

## FEATURES:

- 2:1 Wide Input Voltages Range
- High Efficiency up to 80%
- Regulated Output Types
- Low Ripple and Noise
- Internal SMD Construction
- 1.5KVDC ~ 3KVDC Isolation
- Industry Standard Pinout
- Continuous Short-Circuit Protection With Current Foldback
- UL Recognized

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

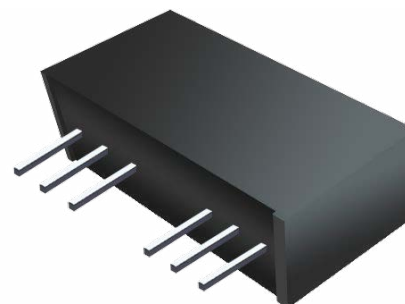
| Part Number  | Input<br>Voltage<br>Range | Output<br>Voltage | Output<br>Current | Efficiency |
|--------------|---------------------------|-------------------|-------------------|------------|
|              | Vdc                       | Vdc               | mA                | %TYP       |
| RD7-24D053R  | 18~36                     | ±5                | ±300              | 70         |
| RD7-12D153R3 | 9~18                      | ±15               | ±100              | 80         |
| RD7-24D123R3 | 18~36                     | ±12               | ±125              | 78         |
| RD7-24D153R3 | 18~36                     | ±15               | ±100              | 80         |

### Note:

1: No suffix is standard isolation (1.5KVDC) e.g., RD7-12D053R  
\*add suffix "3" for 3KVDC isolation, e.g., RD7-12D053R3

# ADAM TECH

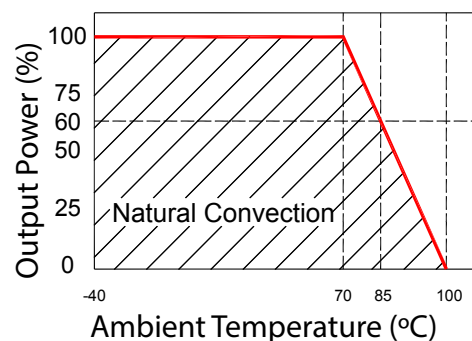
DC-DC Converter  
**RD7-3W Dual Series**  
3 Watt 1.5KV ~ 3KV Isolated  
2:1 Input Voltage Range  
Dual Output  
SIP8



## Input Specifications

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

## Temperature Derating Graph



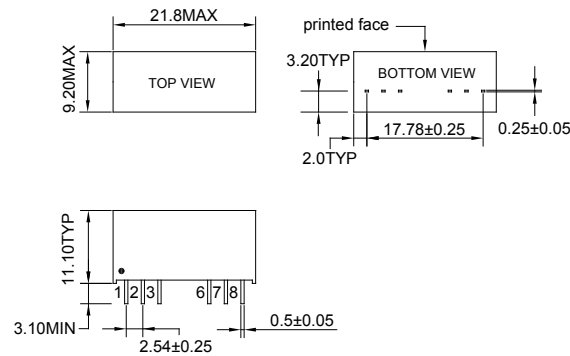
## Output Specifications

| Parameters                      | Conditions                            | Min | Typ | Max        | Units |
|---------------------------------|---------------------------------------|-----|-----|------------|-------|
| Voltage Tolerance               | 100% full load                        |     |     | ±3         | %     |
| Short Circuit Protection        | Continuous                            |     |     |            |       |
| Line Regulation                 | Regulated                             |     |     | ±0.5       | %     |
| Load Regulation                 | Regulated                             |     |     | ±0.8       | %     |
| Ripple & Noise                  | Output:5-9V TYPES<br>BW=DC To 20MHz   |     |     | 100        | mVp-p |
|                                 | Output:12-15V 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       | 1,500,000 |               |     | Hours |
| Weight                |                          |           | 4.5           |     | g     |
| Dimensions            |                          |           | 21.8x9.2x11.1 |     | mm    |

## Markings and Dimensions



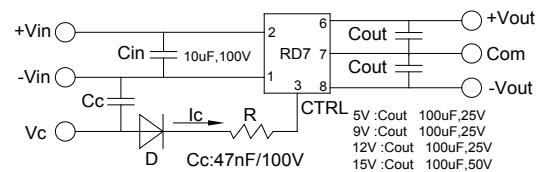
UNIT: mm TYP tolerances are ±0.5

## Part Number

RD7 - XX X XX X X X  
A B C D E F G

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

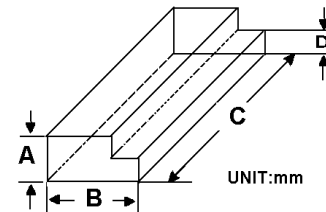
## Recommended Test Circuit



1. When open or high impedance, the converter works well; when this pin is 'high', the converter shuts down. It should be noted that the input current should be between 5-10mA, exceeding the maximum 20mA will cause permanent damage to the converter.

2. To make sure the product works at perfect operation status, a full loading external capacitor is necessary and it is recommended to use a high frequency low resistance electrolytic capacitor.

## Packaging



| Size (mm) |       |     |      |
|-----------|-------|-----|------|
| A         | B     | C   | D    |
| 12.0      | 28.55 | 550 | 6.00 |

## PIN Connection

| PIN  | 1    | 2    | 3                                            | 6     | 7   | 8     |
|------|------|------|----------------------------------------------|-------|-----|-------|
| Dual | -Vin | +Vin | Ctrl-Control input can<br>(can be left open) | +Vout | Com | -Vout |

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