15W DC-DC Regulated Single Output

NSD15-S series



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

TPTC004 UL62368-1

GTIN CODE

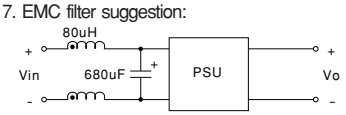
MW Search: https://www.meanwell.com/serviceGTIN.aspx

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	12.375W	15W	15W	15W	12.375W	15W	15W	15W
	CAPACITIVE LOAD (max.)	3300uF							
	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							
	TRIM OUTPUT (Typ.)	+10%	±5.0%	±5.0%	±3.0%	+10%	±5.0%	±5.0%	±3.0%
	SETUP TIME	100ms/RATED DC INPUT at full Load							
INPUT	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			
	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)	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
	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℃							
	WORKING HUMIDITY	0% ~ 95% RH max.							
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 0 ~ 95% RH							
	TEMP. COEFFICIENT	±0.03%/℃ (0~50℃)							
SAFETY & EMC (Note 5)	SAFETY STANDARDS	UL62368-1, EAC TP TC 004 approved, Design refer to BS EN/EN62368-1							
	ISOLATION VOLTAGE	I/P-O/P:1.5KVDC							
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25℃/ 70% RH							
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, EAC TP TC 020							
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,6,8; BS EN/EN55035, light industry level, EAC TP TC 020							
OTHERS	MTBF	12058.3K hrs min. Telcordia SR-332 (Bellcore) ; 1734.0K hrs min. MIL-HDBK-217F (25℃)							
	DIMENSION	50.8*38.1*9.82mm (2"*1.5"*0.387") (L*W*H)							
	PACKING	0.03Kg; 180pcs/6.4Kg/0.94CUFT							

NOTE

1. All parameters NOT specially mentioned are measured at 12, 48VDC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μF & 47 μF 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. All the EMC tests are been executed by mounting the unit on a 230mm*230mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)
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:



8. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).

※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

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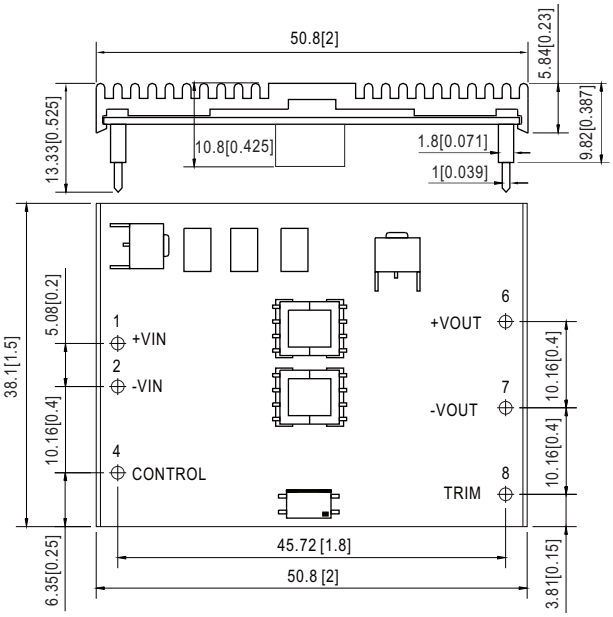
■ Mechanical Specification

(Unit:mm[inch], Tolerance:±1[±0.04])

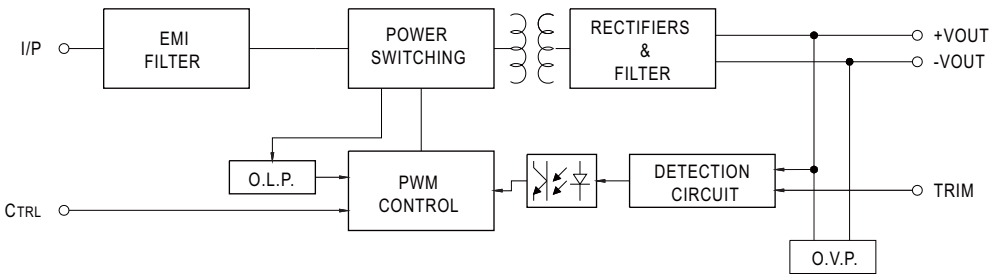


Pin No. Assignment

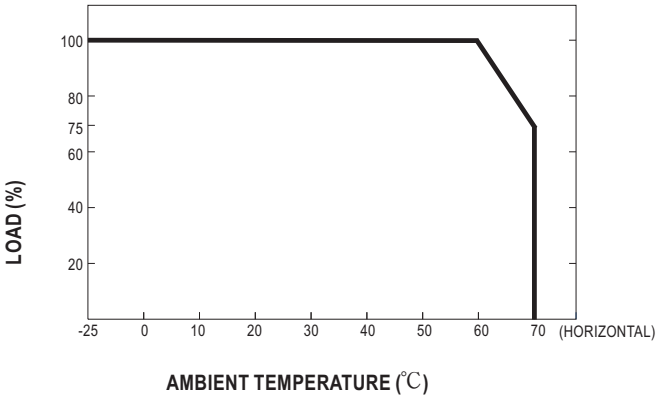
Pin No.	Assignment	Pin No.	Assignment
1	+VIN	6	+VOUT
2	-VIN	7	-VOUT
3,5	No Pin	8	TRIM
4	CONTROL		

■ Block Diagram

fosc : 400KHz

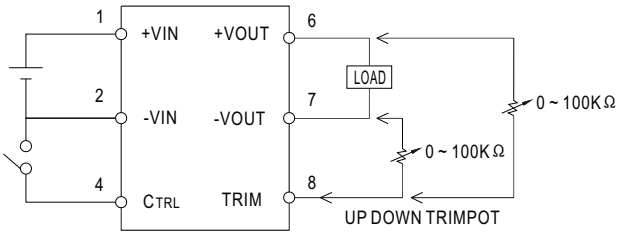


■ Derating Curve



AMBIENT TEMPERATURE (℃)

■ 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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