5W DC-DC Regulated Single Output
NSD05-S series

Features:
- Wide 4:1 DC input range
- Protections: Short circuit / Overload / Over voltage
- 1000VDC I/O isolation
- Cooling by free air convection
- Built-in remote ON-OFF control
- 100% full load burn-in test
- Low cost
- High reliability
- 2 years warranty

### SPECIFICATION

<table>
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<tr>
<th>MODEL</th>
<th>DC VOLTAGE</th>
<th>RATED CURRENT</th>
<th>CURRENT RANGE</th>
<th>RATED POWER</th>
<th>CAPACITIVE LOAD (max.)</th>
<th>RIPPLE &amp; NOISE (max.)</th>
<th>VOLTAGE TOLERANCE</th>
<th>LINE REGULATION</th>
<th>LOAD REGULATION</th>
<th>SETUP TIME</th>
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</thead>
</table>
| NSD05-12S3 | 3.3V | 1.2A | 0 ~ 1.2A | 3.96W | 1000uF | ±2.0% | ±1.0% | ±1.0% | 80ms
| NSD05-12S5 | 5V | 1A | 0 ~ 1A | 4.95W | 1000uF | ±2.0% | ±1.0% | ±1.0% | 80ms
| NSD05-12S12 | 12V | 0.42A | 0 ~ 0.42A | 3.96W | 120uF | ±1.0% | ±1.0% | ±1.0% | 80ms
| NSD05-12S15 | 15V | 1A | 0 ~ 1.2A | 5.04W | 120uF | ±1.0% | ±1.0% | ±1.0% | 80ms
| NSD05-48S3 | 3.3V | 0.42A | 0 ~ 0.42A | 120uF | 1000uF | ±1.0% | ±1.0% | ±1.0% | 80ms
| NSD05-48S5 | 5V | 1A | 0 ~ 1A | 4.95W | 1000uF | ±1.0% | ±1.0% | ±1.0% | 80ms
| NSD05-48S12 | 12V | 0.33A | 0 ~ 0.33A | 3.96W | 120uF | ±1.0% | ±1.0% | ±1.0% | 80ms
| NSD05-48S15 | 15V | 0.33A | 0 ~ 0.33A | 5.04W | 120uF | ±1.0% | ±1.0% | ±1.0% | 80ms

### INPUT
- Rated DC Input: 12VDC
- Voltage Range: 9.2 ~ 36VDC
- Efficiency (Typ.): 72% @ 12VDC
- DC Current: 0.7A/12VDC
- Shutdown Idle Current: 5mA/12VDC
- Power Designation: 3.96W

### OUTPUT
- Rated DC Output: 48VDC
- Voltage Range: 5.6 ~ 6.8V
- Efficiency (Typ.): 72% @ 12VDC
- DC Current: 0.2A/48VDC
- Shutdown Idle Current: 5mA/48VDC
- Power Designation: 5.04W

### PROTECTION
- Overload: Above 105% rated output power
- Short Circuit: Recovers automatically after fault condition is removed
- Short Voltage (Clamp): 3.8 ~ 4.6V

### 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 ~ 60°C)

### SAFETY & EMC
- Safety Standards: IEC60950-1 CB approved by TUV
- Isolation Voltage: 500VDC / 25°C / 70% RH
- EMC Emission: Compliance to EN55022 (CISPR22) Class B
- EMC Immunity: Compliance to EN61000-4-2, 3, 4, 5, 6, 8
- Others: MTBF: 914.4K hrs min.  DIMENSION: 40.6x25.4x18mm (1.6"x1.0"x0.7") (LxWxH)
- Packaging: 0.007Kg: 700pcs/5.9Kg

### NOTE
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. 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. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on http://www.meanwell.com)
5. To insure proper operation, a 47uF/100V electrolytic capacitor with Esr <1Ω must be added to the input line.
6. EMC filter suggestion(TBD):
**Mechanical Specification**

- **Pin No. Assignment**
  - Pin No. | Assignment |
  - 1      | +INPUT     |
  - 2      | -INPUT(GND)|
  - 3      | +VOUT     |
  - 4      | -VOUT     |
  - 5      | CONTROL   |

- **Pin No.** 1, 2, 3, 4, 5
- **Assignment** +INPUT, -INPUT(GND), +VOUT, -VOUT, CONTROL

- **Pin Dimensions**
  - 0.64mm square pins
  - 25.4 [1.0] mm
  - 30.48 [1.2] mm
  - 40.6 [1.6] mm
  - 51.0 [2.0] mm

- **Unit:** mm [inch]

**Block Diagram**

- **fosc:** 350KHz

- **ON/OFF Control**

- **Logic Compatibility:** CMOS or Open Collector TTL
- **Control Voltage:**
  - ON: +5.5VDC min or OPEN CIRCUIT
  - OFF: +2.5VDC max or SHORT TO PIN2

**Derating Curve**

- **Load (%)** vs **Ambient Temperature (°C)**
  - Ambient Temperature: -25 to 70°C
  - Load: 10% to 100%

**Mechanical Specification**

- **Truncated**

- **Control Input** .....................................PIN5
- **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
Click to View Pricing, Inventory, Delivery & Lifecycle Information:

**Mean Well:**
- NSD05-48S5
- NSD05-12S15
- NSD05-48S12
- NSD05-48S15
- NSD05-12S5
- NSD05-48S3
- NSD05-12S3
- NSD05-12S12