

**FEATURES :**

- 2:1Wide Input Voltages Range
- 7PIN SIP Package
- High Efficiency up to 83%
- Regulated Output Types
- Internal SMD Construction
- No External Component Required
- Operating Temperature:-40°C TO +85°C
- Industry Standard Pinout

YUAN DEAN SCIENTIFIC



DC-DC Converter

14DZ-2W SERIES

2Watt 3KV Isolated

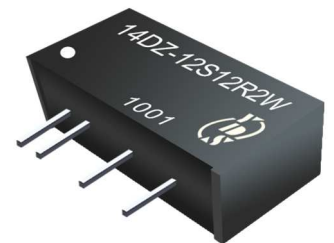
2 : 1 Input Voltage Range

Single Output

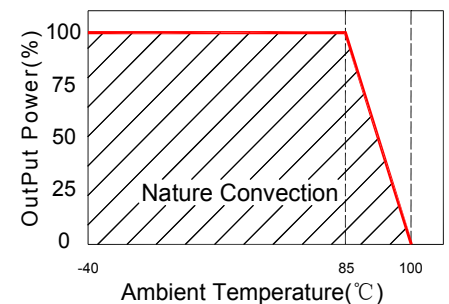
SIP7

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

| Part Number   | Input Voltage | Output Voltage | Output Current | Efficiency |
|---------------|---------------|----------------|----------------|------------|
|               | Vdc           | Vdc            | mA             | %TYP       |
| 14DZ-05S05R2W | 4.5-9         | 5              | 400            | 70         |
| 14DZ-05S09R2W | 4.5-9         | 9              | 222            | 72         |
| 14DZ-05S12R2W | 4.5-9         | 12             | 167            | 75         |
| 14DZ-05S15R2W | 4.5-9         | 15             | 133            | 78         |
| 14DZ-05S24R2W | 4.5-9         | 24             | 84             | 80         |
| 14DZ-12S05R2W | 9-18          | 5              | 400            | 75         |
| 14DZ-12S09R2W | 9-18          | 9              | 222            | 78         |
| 14DZ-12S12R2W | 9-18          | 12             | 167            | 80         |
| 14DZ-12S15R2W | 9-18          | 15             | 133            | 80         |
| 14DZ-12S24R2W | 9-18          | 24             | 84             | 83         |
| 14DZ-24S05R2W | 18-36         | 5              | 400            | 76         |
| 14DZ-24S09R2W | 18-36         | 9              | 222            | 78         |
| 14DZ-24S12R2W | 18-36         | 12             | 167            | 80         |
| 14DZ-24S15R2W | 18-36         | 15             | 133            | 80         |
| 14DZ-24S24R2W | 18-36         | 24             | 84             | 83         |



Temperature Derating Graph



**Input Specifications**

| Parameters    | Conditions | Min | Typ | Max | Units |
|---------------|------------|-----|-----|-----|-------|
| Voltage Types | Vo, Io Nom |     |     | 2:1 |       |
| Filter        | Capacitor  |     |     |     |       |

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Rev:1 2018/10/03

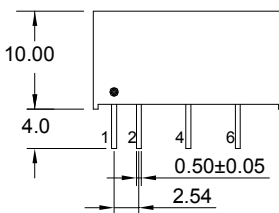
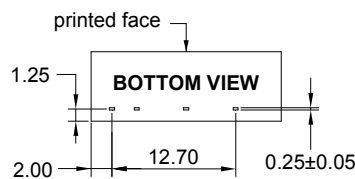
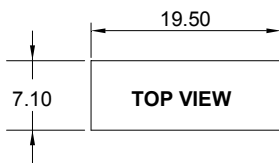
Output Specifications

| Parameters                      | Conditions                            | Min | Typ        | Max  | Units |
|---------------------------------|---------------------------------------|-----|------------|------|-------|
| Voltage Tolerance               | 100% full load                        |     |            | ±5   | %     |
| Short Circuit Protection        | Continuous                            |     |            |      |       |
| Line Regulation                 | Regulated                             |     |            | ±0.5 | %     |
| Load Regulation                 | Regulated                             |     |            | ±1.5 | %     |
| Ripple & Noise                  | Output:5V,9V TYPES<br>BW=DC To 20MHz  |     |            | 100  | mVp-p |
| Ripple & Noise                  | Output:12-24V TYPES<br>BW=DC To 20MHz |     | 1% of Vout |      | mVp-p |
| Transient response setting time | 50% load step change                  |     | 350        |      | us    |

General Specifications

| Parameters            | Conditions               | Min     | Typ           | Max | Units |
|-----------------------|--------------------------|---------|---------------|-----|-------|
| Isolation Resistance  | 500Vdc                   | 1000    |               |     | MΩ    |
| Switching Frequency   | Full load, nominal input |         | 100           |     | KHz   |
| Operating Temperature |                          | -40     |               | 85  | °C    |
| Humidity              | Non Condensing           |         |               | 95  | %     |
| Cooling               | Free air Convection      |         |               |     |       |
| Case material         | DAP                      |         |               |     |       |
| MTBF                  | MIL-HDBK-217F @25°C      | 1500000 |               |     | Hours |
| Weight                |                          |         | 2.7           |     | g     |
| Dimensions            |                          |         | 19.5x7.1x10.0 |     | mm    |

Markings and dimensions



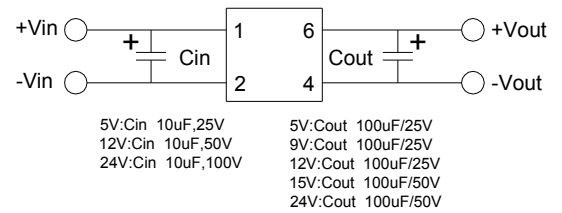
UNIT : mm Unless otherwise specified, all tolerances are ±0.25

Part Number

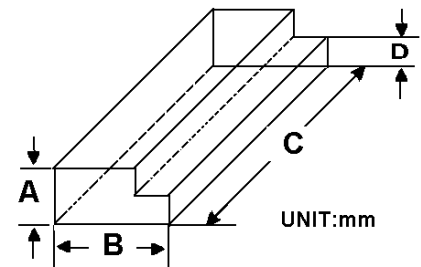
14DZ - 05 S 05 R 2W  
A B C D E F

A:Series  
B:Input Voltage  
C:Single Output  
D:Output Voltage  
E:Regulated(R)  
F:Output Power

Recommended Test Circuit



Packaging



| Size(mm) |      |     |     |
|----------|------|-----|-----|
| A        | B    | C   | D   |
| 9.5      | 16.5 | 522 | 5.0 |

PIN Connection

| Pin    | 1    | 2    | 4     | 6     |
|--------|------|------|-------|-------|
| Single | +Vin | -Vin | -Vout | +Vout |