



**FEATURES:**

- Wide 2:1 input range
- Over Voltage Protection
- High efficiency up to 89%
- Low Ripple and Noise
- Operating temperature -40°C to + 85°C
- Input / Output isolation 1500 and 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)	Efficiency (%)
AM6T-1203S-NZ	9-18	3.3	1400	1500	76
AM6T-1205S-NZ	9-18	5	1200	1500	81
AM6T-1212S-NZ	9-18	12	500	1500	85
AM6T-1215S-NZ	9-18	15	400	1500	85
AM6T-1224S-NZ	9-18	24	250	1500	87
AM6T-2403S-NZ	18-36	3.3	1400	1500	79
AM6T-2405S-NZ	18-36	5	1200	1500	83
AM6T-2409S-NZ	18-36	9	667	1500	85
AM6T-2412S-NZ	18-36	12	500	1500	87
AM6T-2415S-NZ	18-36	15	400	1500	89
AM6T-2424S-NZ	18-36	24	250	1500	89
AM6T-4803S-NZ	36-75	3.3	1400	1500	79
AM6T-4805S-NZ	36-75	5	1200	1500	83
AM6T-4812S-NZ	36-75	12	500	1500	88
AM6T-4815S-NZ	36-75	15	400	1500	88
AM6T-0505SH30-NZ	4.5-9	5	1200	3000	76

**Models**  
**Dual output**

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Efficiency (%)
AM6T-1205D-NZ	9-18	±5	±600	1500	81
AM6T-1212D-NZ	9-18	±12	±250	1500	85
AM6T-1215D-NZ	9-18	±15	±200	1500	85
AM6T-2405D-NZ	18-36	±5	±600	1500	83
AM6T-2412D-NZ	18-36	±12	±250	1500	87
AM6T-2415D-NZ	18-36	±15	±200	1500	87
AM6T-4805D-NZ	36-75	±5	±600	1500	83
AM6T-4812D-NZ	36-75	±12	±250	1500	87
AM6T-4815D-NZ	36-75	±15	±200	1500	88

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
Absolute Max Input Voltage (1 Sec. Max.)	12 Vin 24 Vin 48 Vin		25 50 100	VDC
Voltage range	12 24 48	9-18 18-36 36-75		VDC
Filter	π (Pi) Network			

### Isolation Specifications

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec	1500 , 3000		VDC
Resistance	500 Vdc	> 1000		MOhm
Capacitance	100kV / 0.1V	1000		pF

### Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy (single output)	5% to 100% Load	±1		%
Voltage accuracy (dual output)	Balanced Load	±0.5		%
Short Circuit protection		Continuous		
Short circuit restart		Auto-recovery		
Line voltage regulation	Full Load, low to high	±0.5		%
Load voltage regulation	5% to 100% Load	±0.5		%
Cross Regulation (dual)	Main 50% load, Second 10 – 100% load		±5	%
Temperature coefficient		±0.03		%/°C
Transient Recovery Time	25% load step	300		µsec
Transient Response Deviation	25% load step	±3		%
Ripple & Noise		80		mVp-p
Over Voltage Protection (1500 VDC Isolation models only)			110 to 140	%Vout

### General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	300		KHz
Operating temperature	Derating above +71		-40 to +85	°C
Storage temperature			-55 to +125	°C
Max Case temperature			100	°C
Cooling		Free air convection		
Humidity			95	%
Case material	1500Vdc Isolation 3000Vdc Isolation		Black Anodized Aluminum Plastic (UL94-V0)	
Weight		13		g
Dimensions(L x W x H)	1500Vdc Isolation 3000Vdc Isolation	1.26 x 0.79 x 0.42 inches 1.25 x 0.80 x 0.37 inches	32.00 x 20.00 x 10.80 mm 31.80 x 20.30 x 9.50 mm	
MTBF		>1 000000 hrs(MIL-HDBK -217F, Ground Benign, t=+25°C)		

