

**FEATURES:**

- RoHS Compliant
- 24 Pin Dip Package
- Low Profile Plastic Package
- High Efficiency up to 80%
- Operating Temperature -40°C to + 85°C
- Input / Output Isolation 6000 VDC
- Pin Compatible With Multiple Manufacturers
- UL94-VO Package

Models

Single output



Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Input Current Full Load No Load (mA)	Max Capacitive Load (μF)	Efficiency (%)
AM1N-0505SH60-NZ	4.5-5.5	5	200	6000	263 25	220	76
AM1N-0509SH60-NZ	4.5-5.5	9	111	6000	263 25	220	80
AM1N-1205SH60-NZ	10.8-13.2	5	200	6000	110 15	220	77
AM1N-1209SH60-NZ	10.8-13.2	9	111	6000	110 15	220	80
AM1N-1212SH60-NZ	10.8-13.2	12	84	6000	110 15	220	79
AM1N-1215SH60-NZ	10.8-13.2	15	67	6000	110 15	220	79

Models

Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current Max (mA)	Isolation (VDC)	Input Current Full Load No Load (mA)	Max Capacitive Load (μF)	Efficiency (%)
AM1N-0505DH60-NZ	4.5-5.5	±5	±100	6000	263 25	100	76
AM1N-0509DH60-NZ	4.5-5.5	±9	±55	6000	263 25	100	78
AM1N-0512DH60-NZ	4.5-5.5	±12	±42	6000	263 25	100	79
AM1N-1205DH60-NZ	10.8-13.2	±5	±100	6000	110 15	100	76
AM1N-1212DH60-NZ	10.8-13.2	±12	±42	6000	110 15	100	78
AM1N-1215DH60-NZ	10.8-13.2	±15	±33	6000	110 15	100	79

NOTE: All specifications 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	5 12	4.5-5.5 10.8-13.2		VDC
Filter	Capacitor			

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O 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	Continuous with Auto Recovery			
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		%
Temperature coefficient		±0.03		%/°C
Ripple & Noise	At 20MHz Bandwidth	100		mV p-p

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	50		KHz
Operating temperature	Without derating	-40 to +85		°C
Storage temperature		-55 to +125		°C
Max Case temperature			95	°C
Cooling	Free air convection			
Humidity			90	%
Case material	Plastic UL94-VO			
Weight		16		g
Dimensions(L x W x H)		1.27 x 0.58 x 0.37 inches	32.30 x 14.70 x 9.40mm	
MTBF	>3 500 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			

NOTE: All specifications 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	cULus
Standards	UL60950-1

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

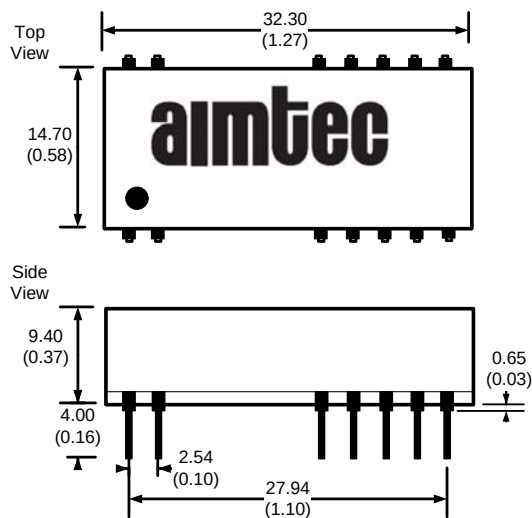
External capacitor – Single output (table 1)

