

Features:

- Wide 4:1 DC input range
- Protections: Short circuit / Overload / Over voltage
- 1500VDC I/O isolation
- Built-in EMI filter
- Cooling by free air convection
- Output voltage trimming function
- Built-in remote ON-OFF control
- 100% full load burn-in test
- Low cost
- High reliability
- 2 years warranty

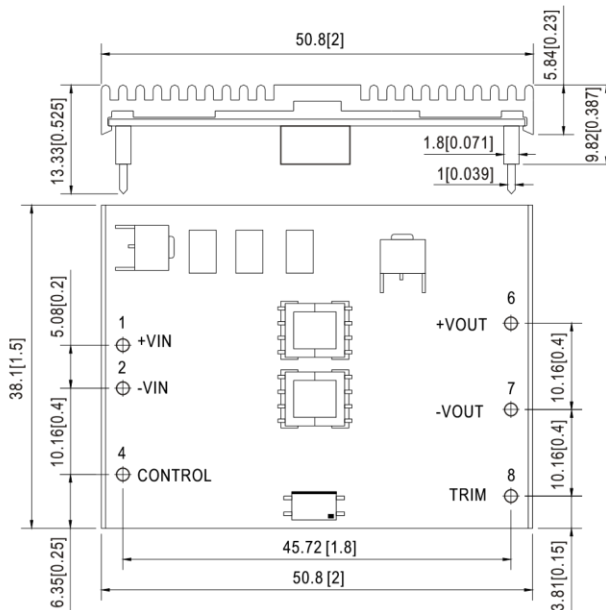


SPECIFICATION

MODEL		NSD15-12S3	NSD15-12S5	NSD15-12S12	NSD15-12S15	NSD15-48S3	NSD15-48S5	NSD15-48S12	NSD15-48S15	
OUTPUT	DC VOLTAGE	3.3V	5V	12V	15V	3.3V	5V	12V	15V	
	RATED CURRENT	3.75A	3A	1.25A	1A	3.75A	3A	1.25A	1A	
	CURRENT RANGE	0.18 ~ 3.75A	0.15 ~ 3A	0.06 ~ 1.25A	0.05 ~ 1A	0.18 ~ 3.75A	0.15 ~ 3A	0.06 ~ 1.25A	0.05 ~ 1A	
	RATED POWER	12.37W	15W	15W	15W	12.37W	15W	15W	15W	
	RIPPLE & NOISE (max.) Note.2	100mVp-p(25% ~ 100% load) for 3.3V only				75mVp-p(25% ~ 100% load)				
	VOLTAGE TOLERANCE Note.3	+/-2.0%								
	LINE REGULATION	+/-1.0% at 10% ~ 100% load								
	LOAD REGULATION	+/-1.0% at 10% ~ 100% load								
INPUT	TRIM OUTPUT (Typ.)	+10%	+/-5.0%	+/-5.0%	+/-3.0%	+10%	+/-5.0%	+/-5.0%	+/-3.0%	
	RATED DC INPUT	12VDC				48VDC				
	VOLTAGE RANGE	9.4 ~ 36VDC				18 ~ 72VDC				
	EFFICIENCY (Typ.)	73%	77%	81%	81%	77%	81%	84%	85%	
	DC CURRENT	1.8A/12VDC				0.4A/48VDC				
PROTECTION	SHUTDOWN IDLE CURRENT	20mA								
	OVERLOAD	Above 105% rated output power Protection type : Over power limiting, recovers automatically after fault condition is removed								
	OVER VOLTAGE(CLAMP)	5.8 ~ 6.93V	5.8 ~ 7.5V	13.8 ~ 18V	17.25 ~ 22.5V	5.61 ~ 6.93V	5.5 ~ 7.5V	13.8 ~ 18V	17.25 ~ 22.5V	
FUNCTION	SHORT CIRCUIT Note.4	Recovers automatically after fault condition is removed								
	ON/OFF CONTROL	Logic "1" or open circuit : ON			Logic "0" or short to PIN2 : OFF					
ENVIRONMENT	WORKING TEMP.	-25 ~ +70°C								
	WORKING HUMIDITY	0% ~ 95% RH max.								
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 0 ~ 95% RH								
	TEMP. COEFFICIENT	+/-0.03%/°C (0~50°C)								
SAFETY & EMC (Note 5)	SAFETY STANDARDS	UL60950-1 approved, Design refer to TUV EN60950-1								
	ISOLATION VOLTAGE	I/P-O/P:1.5KVDC								
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms/500VDC 25°C 70%RH								
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B								
OTHERS	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,6,8; EN55024, light industry level, criteria A								
	MTBF	1734K hrs min. MIL-HDBK-217F (25°C)								
NOTE	DIMENSION	38.1*50.8*9.82mm (1.5**2**0.387") (L*W*H)								
	PACKING	0.03Kg; 180pcs/6.4Kg/0.97CUFT								
<p>1. All parameters NOT specially mentioned are measured at 12, 48VDC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Short circuit no more than 60 seconds. 5. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 6. Derating to 80% load is needed for NSD15-48S series at 18Vdc input voltage. Full output wattage can be acquired when the input voltage is higher than 20Vdc. 7. EMC filter suggestion:</p>										