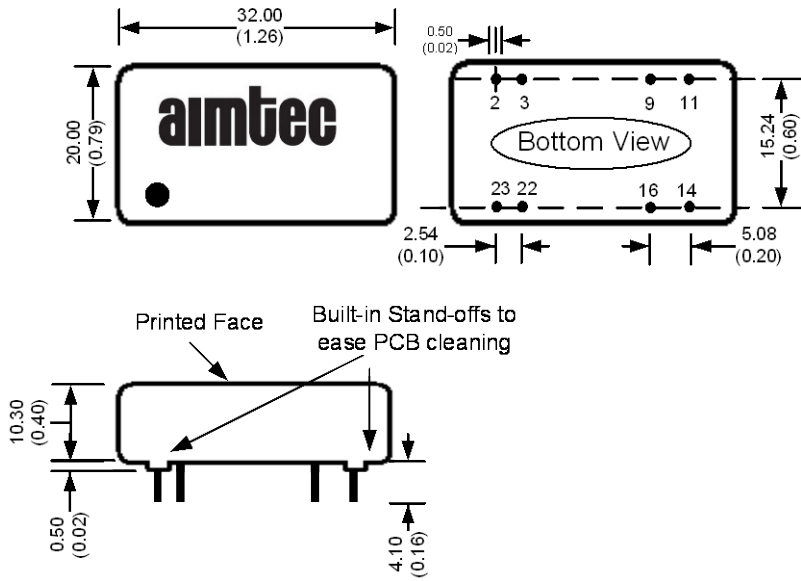
### Safety Specifications

Parameters		
Agency approvals	CE	
Standards	Information technology Equipment	EN60950-1
	EMI - Conducted and radiated emission	55022 Class A (No external Circuit required)

