

FEATURES:



- Super wide Input range 200-1500VDC
- Operating temperature of -25 to +70°C
- Input under voltage lockout
- Over current and Over Voltage protection
- No minimum load required
- High efficiency of up to 70%
- I/O Isolation of 4000VAC
- Reversed connection protection



Models
Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (A)	Isolation (VAC)	Max Capacitive Load(uF)	Efficiency (800VDC) (%)
AM10WM-80005S-NZ	200-1500	5	2	4000	6000	70

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	800VDC		200-1500	VDC
Input current	200VDC input		130	mA
	800VDC input		30	
	1500VDC input		25	
Inrush current <2ms	200VDC input		50	A
	800VDC input		80	
	1500VDC input		150	
External fuse	Slow blow, 15A/1500VDC			
Input under voltage protection	Lockout ON		170-185	VDC
	Lockout OFF		180-195	
Startup time*	Full load		2	s

*The cooling time between input under voltage ON and OFF is over 15s.

Isolation Specifications

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	1 min	4000		VAC

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Line voltage regulation	LL-HL, full load	±1		% of Vin
Load voltage regulation	0-100% load	±1		%
Over voltage protection	Zener diode clamp			
Over current protection	Auto recovery	≥120		% of Iout
Short Circuit protection	Continuous			
Short circuit restart	Auto recovery			
Temperature coefficient		±0.02		%/°C
Ripple & Noise	20MHz Bandwidth	150	300	mV p-p

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	65		kHz
Operating temperature	With derating	-25 to 70		°C
Storage temperature		-25 to 85		°C
Maximum case temperature			95	°C
Cooling	Natural convection			
Humidity			95	% RH

Case material	Heat resistant, black plastic (UL94-V0)		
Weight	270		g
Dimensions (L x W x H)	4.29 x 2.30 x 1.18 inches	109.00 x 58.50 x 30.00 mm	
MTBF	>300,000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)		
Maximum soldering temperature	1.5mm from case for 3-5 sec	360	°C

Safety Specifications

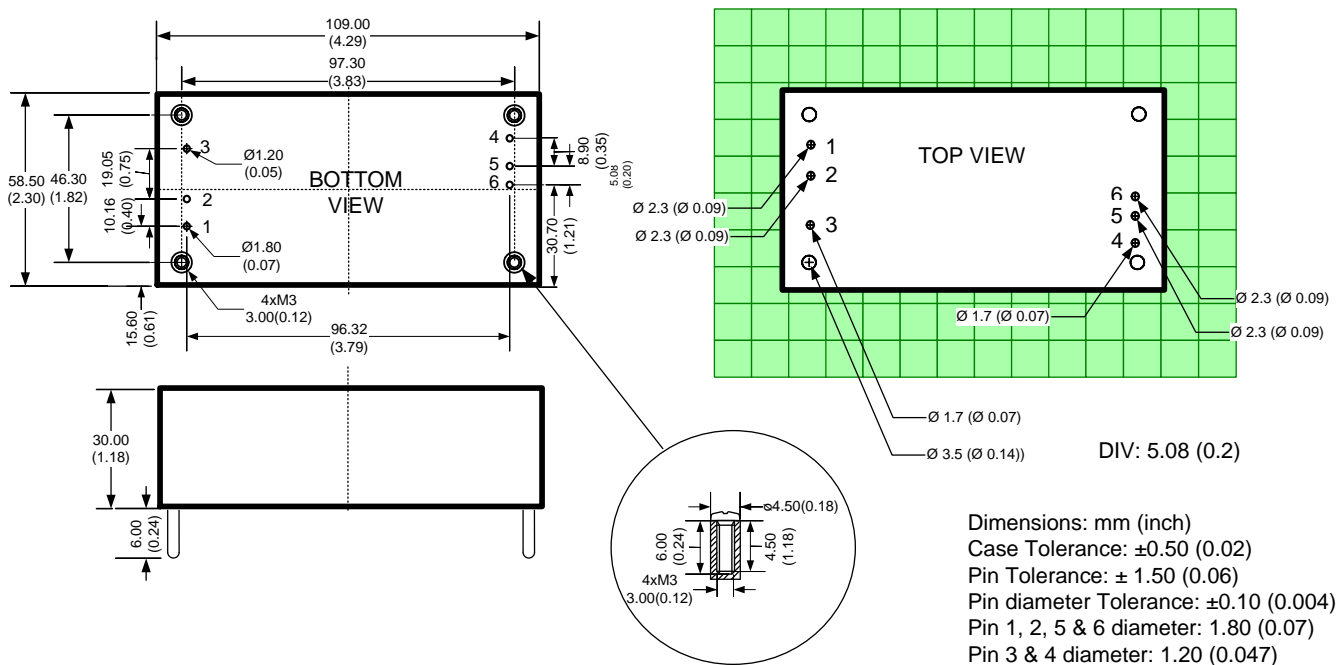
Parameters		
Standards	EMI - Conducted and radiated emission	EN55022, class A (with the recommended EMC circuit) EN55024: 2010
	Electrostatic Discharge Immunity	IEC 61000-4-2: Contact ±6KV/Air ±8KV, Criteria B
	RF, Electromagnetic Field Immunity	IEC 61000-4-3: 10V/m, Criteria A
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4: ±2KV, Criteria B (with the recommended EMC circuit)
	Surge Immunity	IEC 61000-4-5: ±1KV, Criteria B (with the recommended EMC circuit)
	RF, Conducted Disturbance Immunity	IEC 61000-4-6: 10Vrms, Criteria A