Mechanical Specification

Unit:mm[inch]

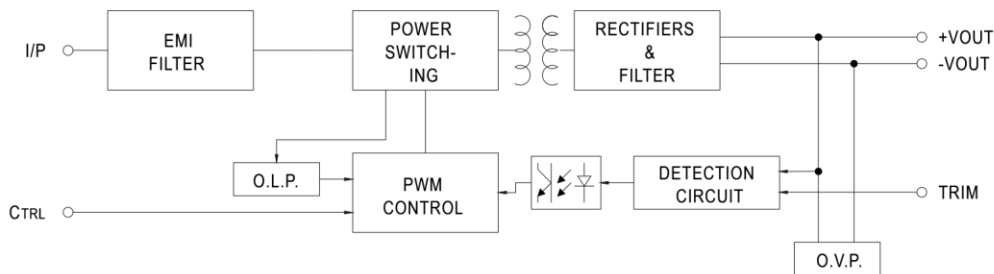


Pin No. Assignment

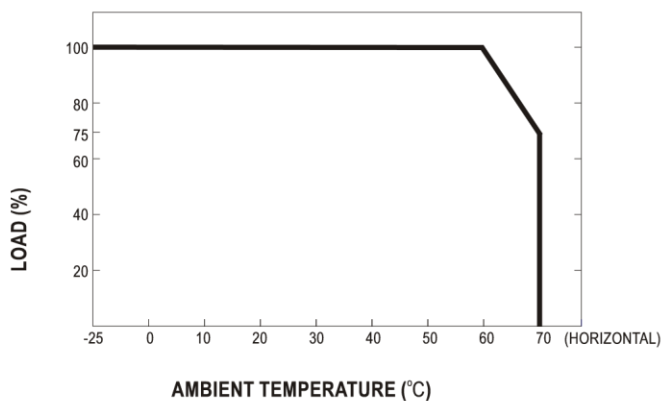
Pin No.	Assignment	Pin No.	Assignment
1	+VIN	6	+VOUT
2	-VIN	7	-VOUT
3,5	No Pin	8	TRIM
4	CONTROL		

Block Diagram

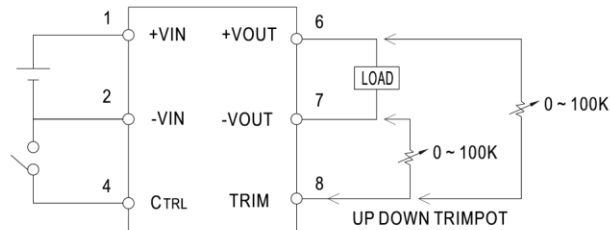
fosc : 400KHz



Derating Curve



ON/OFF Control & Output Trim



CONTROL INPUT.....PIN4
 CONTROL COMMON.....PIN2
 LOGIC COMPATIBILITY.....CMOS OR OPEN COLLECTOR TTL
 CONTROL VOLTAGE
 ON.....+5.5VDC min OR OPEN CIRCUIT
 OFF.....+2.5VDC max. OR SHORT TO PIN2

