

FEATURES:

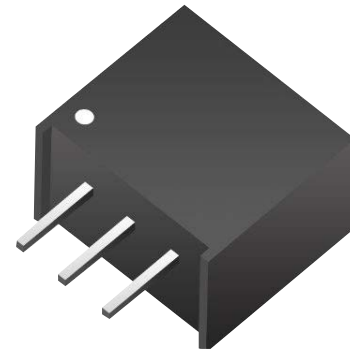
- 3 pin SIP package
- Pin-out compatible with LM78XX Linear
- Efficiency up to 97%, Non isolated, no need for heatsink
- Customized Solutions Available
- UL94V-0 Package Material
- Short circuit protection, thermal shutdown
- UL Recognized
- RoHS Compliant

DC-DC Converter NL1-P5 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-P5	4.75~34	3.3	500	91	81
NL1-05-P5	6.5~34	5	500	94	86

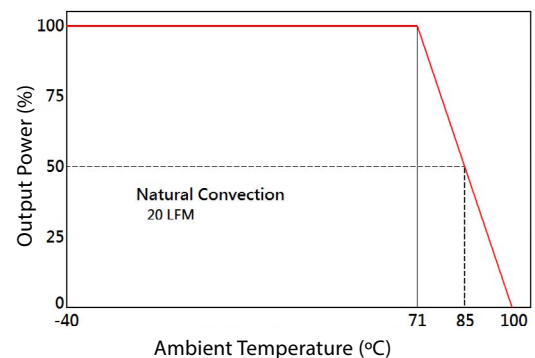


Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance				±3	%
Short Circuit Protection	Hiccup, automatic recovery				
Line Regulation	1.5V to 6.5V			0.4	%
	9V to 15.5V			0.2	%
Load Regulation	1.5V to 6.5V (10% To 100% F.L)			0.6	%
	9V to 15.5V (10% To 100% F.L)			0.4	%
Ripple & Noise (Without Output Capacitor)	1.5V to 6.5V (BW=DC To 20MHz)			30	mVp-p
	9V to 15.5V (BW=DC To 20MHz)			40	mVp-p
Transient Response Setting Time	25% load step change		350		us



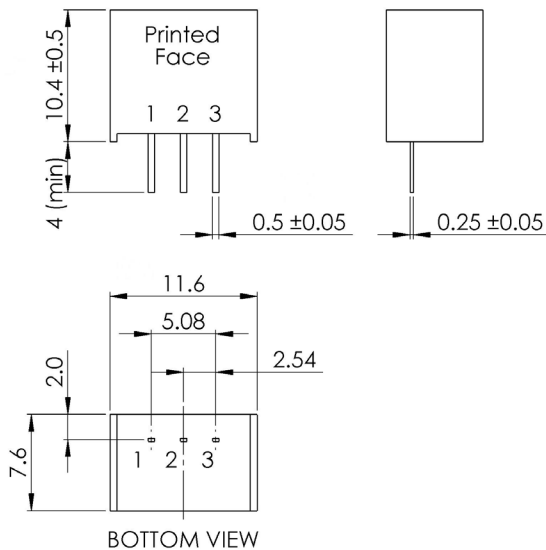
Temperature Derating Graph



General Specifications

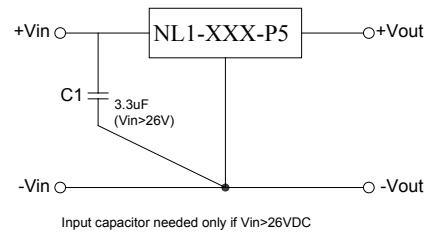
Parameters	Conditions	Min	Typ	Max	Units
Switching Frequency			330		KHz
Operation Temperature	With derating	-40		+85	°C
Humidity	Non Condensing			95	%
Cooling	Natural Convection (20LFM)				
Case material	Non-Conductive Black Plastic				
Weight			2.0		g
Dimensions			11.6x7.6x10.4		mm
MTBF(+25°C)	using MIL-HDBK 217F		21098x10 ³		hours
MTBF(+71°C)	using MIL-HDBK 217F		4212x10 ³		hours

Markings and Dimensions



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

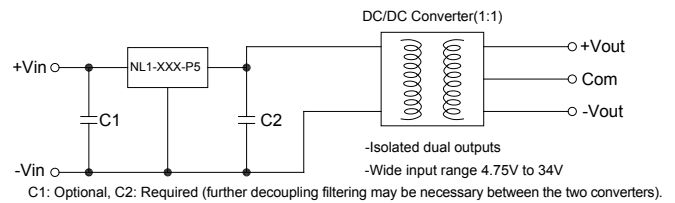
Application Examples



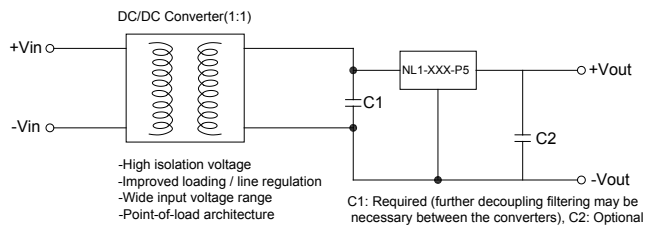
Add a blocking diode to Vout if current can flow backwards into the output, as this can damage the converter when it is powered down. See Application Examples for details.

Application Examples

High efficiency, isolated, dual unregulated outputs



Isolated (up to 6KV), wide input range regulated output



Part Number

$\frac{NL1}{A} - \frac{XXX}{B} - \frac{P5}{C}$

A: Series
B: Output Voltage
C: Output Current

PIN Connection

PIN	1	2	3
Function	+Vin	GND	+Vout