

Series AMSRW-78Z

Up to 7.5 Watt | DC-DC Switching Regulator



FEATURES:

- 3 Pin SIP package
- Very high efficiency up to 95%
- Non Isolated
- Low Ripple and Noise
- High voltage input range up to 72V
- Operating temperature -40°C to +85°C
- Pin Compatible with multiple manufacturers
- Continuous Short Circuit Protection



Models Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Max Capacitive Load (uF)	Efficiency Vin Min (%)	Efficiency Vin Max (%)
AMSRW-783.3Z	9-72	3.3	500	100	82	75
AMSRW-7805Z	9-72	5	500	100	87	80
AMSRW-786.5Z	9-72	6.5	500	100	91	83
AMSRW-787.2Z	14-72	7.2	500	100	91	84
AMSRW-7809Z	14-72	9	500	100	92	86
AMSRW-7812Z	17-72	12	500	100	94	89
AMSRW-7815Z	20-72	15	500	100	95	91

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	See table above			VDC
Filter	Capacitor			
No Load Input Current	Vin=(LL-HL) at 0% load		0.3	mA
Input reflected ripple current	Full Load		35	mA p-p

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	100% Load	±3		%
Short Circuit protection	Continuous			
Short circuit restart	Auto recovery			
Line voltage regulation	Vin=(LL-HL) at full load	±1		% of Vin
Load voltage regulation	From 10% to 100% Load	±0.6		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise	20MHz Bandwidth	75		mV p-p

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	120 to 800		KHz
Operating temperature	Derating above 60°C	-40 to +85		°C
Storage temperature		-40 to +125		°C
Maximum case temperature			105	°C
Cooling	Free air convection			
Humidity			95	% RH
Case material	Non Conductive Black Plastic(UL94V-0 rated)			
Weight		1.8		g
Dimensions (L x W x H)		0.46 x 0.29 x 0.40 inches	11.68 x 7.50 x 10.20 mm	
MTBF		>4.5 Mhours (MIL-HDBK-217F, Ground Benign, t=+25°C)		
Maximum soldering temperature		260		°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

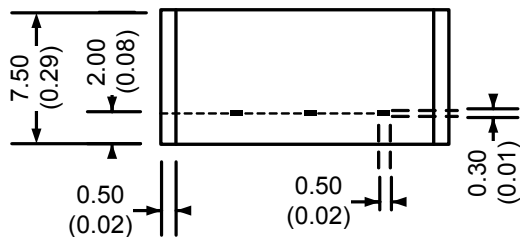
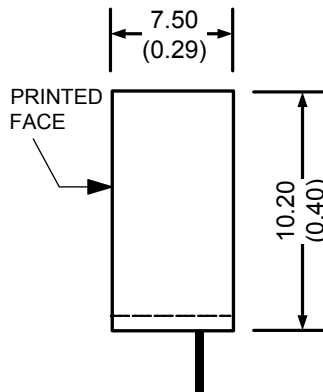
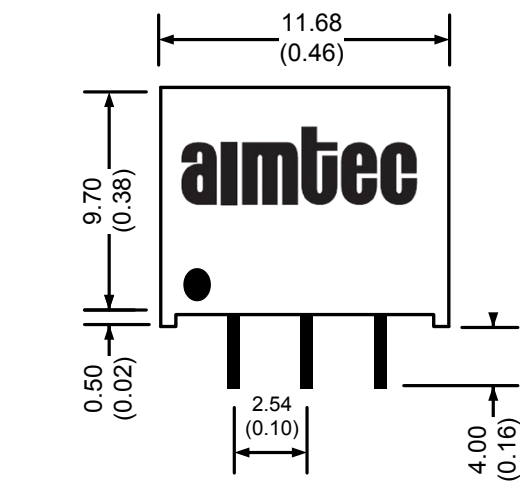
Parameters

Agency Approvals	CE
Standards	EN 55022 class B
	EN 55024
	IEC 61000-4-2
	IEC 61000-4-3
	IEC 61000-4-4
	IEC 61000-4-5
	IEC 61000-4-6
	IEC 61000-4-8

