

FEATURES :

- 24PIN DIL Package
- Low Ripple & Noise
- High Efficiency up to 85%
- Unregulated & Regulated Output Types
- Internal SMD Construction
- No External Component Required
- Operating Temperature:-40°C TO +85°C
- Industry Standard Pinout

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

| Part Number | Output Voltage | Output Current | Efficiency |
|--------------|----------------|----------------|------------|
| | Vdc | mA | %Typ |
| 50D-XXS05RNL | 5 | 360 | 58 |
| 50D-XXS05NNL | 5 | 360 | 70 |
| 50D-XXD05NNL | ±5 | ±180 | 70 |
| 50D-XXS09RNL | 9 | 200 | 60 |
| 50D-XXS09NNL | 9 | 200 | 70 |
| 50D-XXD09NNL | ±9 | ±100 | 70 |
| 50D-XXS12RNL | 12 | 150 | 60 |
| 50D-XXS12NNL | 12 | 150 | 75 |
| 50D-XXD12RNL | ±12 | ±75 | 60 |
| 50D-XXD12NNL | ±12 | ±75 | 75 |
| 50D-XXS15RNL | 15 | 120 | 60 |
| 50D-XXS15NNL | 15 | 120 | 75 |
| 50D-XXD15RNL | ±15 | ±60 | 60 |
| 50D-XXD15NNL | ±15 | ±60 | 75 |
| 50D-XXS24RNL | 24 | 75 | 60 |
| 50D-XXS24NNL | 24 | 75 | 80 |
| 50D-XXD24RNL | ±24 | ±38 | 60 |
| 50D-XXD24NNL | ±24 | ±38 | 80 |

Note:

- 1."XX" Is Input Voltage :05=5Vdc,09=9Vdc,12=12Vdc,15=15Vdc,24=24Vdc.
- 2.The input voltage increases, there will be an increase in efficiency.

Input Specifications

| Parameters | Conditions | Min | Typ | Max | Units |
|--------------------------|------------|-----|-----|-----|-------|
| Voltage Tolerance | Vo,Io Nom | | | ±10 | % |
| Filter | Capacitor | | | | |

YUAN DEAN SCIENTIFIC



DC-DC Converter

50D SERIES

1.8Watt

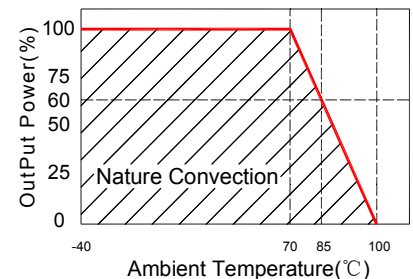
0.5KV Isolated

Single & Dual Output

DIL24



Temperature Derating Graph



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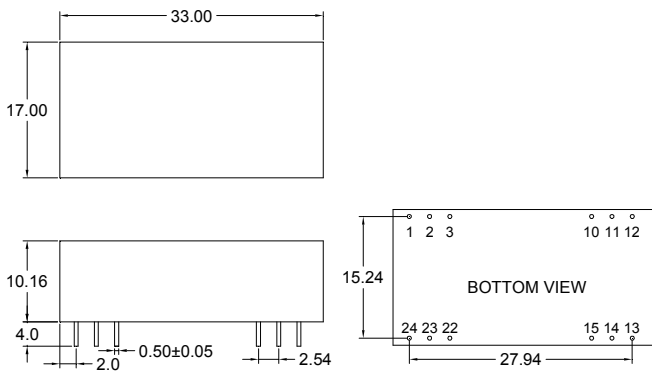
Output Specifications

| Parameters | Conditions | Min | Typ | Max | Units |
|--------------------------|----------------------------------|-----|-----|------|-------|
| Voltage Tolerance | 100% full load | | | ±5 | % |
| Short Circuit Protection | Regulated (Continuous) | | | | |
| Short Circuit Protection | Unregulated (Short Trem) | | | 1 | Sec |
| Line Regulation | Regulated | | | ±0.3 | % |
| Load Regulation | Regulated | | | ±0.5 | % |
| Ripple & Noise | BW=DC To 20MHz | | | 50 | mVp-p |
| Line Regulation | Unregulated (For 1% of Vin) | | 1.2 | | % |
| Load Regulation | Unregulated (20% To 100% F.L) | | | 10 | % |

General Specifications

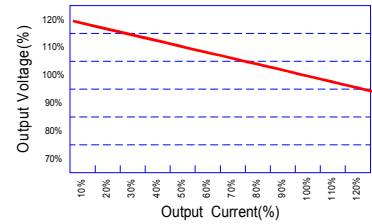
| Parameters | Conditions | Min | Typ | Max | Units |
|-----------------------|-------------------------------------|---------|-----------------|-----|-------|
| Isolation Resistance | 500Vdc | 1000 | | | MΩ |
| Switching Frequency | Full load, nominal input | | 50 | | KHz |
| Operating Temperature | | -40 | | +85 | °C |
| Humidity | Non Condensing | | | 95 | % |
| Cooling | Free air Convection | | | | |
| Case material | DAP | | | | |
| MTBF | MIL-HDBK-217F@25°C (Unregulated) | 2500000 | | | Hours |
| MTBF | MIL-HDBK-217F@25°C (Regulated) | 1500000 | | | Hours |
| Weight | | | 15.5 | | g |
| Dimensions | | | 33.0x17.0x10.16 | | mm |

Markings and Dimensions



Unit : mm Unless otherwise specified, all tolerances are ±0.25

Tolerance Envelope Graph

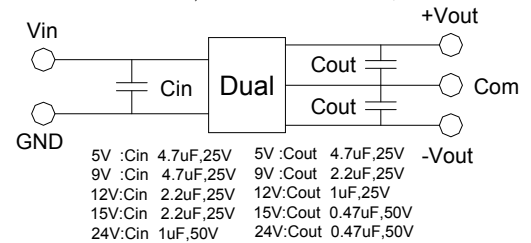
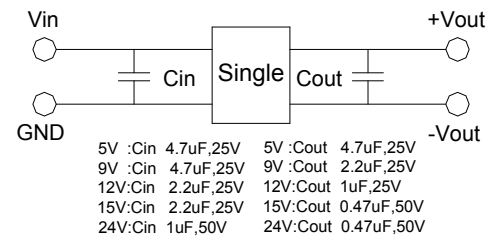


Part Number

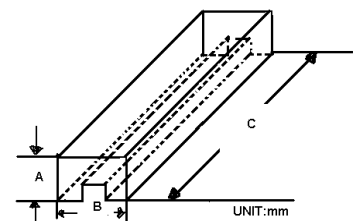
50D - 05 S 05 R NL
A B C D E F

- A:Series
- B:Input Voltage
- C:Single(S)Dual(D)
- D:Output Voltage
- E:Regulated(R)Unregulated(N)
- F:RoHS Version

Recommended Test Circuit



Packaging



| Size(mm) | | |
|----------|-------|-----|
| A | B | C |
| 18.71 | 23.00 | 522 |

PIN Connection

| PIN | 1 | 2 | 3 | 10 | 11 | 12 | 13 | 14 | 15 | 22 | 23 | 24 |
|--------|------|-------|-----|-------|-------|------|------|-------|-------|-----|-------|------|
| Single | +Vin | NC | NC | -Vout | +Vout | -Vin | -Vin | +Vout | -Vout | NC | NC | +Vin |
| Dual | +Vin | -Vout | Com | Com | +Vout | -Vin | -Vin | +Vout | Com | Com | -Vout | +Vin |