Pin Out Specifications

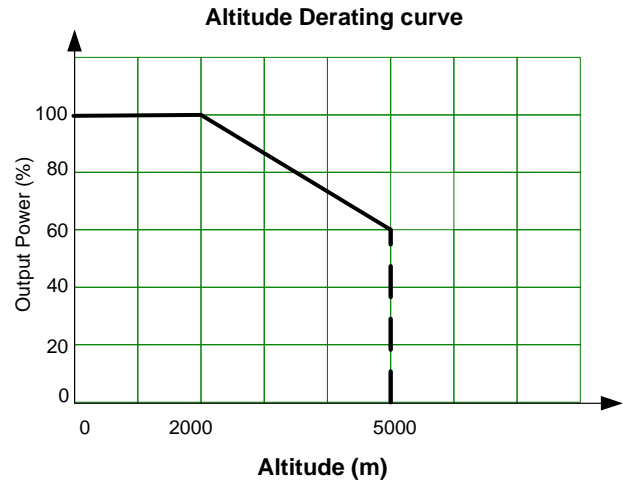
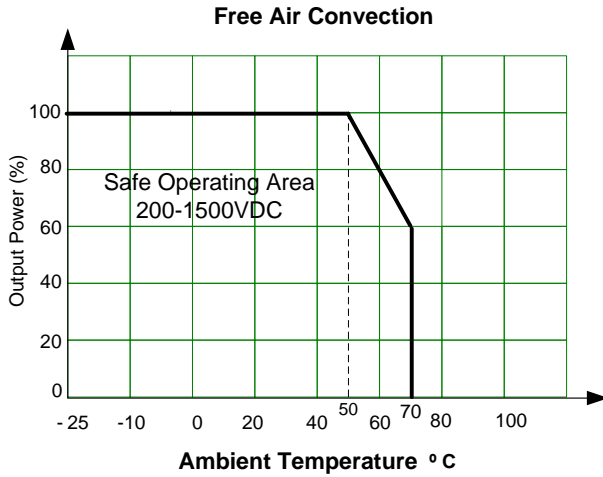
Pin	Single
1	+Vin
2	-Vin
3 & 4	N.C.
5	-Vout
6	+Vout