Pin Out Specifications

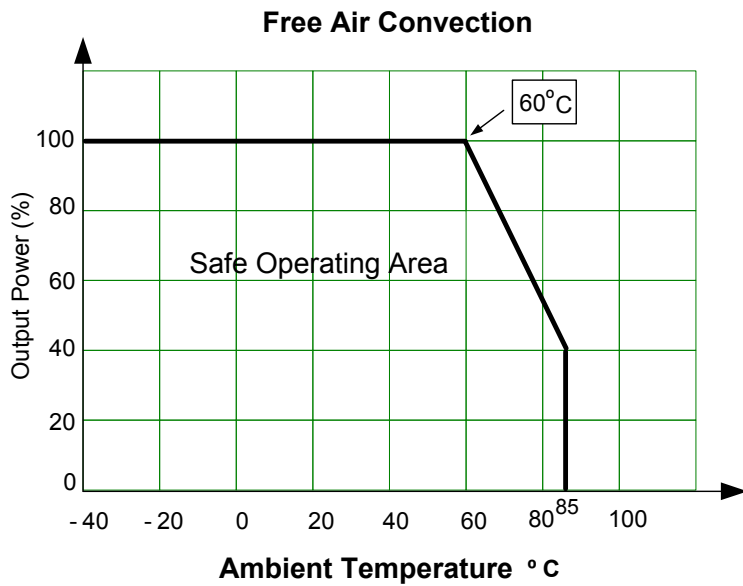
Pin	Single
1	+V input
2	GND
3	+V output

Dimensions

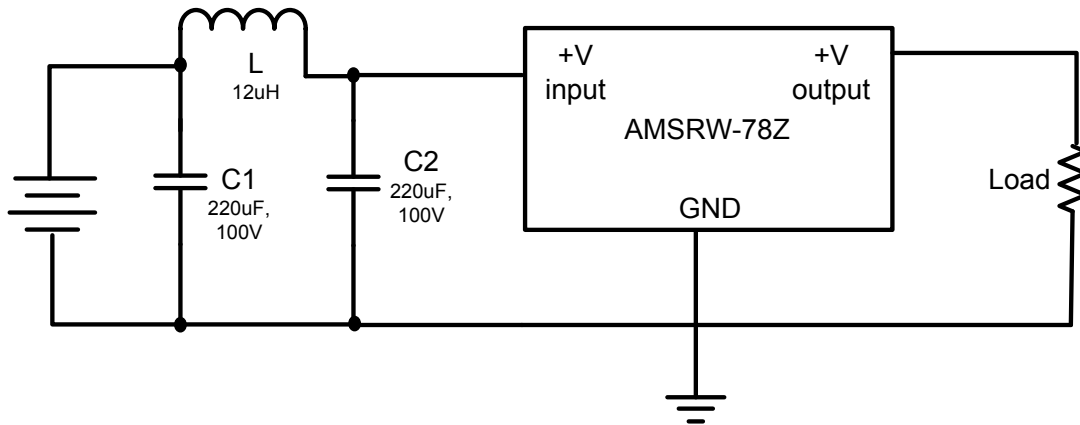


Dimensions are in mm (inch)
Pin Pitch Tolerance: ± 0.35 (± 0.014)
Case Tolerance: ± 0.50 (± 0.02)

Derating

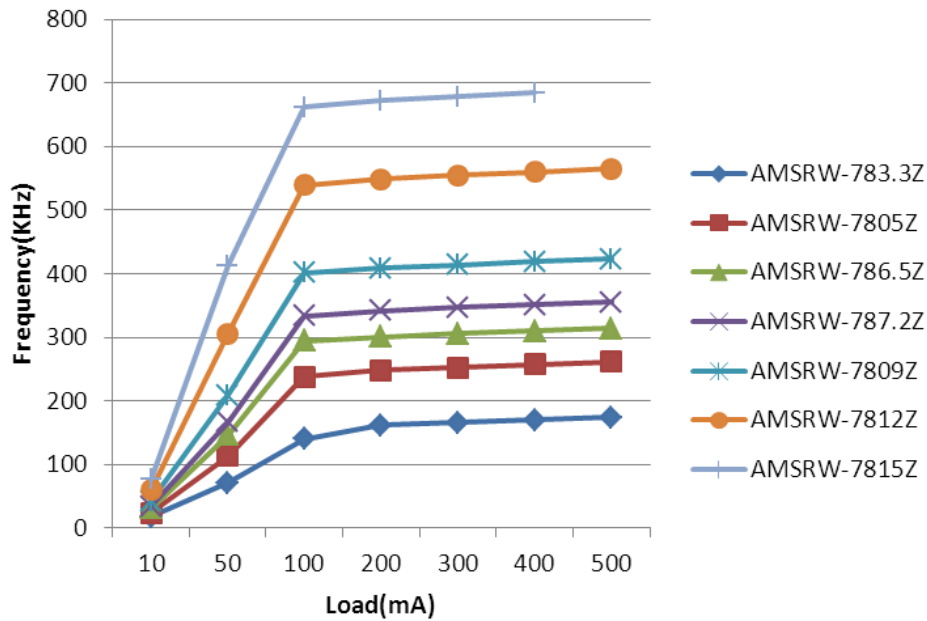


EMI/EMS Solution



Switching Frequency(KHz) vs. Load(mA)

$V_{in} = 24V-72V$



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