Series AM1N-NZ

1 Watt | DC-DC Converter

RoHS

FEATURES:

- RoHS compliant
- 24 Pin DIP Package
- Low profile plastic package
- High efficiency up to 75%
- Operating temperature -40°C to + 85°C
- Input / Output Isolation 6000VDC
- Pin compatible with multiple manufacturers
- UL94-VO Package

Models
Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Efficiency (%)
AM1N-0505SH60-NZ	4.5-5.5	5	200	6000	68
AM1N-0509SH60-NZ	4.5-5.5	9	111	6000	72
AM1N-0512SH60-NZ	4.5-5.5	12	84	6000	74
AM1N-0515SH60-NZ	4.5-5.5	15	67	6000	74
AM1N-1205SH60-NZ	10.8-13.2	5	200	6000	69
AM1N-1209SH60-NZ	10.8-13.2	9	111	6000	72
AM1N-1212SH60-NZ	10.8-13.2	12	84	6000	74
AM1N-1215SH60-NZ	10.8-13.2	15	67	6000	75

Models
Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Efficiency (%)
AM1N-0505DH60-NZ	4.5-5.5	±5	±100	6000	68
AM1N-0509DH60-NZ	4.5-5.5	±9	±55	6000	72
AM1N-0512DH60-NZ	4.5-5.5	±12	±42	6000	74
AM1N-0515DH60-NZ	4.5-5.5	±15	±33	6000	74
AM1N-1205DH60-NZ	10.8-13.2	±5	±100	6000	69
AM1N-1209DH60-NZ	10.8-13.2	±9	±55	6000	72
AM1N-1212DH60-NZ	10.8-13.2	±12	±42	6000	74
AM1N-1215DH60-NZ	10.8-13.2	±15	±33	6000	75

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	5 12	4.5-5.5 10.8-13.2		VDC
Filter	Capacitor			

Isolation Specifications

Parameters	Conditions	Typical	Maximum	Units
Tested voltage	60 sec	6000		VDC
Resistance		> 1000		MOhm
Capacitance		60		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	See tolerance envelope graph			
Short Circuit protection	1sec			
Line voltage regulation (Single)	For 1.0% of Vin	±1.2		%
Line voltage regulation (Dual)	For 1.0% of Vin	±1.2		%
Load voltage regulation (Single)	Load 10 – 100%	10		%
Load voltage regulation (Dual)	Load 10 – 100%	10		%

Output Specifications (continued)

Parameters	Conditions	Typical	Maximum	Units
Temperature coefficient		±0.03		%/°C
Ripple & Noise	At 20MHz Bandwidth	75		mV p-p

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	250		KHz
Operating temperature	Without derating	-40 to +85		°C
Storage temperature		-55 to +125		°C
Case temperature			95	°C
Cooling	Free air convection			
Humidity	Non condensing		90	%
Case material	Plastic UL94-VO			
Weight		16		g
Dimensions		1.27 x 0.58 x 0.37 inches	32.27 x 14.72 x 9.4 mm	
MTBF	>1 211 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			

Safety Specifications

Standards	
Agency approvals	cULus

Pin Out Specifications

Pin	Single	Dual
1	+ V Input	+ V Input
2	- V Input	- V Input
8,17	N.C.	-V Output
10,15	-V Output	Common
12,13	+V Output	+V Output

