



FEATURES:

- Short Circuit Protection
- Thermal Shutdown
- Non-Isolated
- Low ripple and noise
- Pin Compatible to LM78xx
- 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 Min (%)	Efficiency Vin Max (%)
AMSR-783.3-NZ ✖	4.75-28	3.3	500	91	81
AMSR-7805-NZ	6.5-32	5	500	94	86
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

NOTE:

- For models marked with ✖ will be discontinued (EOL) by December 30, 2020; for new designs, please refer to model AMSRL-786.5JZ or AMSRI-78-NZ series.

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

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	100% load	±2		%
Short Circuit protection	Continuous			
Short circuit restart	Auto recovery			
Thermal shutdown	Internal IC junction	150		°C
Thermal Impedance		85		°C/W
Line voltage regulation	Vin=(LL-HL) at full load	±0.2		%
Load voltage regulation	10-100% load	±0.4		%
Temperature coefficient	-40°C to +85°C ambient	±0.02		%/°C
Dynamic Load Stability	Nominal Input, 25% load step change	55 - 250		mV
Dynamic Load Recovery		0.5 - 1		mSec
Ripple & Noise	20MHz Bandwidth	20		mV p-p
Maximum capacitive load			1000	uF

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	Non condensing		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	11.60 x 7.50 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.

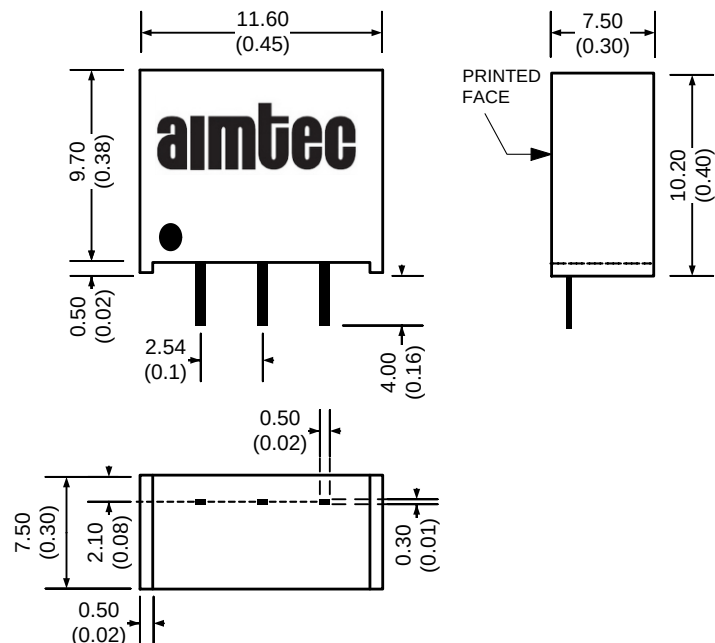
Safety Specifications

Parameters	
Agency Approval	CE
	IEC 60950-1
Standards	EN55022: 2006 + A1:2007, Class B (with recommended circuit)
	IEC61000-4-2 (ESD): Contact ±4KV, Perf. Criteria B
	IEC61000-4-3 (Radiation Immunity): 10V/m, Perf. Criteria A
	IEC61000-4-4 (EFT): ±1KV, Perf. Criteria B (with recommended circuit)
	IEC61000-4-5 (Surge Immunity): ±1KV, Perf. Criteria B (with recommended circuit)
	IEC61000-4-6 (Conducted Disturbance Immunity): 3Vr.m.s, Perf. Criteria A
	IEC61000-4-29 (VDDSI): 0%-70%, Perf. Criteria A

Pin Out Specifications

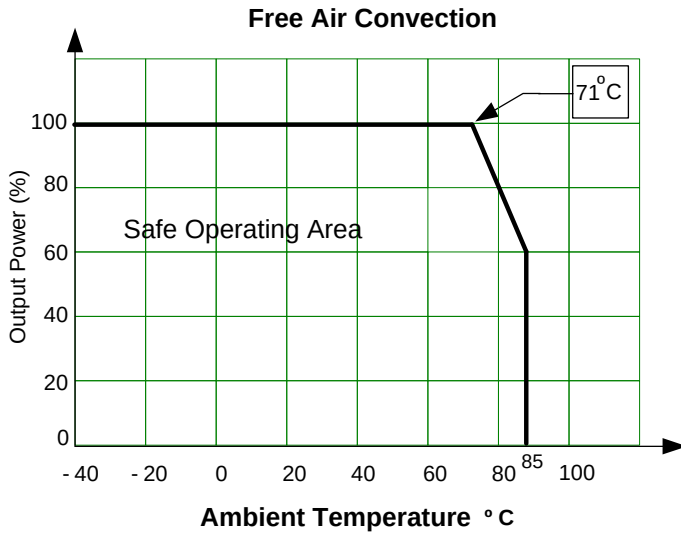
Pin	Single
1	+V Input
2	Ground
3	+V Output

Dimensions

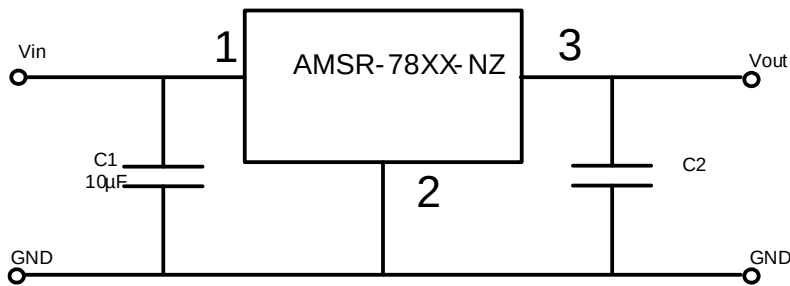


Dimensions are in mm (inch)
Pin Tolerance: ±0.16 mm (0.004 inch)
Case Tolerance: ±0.25 mm (0.01 inch)

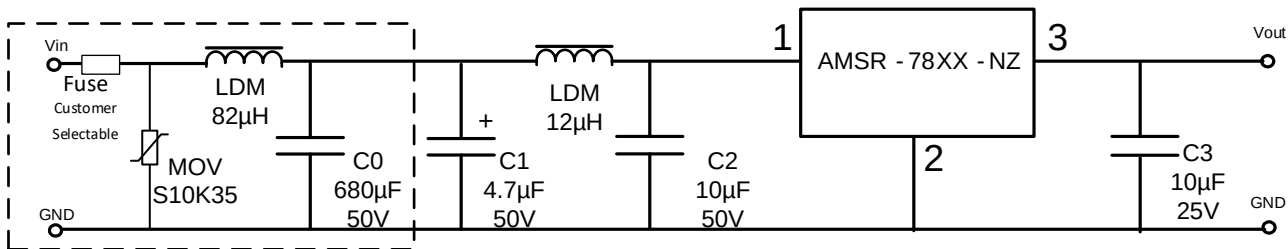
Derating



Standard Application Circuit



Recommended EMC circuit



NOTE: This part is not designed for parallel operation

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