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

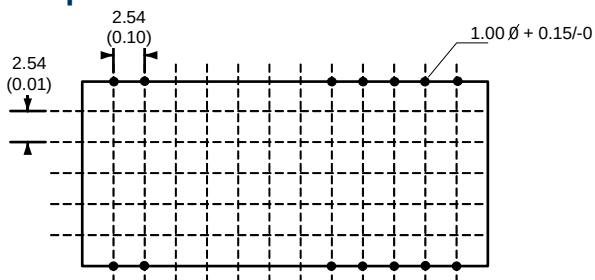
External capacitor – Dual output

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

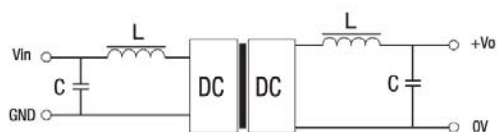
Dimensions



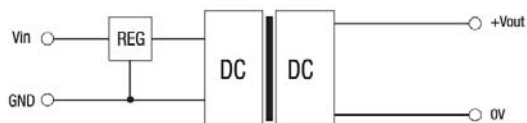
Footprint



Block diagram single output

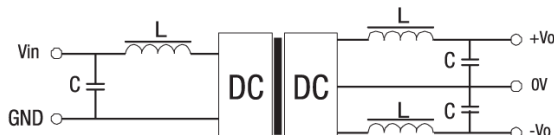


<Figure 1>



<Figure 2>

Block diagram dual output

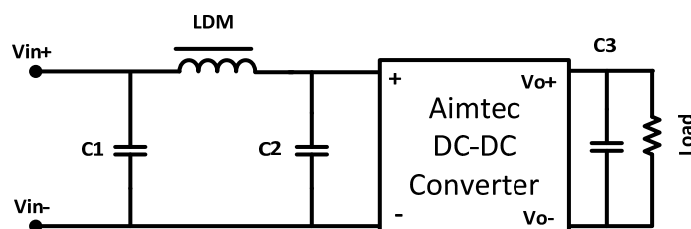


<Figure 1>



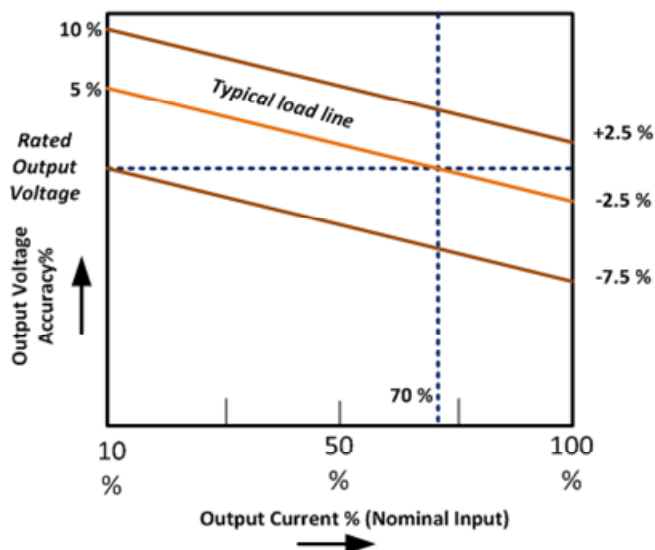
<Figure 2>

Recommended Class B EMI Circuit

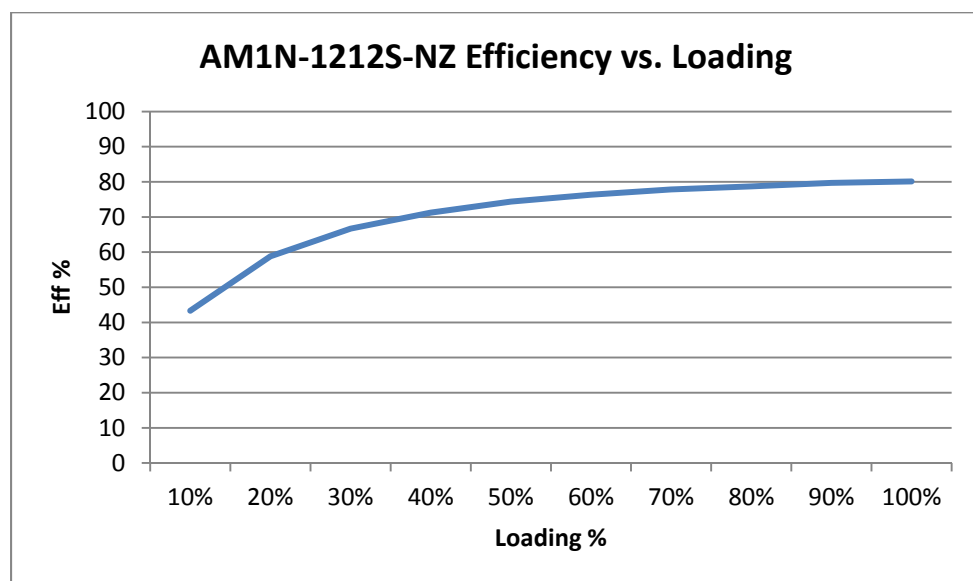
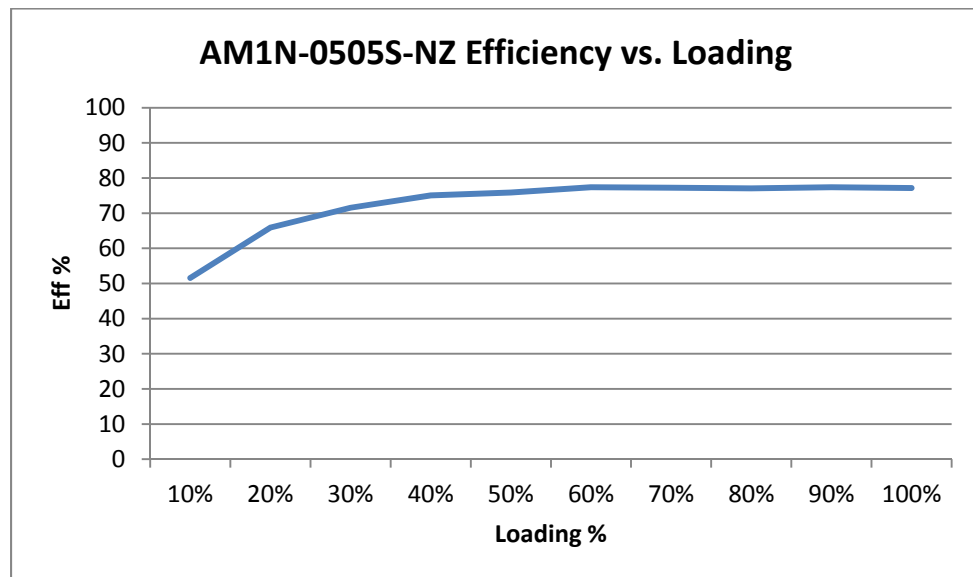


Vin (VDC)	C1 / C2	LDM	C3
5	4.7 μ F / 50V	6.8 μ H	10 μ F
12	4.7 μ F / 50V	6.8 μ H	4.7 μ F
24	4.7 μ F / 50V	6.8 μ H	2.2 μ F

Load Accuracy Tolerance Graph



Typical Efficiency Example Charts



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