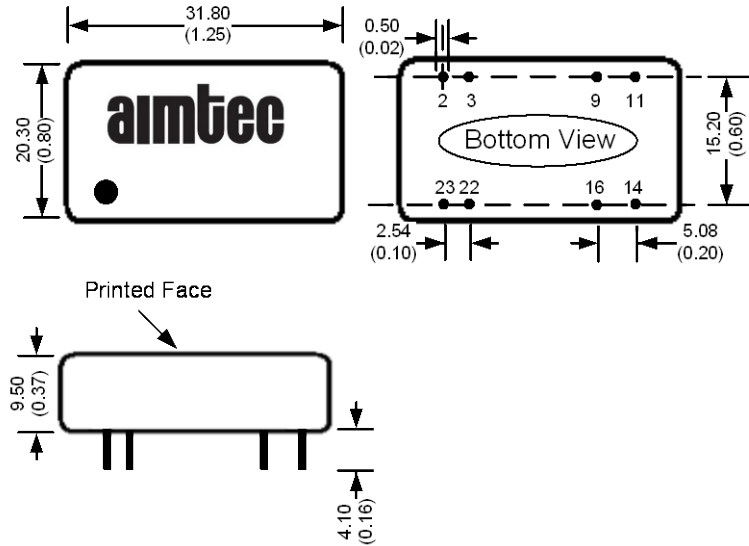
### Pin Out Specifications

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

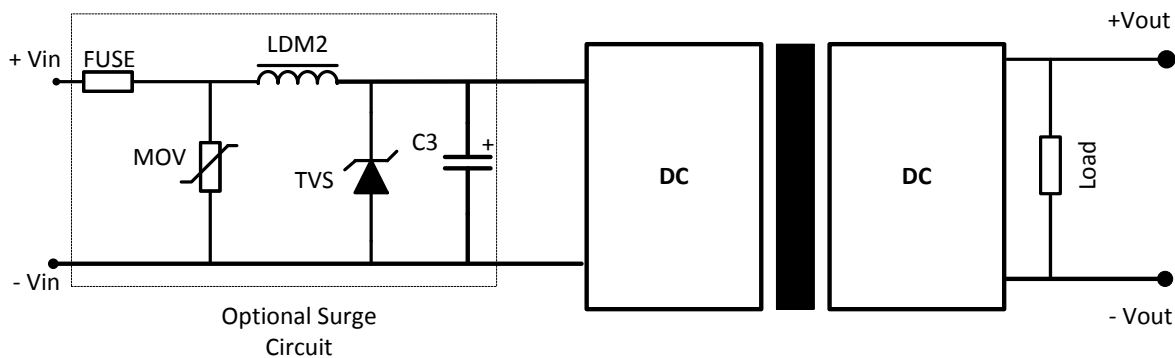
**Dimensions 1500VDC**



**Dimensions 3000VDC**



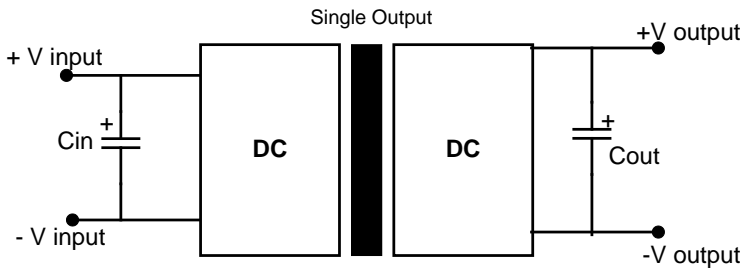
**Recommended Circuit**



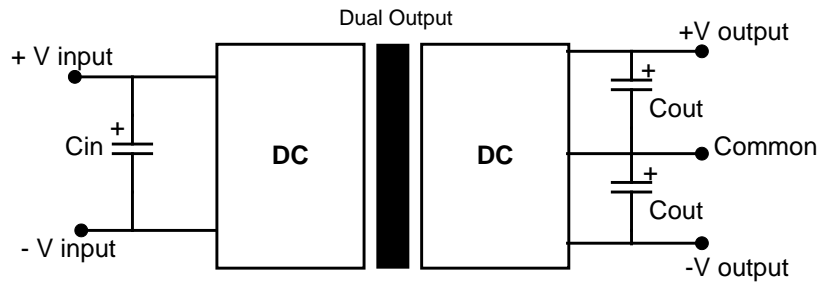
Model	MOV	TVS	C3	LDM2
12 Vin	-	SMCJ28A	680 $\mu$ F / 25V	-
24 Vin	S10K35	SMCJ48A	120 $\mu$ F / 50V	56 $\mu$ H
48 Vin	S10K60	SMCJ90A	120 $\mu$ F / 100V	56 $\mu$ H

Note: Fuse is user selectable

### Recommended Circuit For Ripple & Noise reduction- Single Output



### Dual Output



### External Capacitor Tables

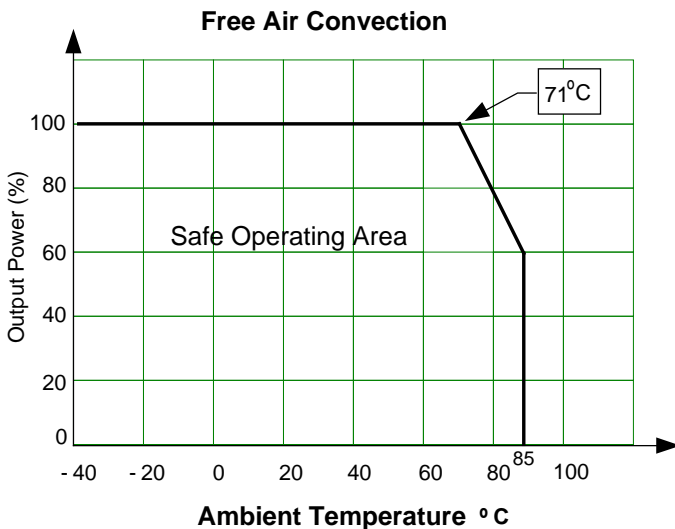
#### Input Capacitor (Cin)

Vin (VDC)	Cin ( $\mu$ F)
12	100
24	10 ~ 47
48	10 ~ 47

#### Output Capacitor (Cout)

Single Vout (VDC)	Cout ( $\mu$ F)	Dual Vout (Vdc)	Cout ( $\mu$ F)
3.3	10	$\pm$ 5	10
5	10	$\pm$ 9	10
9	10	$\pm$ 12	10
12	10	$\pm$ 15	10
15	10		
24	10		

### Derating



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