



**FEATURES:**

- RoHS Compliant
- 3 Pin SIP Package
- Non-Isolated
- Low ripple and noise
- Operating temperature -40°C to +85°C
- Very high efficiency up to 96%
- Pin compatible to multiple manufacturers
- Regulated Outputs

**Models**  
**Single output**

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Efficiency Vin Max (%)	Efficiency Vin Min (%)
AMSR-783.3-NZ	4.75-28	3.3	500	90	80
AMSR-7805-NZ	6.5-32	5	500	93	84
AMSR-786.5-NZ	8-32	6.5	500	94	87
AMSR-7809-NZ	11-32	9	500	95	91
AMSR-7812-NZ	15-32	12	500	95	92
AMSR-7815-NZ	18-32	15	500	96	93

**Input Specifications**

Parameters	Conditions	Typical	Maximum	Units
Voltage range	See the table above			VDC
Filter	Capacitor			
Quiescent current	Vin=(LL-HL) at 0% load		7	mA
Short circuit consumption			0.8	W

**Output Specifications**

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	100% load	±3		%
Short Circuit protection	Continuous			
Short circuit restart	Auto recovery			
Output current limit			2	A
Thermal shutdown	Internal IC junction	150		°C
Dynamic load stability	10-100% load		±100	mV
Line voltage regulation	Vin=(LL-HL) at full load	±0.4		%
Load voltage regulation	10-100% load	±0.6		%
Temperature coefficient	-40°C to +85°C ambient	±0.02		%/°C
Ripple & Noise	20MHz Bandwidth	35		mV p-p

**General Specifications**

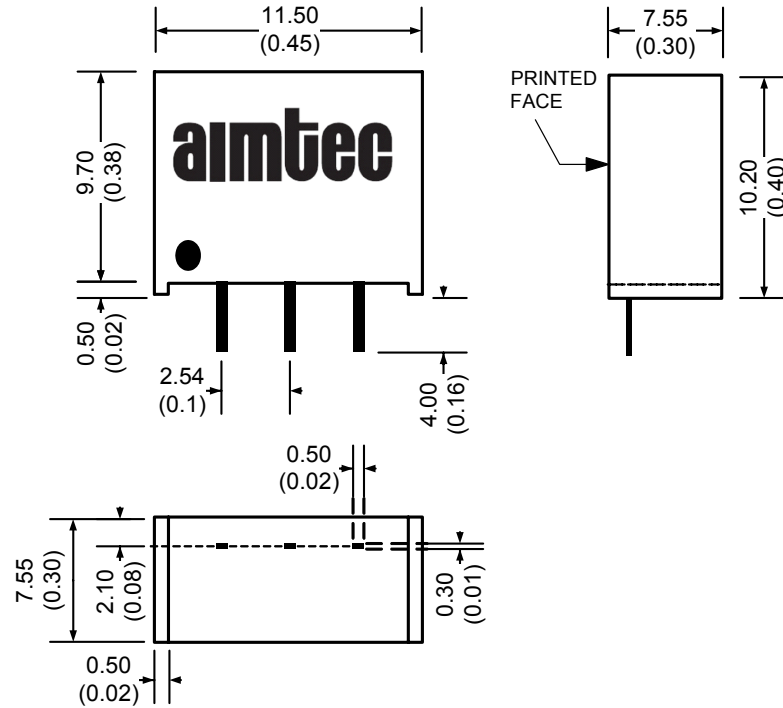
Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	330		KHz
Operating temperature	With derating above 71 °C	-40 to +85		°C
Storage temperature		-55 to +125		°C
Max Case temperature			100	°C
Cooling	Free air convection			
Humidity			95	%
Case material	Non-conductive black plastic (UL94V-0 rated)			
Weight		2		g
Dimensions (L x W x H)		0.45 x 0.30 x 0.40 inches	11.50 x 7.60 x 10.20 mm	
MTBF		> 2 000 000 hrs (MIL-HDBK-217F, Ground Benign, t=+25°C)		
Soldering Temperature	1.5 mm from case for 10 sec		300	°C

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.

### Pin Out Specifications

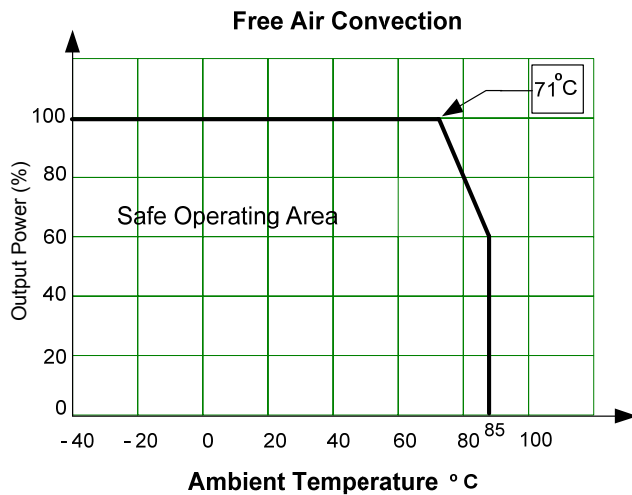
Pin	Single
1	+V Input
2	Ground
3	+V Output

### Dimensions

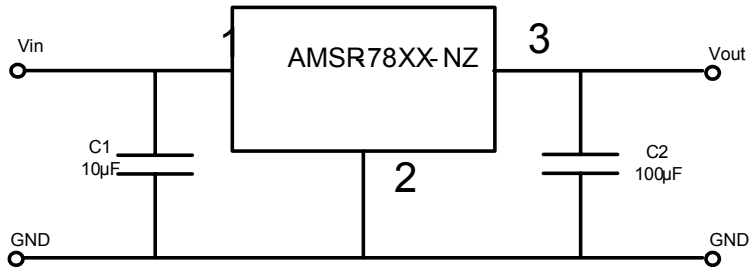


Dimensions are in mm (inch)  
Pin Tolerance:  $\pm 0.16$  mm (0,004 inch)  
Case Tolerance:  $\pm 0.25$  mm (0.01 inch)

### Derating



## Standard Application Circuit



**C1:** A low ESR capacitor is required to keep the noise of the converter to a minimum.

Ceramic capacitors are recommended, but tantalum or electrolytic may be used. Typical value is  $10\mu F / 50V$ .

**C2:** Installation of C2 is recommended but optional. Typical recommended value is  $100\mu F / 25V$  electrolytic.

**NOTE:** This part is not designed for parallel operation

**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](http://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. 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. 5. 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 than the ones listed in this datasheet.