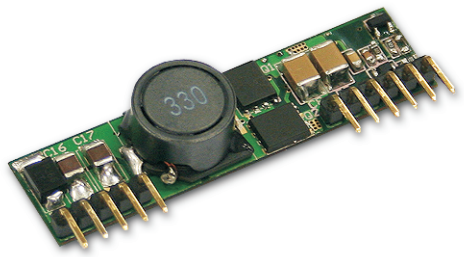
12.5~30W DC-DC Non-isolated Single Output Converter

NID30 series



Features :

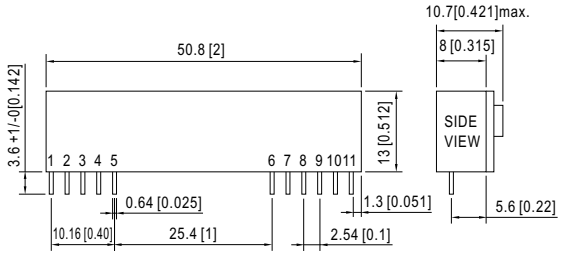
- Economical open frame design
- Wide input range
- High efficiency up to 96%
- Built-in remote ON / OFF control
- Compact size 2.0"x0.512"x 0.421"(SIP package)
- Cooling by free air convection
- Protections: Short circuit / Overload / Over voltage
- 100% burn-in test
- Low cost / High reliability

SPECIFICATION

ORDER NO.			NID30S24-05	NID30S24-12	NID30S24-15	NID30S48-24
OUTPUT	DC VOLTAGE		5V	12V	15V	24V
	CURRENT RANGE		0 ~ 2.5A	0 ~ 2.5A	0 ~ 2A	0 ~ 1.25A
	RATED POWER		12.5W	30W	30W	30W
	RIPPLE & NOISE (max.) Note.2		100mVp-p	120mVp-p	150mVp-p	200mVp-p
	LINE REGULATION Note.3		±0.5%			
	LOAD REGULATION Note.4		±0.5%			
	VOLTAGE ACCURACY		±2.0%			
	SWITCHING FREQUENCY (Typ.)		250KHz			
	EXTERNAL CAPACITANCE Note.5		100uF / 25V low ESR			
INPUT	VOLTAGE RANGE		20 ~ 53VDC	20 ~ 53VDC	20 ~ 53VDC	30 ~ 53VDC
	NORMAL VOLTAGE		24VDC (or 48VDC)	24VDC (or 48VDC)	24VDC (or 48VDC)	48VDC
	EFFICIENCY (Typ.)		91%	96%	96%	93%
	DC CURRENT	Full load	590mA	1310mA	1320mA	700mA
		No load	20mA	30mA	30mA	50mA
	PROTECTION		Fuse recommended (3A)			
	EXTERNAL CAPACITANCE Note.5		22uF / 100V low ESR			
PROTECTION	OVERLOAD (Typ.)		120 ~ 220% rated output power			
			Protection type : Hiccup mode, recovers automatically after fault condition is removed			
	SHORT CIRCUIT		All output equipped with short circuit			
			Protection type : Hiccup mode, recovers automatically after fault condition is removed			
	OVER VOLTAGE		Protection type : Shut off o/p voltage, clamp by TVS diode			
ENVIRONMENT	WORKING TEMP.		-25 ~ +65℃ (Refer to output load derating curve)			
	WORKING HUMIDITY		20% ~ 85% RH non-condensing			
	STORAGE TEMP., HUMIDITY		-25 ~ +105℃, 10 ~ 85% RH			
	TEMP. COEFFICIENT		±0.03% / ℃ (0 ~ 50℃)			
	VIBRATION		10 ~ 500Hz, 2G 10min./1 cycle, period for 60min. each along X, Y, Z axes			
OTHERS	REMOTE CONTROL		Power on : 3.3VDC < R.C ~ com < 12VDC or open circuit ; power off : R.C ~ com < 0.4VDC or short circuit (PIN5,6 & PIN11)			
	DIMENSION		50.8*13*10.7mm or 2.0"*0.512"*0.421" inch (L*W*H)			
	WEIGHT		8g			

Mechanical Specification

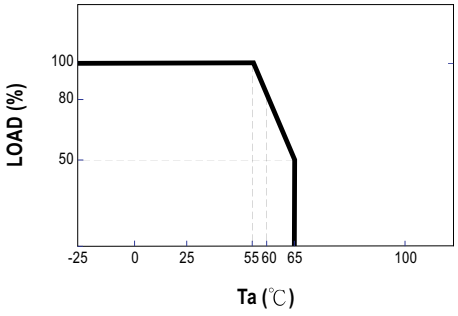
Unit:mm(inch)



Pin Configuration

Pin No.	Output
1,2,3,4	+Vout
5,6	Com
7,8	+Vin
9,10	N.C.
11	R.C.

Derating Curve



NOTE	
	1.All parameters are specified at normal input, rated load, 25℃ 70% RH Ambient. 2.Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1uf & 47uf capacitor. 3.Line regulation is measured from low line to high line at rated load. 4.Load regulation is measured from 10% to 100% rated load. 5.The input terminal recommend to parallel with 22uF/100V capacitor and output terminal recommend to parallel with 100uF/25V capacitor.

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