

KEY FEATURES

- Non-Isolation Output
- Synchronous-rectifier Topologies
- High Efficiency
- High Power Density
- 2-Year Product Warranty


ELECTRICAL SPECIFICATIONS

Model No.	NI20-5-1.5S	NI20-5-1.8S	NI20-5-2.1S	NI20-5-2.5S	NI20-5-3.3S
Max. output wattage (W)	12W	14.4W	16.8W	20W	26.4W
Input voltage (V.DC.)	5V (4.5V-5.5V)	5V (4.5V-5.5V)	5V (4.5V-5.5V)	5V (4.5V-5.5V)	5V (4.5V-5.5V)
Output voltage (V.DC.)	1.5V / 8000mA	1.8V / 8000mA	2.1V / 8000mA	2.5V / 8000mA	3.3V / 8000mA

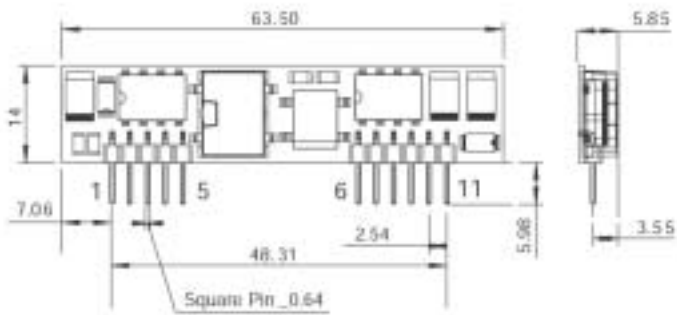
Model No.	NI20-12-1.5S	NI20-12-1.8S	NI20-12-2.1S	NI20-12-2.5S	NI20-12-3.3S
Max. output wattage (W)	12W	14.4W	16.8W	20W	26.4W
Input voltage (V.DC.)	12V (4.5V-13.5V)	12V (4.5V-13.5V)	12V (4.5V-13.5V)	12V (4.5V-13.5V)	12V (4.5V-13.5V)
Output voltage (V.DC.)	1.5V / 8000mA	1.8V / 8000mA	2.1V / 8000mA	2.5V / 8000mA	3.3V / 8000mA

Model No.	NI20-12-5S
Max. output wattage (W)	20W
Input voltage (V.DC.)	12V (7V-13.5V)
Output voltage (V.DC.)	5V / 4000mA

Model No.	NI20-5-1.5S NI20-12-1.5S	NI20-5-1.8S NI20-12-1.8S	NI20-5-2.1S NI20-12-2.1S	NI20-5-2.5S NI20-12-2.5S	NI20-5-3.3S NI20-12-3.3S	NI20-12-5S	
Max output wattage (W)	12W	14.4W	16.8W	20W	26.4W	20W	
Input	Input filter: π type						
Output	Voltage (V.DC.)	1.5	1.8	2.1	2.5	3.3	5
	Voltage accuracy	$\pm 2\%$	$\pm 2\%$	$\pm 2\%$	$\pm 2\%$	$\pm 2\%$	$\pm 2\%$
	Current (mA) max	8000	8000	8000	8000	8000	4000
	Line regulation (HL-LL) (typ.)	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$
	Load regulation (10-100%) (typ.)	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$
	Ripple	30mV max (Vp-p)					
	Noise	100mV max (Vp-p)					
	Efficiency	83%	85%	86%	88%	90%	90%
Switching frequency	200KHz	200KHz	200KHz	200KHz	200KHz	200KHz	
Protection	Over current protection	Works over 120% of rating and shut down					
	Short circuit protection	Current limit, shut down					
Environment	Operating temperature	0°C...+50°C					
	Storage temperature	-55°C...+105°C					
	Case temperature	+95°C max.					
	Temperature coefficient	$\pm 0.02\%$ Per°C					
	Humidity	95% RH					
MTBF	>1,000,000 h @ 25°C (MIL-HDBK-217F)						
Physical	Dimension (L x W x H)	2.5 x 0.55 x 0.24 Inches (63.5 x 13.9x 6.0 mm)					
	Case Material	Open Frame					
	Weight	5 g					
	Cooling method	Free-air convection					

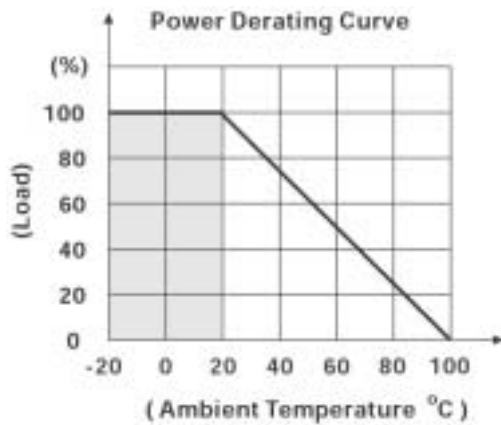
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

MECHANICAL DIMENSION (Top View)



PIN#	Single
1	+VOUT
2	+VOUT
3	NC
4	+VOUT
5	GND
6	GND
7	+VIN
8	+VIN
9	NC
10	NC
11	NC

DERATING



BLOCK DIAGRAM

