

FEATURES :

- 40 Watt 2"X1" DIL Package
- 2:1Wide Input Voltage
- 100% Burned In
- High Efficiency To 91%
- Customized Solutions Available
- Remote Control:On/Off
- UL94V-0 Package Material
- Operating Temperature:-40°C TO +77°C
- 3 Years Warranty

YUAN DEAN SCIENTIFIC



DC-DC Converter

99D-R3 SERIES

40Watt 1.5KV Isolated

2 : 1 Input Voltage Range

Single & Dual Output

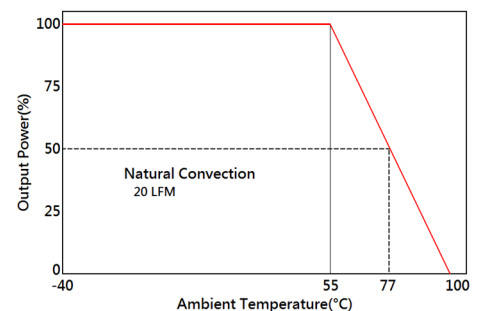
2" x 1"

Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified

| Part Number | Input Voltage | | Input Current | | Output Voltage | | Output Current | | Capacitor Load | Efficiency |
|---------------|---------------|------------------|--------------------|-----|----------------|-------|----------------|--|----------------|------------|
| | Vdc | No-Load (mA TYP) | Full Load (mA TYP) | Vdc | Full Load (mA) | uF | %TYP | | | |
| 99D-12S03R3NL | 9-18 | 160 | 2472 | 3.3 | 8000 | 16000 | 89 | | | |
| 99D-12S05R3NL | 9-18 | 160 | 3745 | 5 | 8000 | 10000 | 89 | | | |
| 99D-12S12R3NL | 9-18 | 60 | 3753 | 12 | 3340 | 1800 | 89 | | | |
| 99D-12S15R3NL | 9-18 | 60 | 3708 | 15 | 2670 | 1200 | 90 | | | |
| 99D-12D12R3NL | 9-18 | 60 | 3795 | ±12 | ±1670 | ±680 | 88 | | | |
| 99D-12D15R3NL | 9-18 | 60 | 3807 | ±15 | ±1340 | ±560 | 88 | | | |
| 99D-24S03R3NL | 18-36 | 90 | 1236 | 3.3 | 8000 | 16000 | 89 | | | |
| 99D-24S05R3NL | 18-36 | 90 | 1873 | 5 | 8000 | 10000 | 89 | | | |
| 99D-24S12R3NL | 18-36 | 60 | 1876 | 12 | 3340 | 1800 | 89 | | | |
| 99D-24S15R3NL | 18-36 | 60 | 1854 | 15 | 2670 | 1200 | 90 | | | |
| 99D-24D12R3NL | 18-36 | 50 | 1898 | ±12 | ±1670 | ±680 | 88 | | | |
| 99D-24D15R3NL | 18-36 | 50 | 1882 | ±15 | ±1340 | ±560 | 89 | | | |
| 99D-48S03R3NL | 36-75 | 70 | 617 | 3.3 | 8000 | 16000 | 89 | | | |
| 99D-48S05R3NL | 36-75 | 70 | 926 | 5 | 8000 | 10000 | 90 | | | |
| 99D-48S12R3NL | 36-75 | 40 | 927 | 12 | 3340 | 1800 | 90 | | | |
| 99D-48S15R3NL | 36-75 | 40 | 917 | 15 | 2670 | 1200 | 91 | | | |
| 99D-48D12R3NL | 36-75 | 40 | 938 | ±12 | ±1670 | ±680 | 89 | | | |
| 99D-48D15R3NL | 36-75 | 40 | 941 | ±15 | ±1340 | ±560 | 89 | | | |