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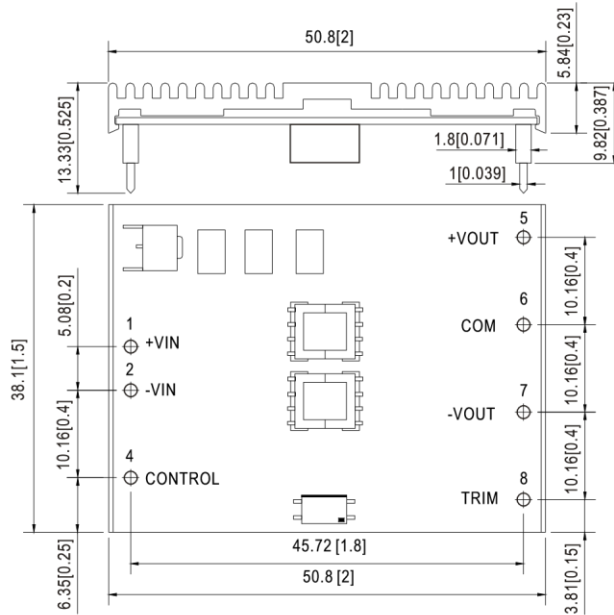


SPECIFICATION

MODEL	NSD15-12D5		NSD15-12D12		NSD15-12D15		NSD15-48D5		NSD15-48D12		NSD15-48D15		
OUTPUT	DC VOLTAGE	5V	-5V	12V	-12V	15V	-15V	5V	-5V	12V	-12V	15V	-15V
	RATED CURRENT	1.5A	1.5A	0.62A	0.62A	0.5A	0.5A	1.5A	1.5A	0.62A	0.62A	0.5A	0.5A
	CURRENT RANGE	0.07 ~ 1.5A	0.07 ~ 1.5A	0.03 ~ 0.62A	0.03 ~ 0.62A	0.02 ~ 0.5A	0.02 ~ 0.5A	0.07 ~ 1.5A	0.07 ~ 1.5A	0.03 ~ 0.62A	0.03 ~ 0.62A	0.02 ~ 0.5A	0.02 ~ 0.5A
	RATED POWER	15W											
	RIPPLE & NOISE (max.) Note.2	100mVp-p(25% ~ 100% load)											
	VOLTAGE TOLERANCE Note.3	+/-3.0%		+/-2.0%		+/-2.0%		+/-3.0%		+/-2.0%		+/-2.0%	
	LINE REGULATION	+/-1.0% at 10% ~ 100% load											
	LOAD REGULATION	+/-2.0%		+/-1.0%		+/-1.0%		+/-2.0%		+/-1.0%		+/-1.0%	
TRIM OUTPUT (Typ.)	+/-5.0%		+/-5.0%		+/-3.0%		+/-5.0%		+/-5.0%		+/-3.0%		
INPUT	RATED DC INPUT	12VDC						48VDC					
	VOLTAGE RANGE Note.6	9.4 ~ 36VDC						18 ~ 72VDC					
	EFFICIENCY (Typ.)	76%		80%		80%		80%		84%		84%	
	DC CURRENT	1.8A/12VDC						0.4A/48VDC					
	SHUTDOWN IDLE CURRENT	20mA											
PROTECTION	OVERLOAD	Above 105% rated output power Protection type : Over power limiting, recovers automatically after fault condition is removed											
	OVER VOLTAGE(CLAMP)	7.25 ~ 9V	-7.25 ~ -9V	13.8 ~ 18V	-13.8 ~ -18V	17.3 ~ 22.5V	-17.3 ~ -22.5V	7.25 ~ 9V	-7.25 ~ -9V	13.8 ~ 18V	-13.8 ~ -18V	17.3 ~ 22.5V	-17.3 ~ -22.5V
	SHORT CIRCUIT Note.4	Recovers automatically after fault condition is removed											
FUNCTION	ON/OFF CONTROL	Logic "1" or open circuit : ON						Logic "0" or short to PIN2 : OFF					
ENVIRONMENT	WORKING TEMP.	-25 ~ +70°C											
	WORKING HUMIDITY	0% ~ 95% RH max.											
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 0 ~ 95% RH											
	TEMP. COEFFICIENT	+/-0.03%/°C (0~50°C)											
SAFETY & EMC (Note 5)	SAFETY STANDARDS	UL60950-1 approved, Design refer to TUV EN60950-1											
	ISOLATION VOLTAGE	I/P-O/P:1.5KVDC											
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms/500VDC 25°C 70%RH											
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B											
OTHERS	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,6,8; EN55024, light industry level, criteria A											
	MTBF	1673.1K hrs min. MIL-HDBK-217F (25°C)											
	DIMENSION	38.1*50.8*9.82mm (1.5**2**0.387") (L*W*H)											
	PACKING	0.03Kg; 180pcs/6.4Kg/0.97CUFT											
NOTE	<p>1. All parameters NOT specially mentioned are measured at 12, 48VDC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Short circuit no more than 60 seconds.</p> <p>5. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</p> <p>6. Derating to 80% load is needed for NSD15-48D series at 18Vdc input voltage. Full output wattage can be acquired when the input voltage is higher than 20Vdc.</p> <p>7. EMC filter suggestion:</p>												