N.C. Not connected

Dimensions

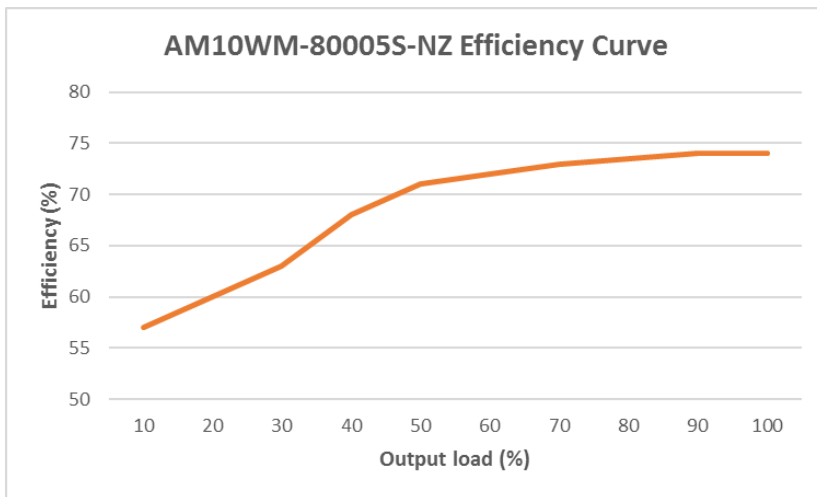


Derating

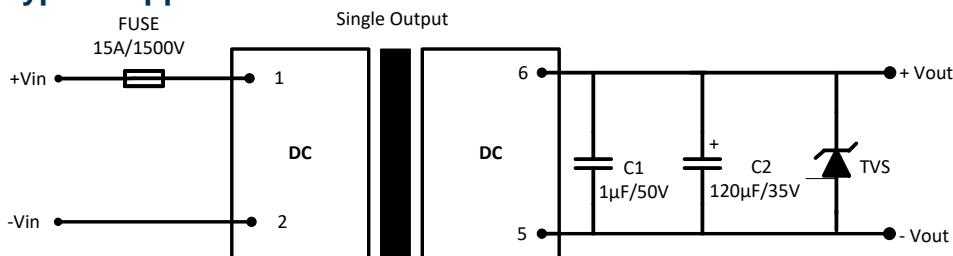


*NOTE: Derating is indicated at natural convection. Sufficient air space around is needed.

Efficiency curve

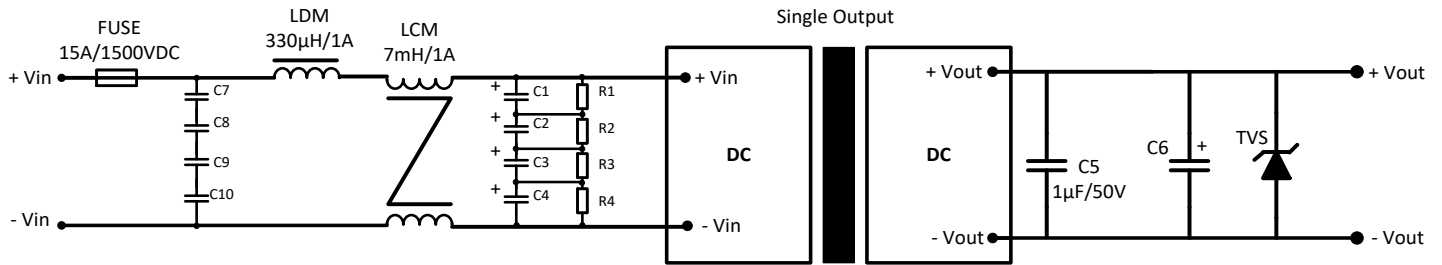


Typical Application circuit *



Note: TVS 7V

Recommended EMC Circuit



C1, C2, C3 & C4	C7, C8, C9 & C10	R1, R2, R3 & R4	C6	TVS
47 µF/450V	100 nF/275V	1MΩ / 2W	120 µF / 35V	7V

NOTE: **1.** Datasheets are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, datasheets are no longer controlled by Aimtec; refer to www.aimtec.com for the most current product specifications. **2.** Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured. **3.** Mechanical drawings and specifications are for reference only. **4.** All specifications are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified. **5.** Aimtec may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release. **6.** This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this datasheet. **7.** Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.