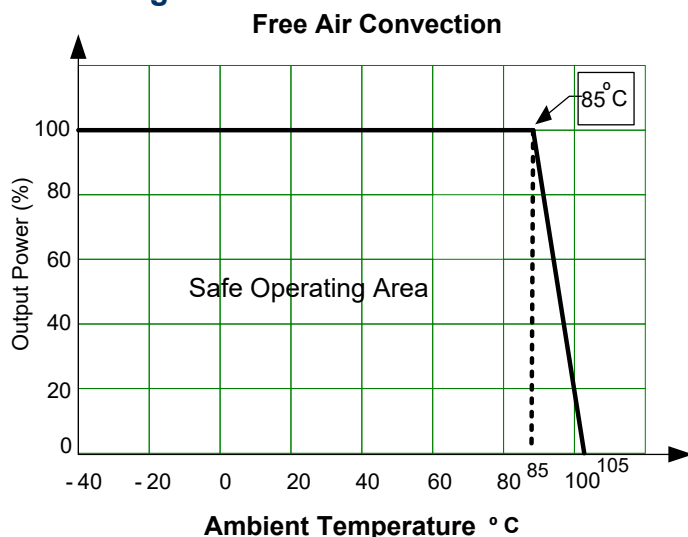
Vin (VDC)	Cin) (uF)	Cout (uF)
5 & 12	100	10
24 & 48	10-47	10

The diagram illustrates a power supply system with the following components and connections:

- Input:** Labeled $+V_{in}$ and $-V_{in}$.
- Optional Surge Circuit (dashed box):** Contains a **FUSE** in series with the $+V_{in}$ line, a **MOV** (Metal Oxide Varistor) connected in parallel across the input lines, and a capacitor **C3** connected in parallel to ground.
- Optional Filter Circuit (dashed box):** Features an inductor **LDM** in series with the $+V_{in}$ line, followed by a parallel combination of capacitor **C1** to ground and capacitor **C2** to the common return line.
- Single Output Stage:** Consists of two **DC** (DC-DC converter) blocks separated by a thick vertical bar, indicating isolation. The output of the first DC block is connected to the input of the second DC block.
- Output:** Labeled $+V_{out}$ and $-V_{out}$. A capacitor **C4** is connected in parallel across the output lines.
- Common Return:** A single line connects the negative input, the negative filter output, the negative input of the second DC block, and the negative output, labeled **CY1** at the bottom.

Model	C1 & C2	C3	C4	LDM	MOV	CY1
5 Vin	4.7 μ F / 50V	1000 μ F / 16V	10 μ F	12 μ H	-	1 nF /2KV – 1500VDC models 1 nF/3KV – 3000VDC models
12 Vin	4.7 μ F / 50V	1000 μ F / 25V			S14K25	
24 Vin	4.7 μ F / 50V	330 μ F / 50V			S14K35	
48 Vin	4.7 μ F / 100V	330 μ F / 100V			S14K60	

Derating



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