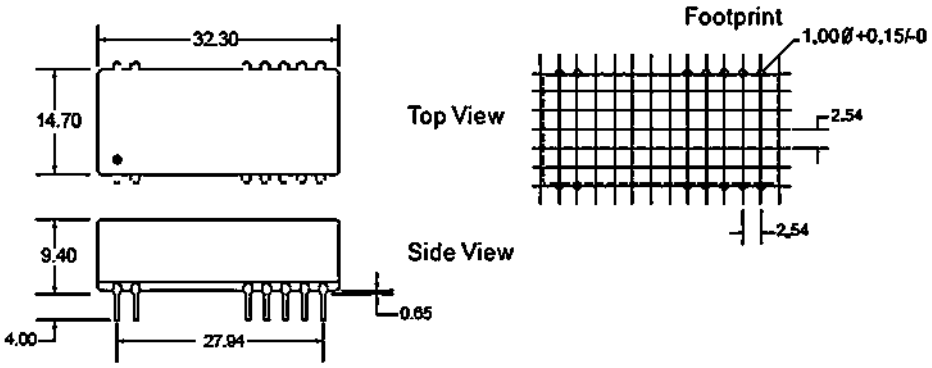
External capacitor – Single output

Vin (VDC)	External capacitor (µF)	Vout (VDC)	External capacitor (µF)
5	4.7	5	10
12	2.2	9	4.7
24	1	12	2.2
-		15	1

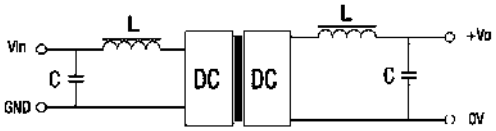
External capacitor – Dual output

Vin (VDC)	External capacitor (µF)	Vout (VDC)	External capacitor (µF)
5	4.7	5	4.7
12	2.2	9	2.2
24	1	12	1
-	-	15	0.47

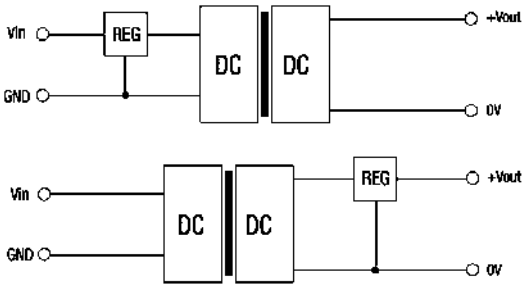
Dimensions



Block diagram single output

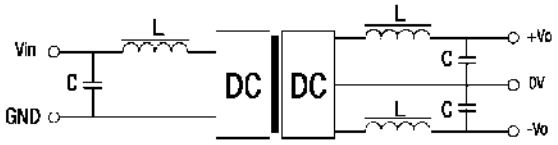


<Figure 1>

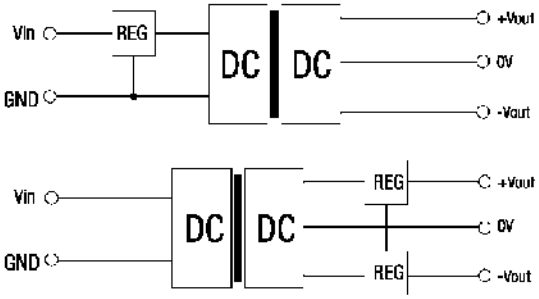


<Figure 2>

Block diagram dual output

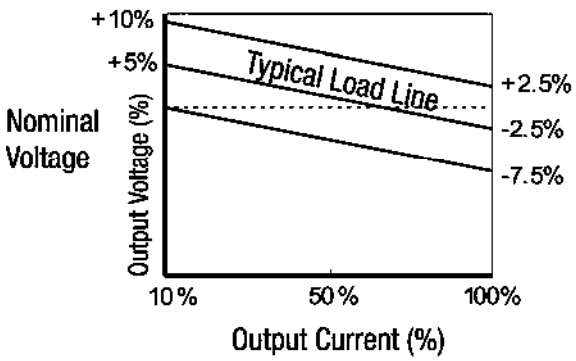


<Figure 1>

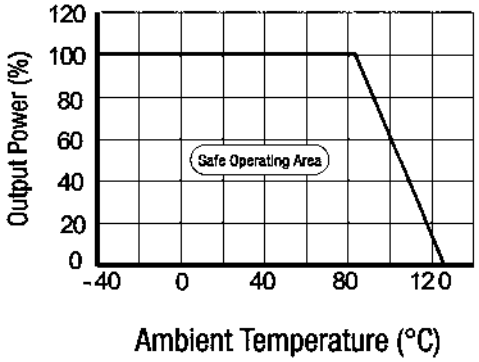


<Figure 2>

Tolerance Envelope Graph



Temperature Derating Graph



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