Temperature Derating Graph



Input Specifications

| Parameters | Conditions | Min | Typ | Max | Units |
|---------------|------------------|-----|-----|-----|-------|
| Voltage Types | | | | 2:1 | |
| Filter | Pi Network | | | | |
| Protection | Fuse Recommended | | | | |

www.yds.com.tw



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Rev:0 2018/10/31

Output Specifications

| Parameters | Conditions | Min | Typ | Max | Units |
|---------------------------------|--------------------------------------|-----|-----|------------|-------|
| Voltage Tolerance | Full load@ Vin(nom.) | | | ±2 | % |
| Line Regulation | | | | ±0.5 | % |
| Load Regulation | Single | | | ±0.5 | % |
| | Dual(Balance Load) | | | ±2 | % |
| Cross Regulation | Dual | | | ±5 | % |
| | (25% to 100% load) | | | | |
| Ripple & Noise | Output:3-15V TYPES BW=DC To 20MHz | | | 100 | mVp-p |
| | Output > 15V TYPES BW=DC To 20MHz | | | 1% of Vout | mVp-p |
| Short Circuit Protection | Hiccup, automatic recovery | | | | |
| Transient response setting time | 25% load step change | | 300 | | us |
| External Trim Adj. Range | | | | ±10 | % |

General Specifications

| Parameters | Conditions | Min | Typ | Max | Units |
|-----------------------|-----------------------------------------------------|--------|----------------|---------------|-------|
| Isolation Resistance | 500Vdc | 1000 | | | MΩ |
| Switching Frequency | | | 350 | | KHz |
| Operating Temperature | Refer to temperature derating graph (with derating) | -40 | | 77 | °C |
| Humidity | Non Condensing | 5 | | 95 | % |
| Cooling | Natural Convection (20LFM) | | | | |
| Case material | Nickel Coated with Non-Conductive Base | | | | |
| Weight | | | 40 | | g |
| Dimensions | | | 50.8X25.4X11.6 | | mm |
| Potting Material | Epoxy (UL94V-0 rated) | | | | |
| Remote ON/OFF | ON | | | Open | |
| | OFF | | | Short to -Vin | |
| Isolation Voltage | | | | 1500 | VDC |
| MTBF | MIL-HDBK-217F @25°C , Ground Benign | 328000 | | | Hours |
| Storage Temperature | | -55 | | +125 | °C |
| Case Temperature | | | | +105 | °C |
| Isolation Capacitance | | | | 1500 | pF |

PIN Assignment

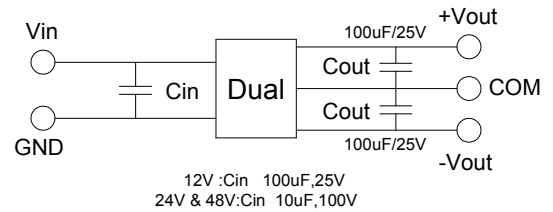
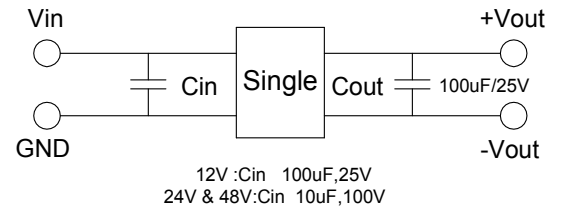
| Pin | 1 | 2 | 3 | 4 | 5 | 6 |
|--------|------|------|---------------|-------|-------|-------|
| Single | +Vin | -Vin | Remote On/Off | +Vout | -Vout | Trim |
| Dual | +Vin | -Vin | Remote On/Off | +Vout | Com | -Vout |

Part Number

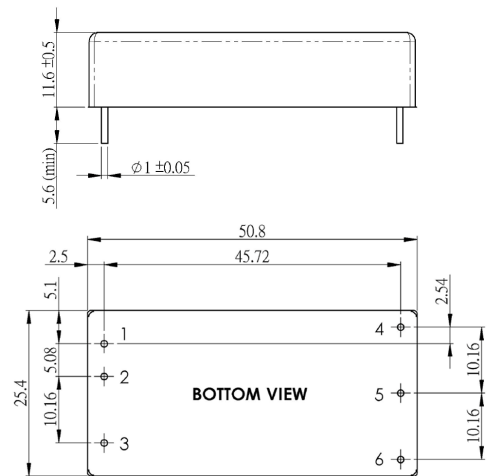
99D - 24 S 05 R 3 NL
A B C D E F G

- A: Series
- B: Input Voltage
- C: Single Output(S),Dual(D)
- D: Output Voltage
- E: Regulated(R)
- F: Package
- G: RoHs Version

Recommended Test Circuit



Dimensions



Unit : mm
Tolerance : XX.X ±0.5 , XX.XX ±0.25