

FEATURES:

- 3 pin SIP package
- Pin-out compatible with LM78XX Linear
- Efficiency up to 96%, Non isolated, no need for heatsink
- Customized Solutions Available
- UL94V-0 Package Material
- Short circuit protection

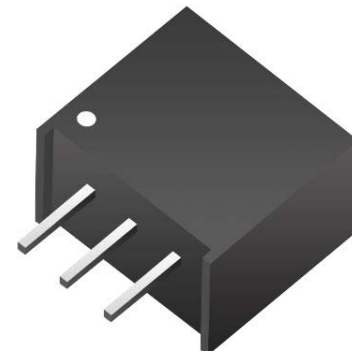


DC-DC Converter NL1-1A Series

Non-Isolated
Single Output
0.45" * 0.3" * 0.4"

Specifications typical at TA=25°C nominal input voltage and rated output current unless otherwise specified

Part Number	Input Voltage Range	Output Voltage	Output Current	Efficiency	
	Vdc	Vdc	mA	Min.Vin(%)	Max.Vin(%)
NL1-3P3-1A	4.75~36	3.3	1000	90	78
NL1-05-1A	6.5~36	5	1000	92	85
NL1-6P5-1A	9.0~36	6.5	1000	93	88
NL1-09-1A	12~36	9	1000	95	90
NL1-12-1A	15~36	12	1000	95	92
NL1-15-1A	18~36	15	1000	96	94

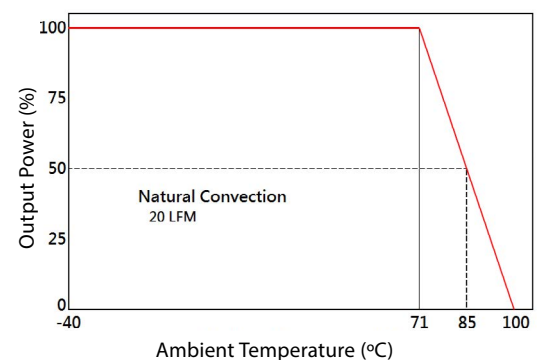


Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance				±2	%
Short Circuit Protection	Hiccup, automatic recovery				
Line Regulation	1.2V to 1.5V			0.3	%
	1.8V to 15V			0.3	%
Load Regulation	1.2V to 1.5V (10% To 100% F.L)			0.6	%
	1.8V to 15V (10% To 100% F.L)			0.4	%
Ripple & Noise (Without Output Capacitor)	1.2V to 6.5V (BW=DC To 20MHz)			50	mVp-p
	9V to 15V (BW=DC To 20MHz)			75	mVp-p
Transient Response Setting Time	25% load step change		250		us
Capacitive Load				470	uF



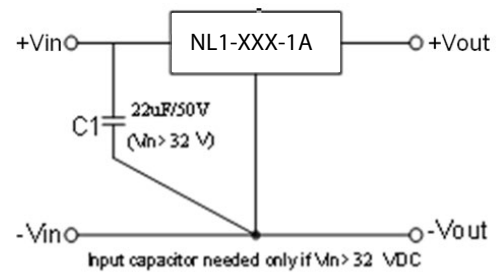
Temperature Derating Graph



General Specifications

Parameters	Conditions	Min	Typ	Max	Units
Switching Frequency			500		KHz
Operation Temperature	With derating	-40		+85	°C
Storage Temperature		-55		+125	°C
Humidity	Non Condensing			95	%
Cooling	Natural Convection (20LFM)				
Case Material	Non-Conductive Black Plastic				
Weight			2.0		g
Dimensions			11.6x7.6x10.4		mm
MTBF (+25°C)	using MIL-HDBK 217F		5000x10 ³		hours
MTBF (+71°C)	using MIL-HDBK 217F		1000x10 ³		hours

Application Examples

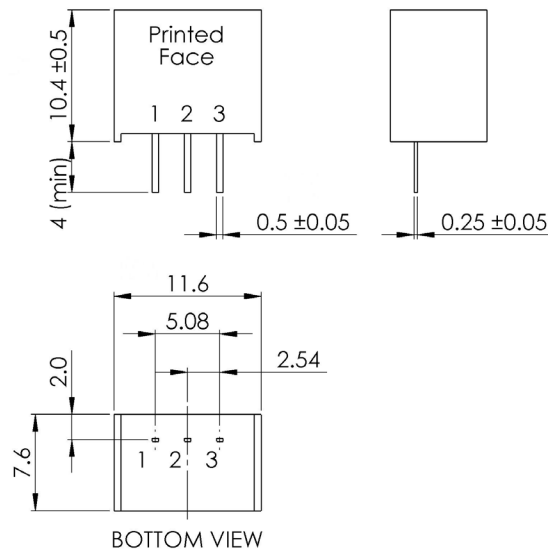


Part Number

$$\frac{NL1}{A} - \frac{XXX}{B} - \frac{1A}{C}$$

A: Series
B: Output Voltage
C: Output Current

Markings and Dimensions



Unit : mm
Tolerance : XX.X ± 0.5 , XX.XX ± 0.25

PIN Connection

PIN	1	2	3
Function	+Vin	GND	+Vout