Mechanical Specification

Unit:mm[inch]

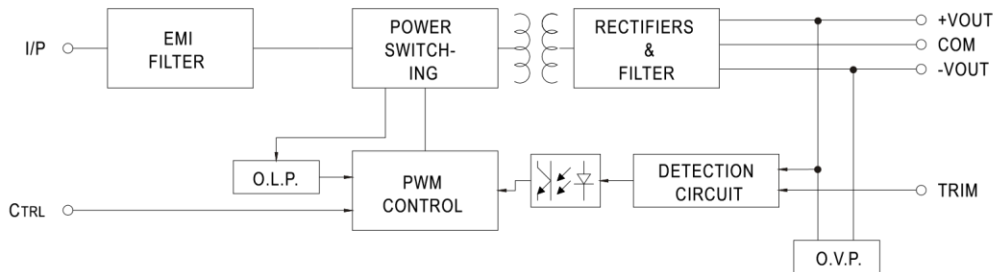


Pin No. Assignment

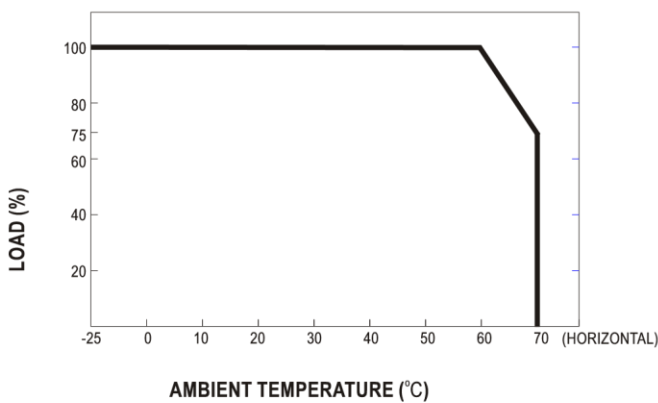
Pin No.	Assignment	Pin No.	Assignment
1	+VIN	5	+VOUT
2	-VIN	6	COMMON
3	No Pin	7	-VOUT
4	CONTROL	8	TRIM

Block Diagram

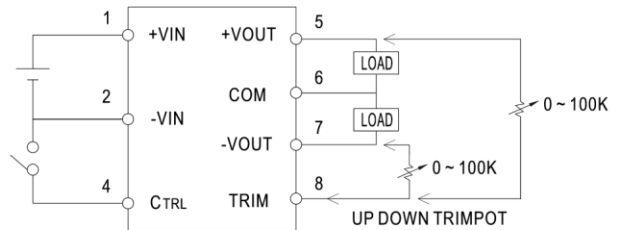
fosc : 400KHz



Derating Curve



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- CONTROL VOLTAGE
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