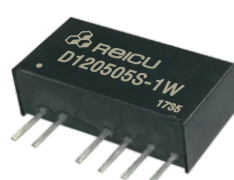


**Features**

- RoHS compliant
- Efficiency up to 80%
- 1.6kVDC Isolation
- Double isolated output
- Low ripple & noise
- Industry standard required
- Wide temperature performance at full 1 Watt load, -40°C to 85°C



**Model Selection Guide**

| Order Code  | Vin(V)  |           | Output |         | Max capacitive Load | Efficiency(%) (Typ) |
|-------------|---------|-----------|--------|---------|---------------------|---------------------|
|             | Nominal | Range     | Vo(V)  | Io(mA)  |                     |                     |
| D050505S-1W | 5       | 4.5-5.5   | 5/5    | 100/100 | 100                 | 70                  |
| D050909S-1W |         |           | 9/9    | 56/56   | 100                 | 75                  |
| D051212S-1W |         |           | 12/12  | 42/42   | 100                 | 77                  |
| D051515S-1W |         |           | 15/15  | 33/33   | 47                  | 77                  |
| D052424S-1W |         |           | 24/24  | 21/21   | 47                  | 76                  |
| D120505S-1W | 12      | 10.8-13.2 | 5/5    | 100/100 | 100                 | 72                  |
| D120909S-1W |         |           | 9/9    | 56/56   | 100                 | 77                  |
| D121212S-1W |         |           | 12/12  | 42/42   | 100                 | 78                  |
| D121515S-1W |         |           | 15/15  | 33/33   | 47                  | 80                  |
| D122424S-1W |         |           | 24/24  | 21/21   | 47                  | 78                  |
| D240505S-1W | 24      | 21.6-26.4 | 5/5    | 100/100 | 100                 | 70                  |
| D240909S-1W |         |           | 9/9    | 56/56   | 100                 | 74                  |
| D241212S-1W |         |           | 12/12  | 42/42   | 100                 | 76                  |
| D241515S-1W |         |           | 15/15  | 33/33   | 47                  | 76                  |
| D242424S-1W |         |           | 24/24  | 21/21   | 47                  | 75                  |

\*All the specifications typical at Ta=+25°C resistive load, nominal input voltage and rated output current unless otherwise noted.

**Input Characteristics**

| Parameter                         | Condition         | Min                | Typ | Max | Units |
|-----------------------------------|-------------------|--------------------|-----|-----|-------|
| Input Surge Voltage (1 sec. Max.) | 3.3V Input Models | -0.7               | --  | 6   | VDC   |
|                                   | 5V Input Models   | -0.7               | --  | 9   |       |
|                                   | 12V Input Models  | -0.7               | --  | 18  |       |
|                                   | 24V Input Models  | -0.7               | --  | 30  |       |
| Input Filter                      | All Models        | Internal Capacitor |     |     |       |

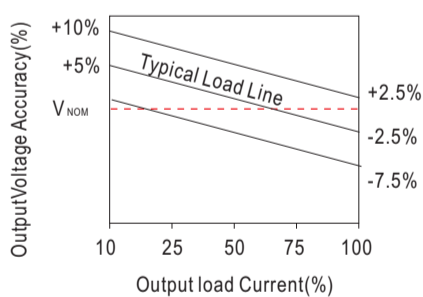
**Output Characteristics**

| Parameter           | Condition                | Min  | Typ | Max  | Units |
|---------------------|--------------------------|------|-----|------|-------|
| Line regulation     | Vin change 1%            | ±1.2 | --  | ±1.5 | %     |
| Switching frequency | Full load, nominal input | --   | 100 | --   | KHz   |
| Load regulation     | 10%~100% load            | 6.5  | --  | 15   | %     |
| Ripple and noise    | BW=DC to 20MHz           | --   | 75  | ≤100 | mVp-p |

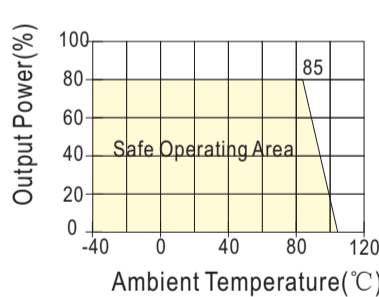
**General Characteristics**

| Parameter             | Condition           | Min  | Typ  | Max  | Units   |
|-----------------------|---------------------|------|------|------|---------|
| Operating Temperature | All output types    | -40  | --   | +85  | °C      |
| Storage               |                     | -55  | --   | +125 | °C      |
| Storage humidity      |                     | --   | --   | +95  | %       |
| Cooling               | Free air convection | --   | --   | --   |         |
| Isolation voltage     | 1mA≤1minute         | --   | 1600 | --   | VDC     |
| Isolation resistance  | 500VDC              | 1000 | --   | --   | MΩ      |
| Switching Frequency   |                     | --   | 100  | 110  | KHz     |
| MTBF                  | 3.5×10 <sup>6</sup> |      |      |      | K hours |

**Tolerance Envelopes Curve**

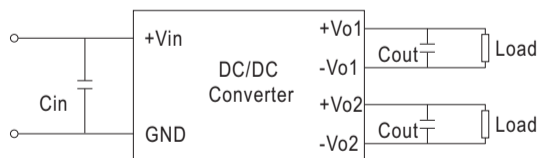


**Temperature Derating Graph Curve**



**Input/Output Ripple Reduction**

Reduce output ripple, it is recommended to use capacitors at the input/output.



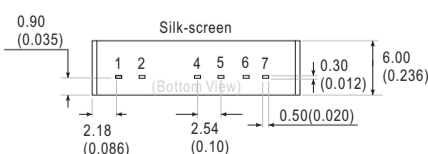
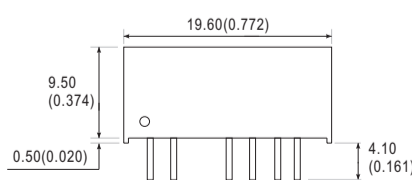
**External Capacitor Table**

| Parameter | 5   | 12  | 15  | 24 |      |
|-----------|-----|-----|-----|----|------|
| Vin(VDC)  | 5   | 12  | 15  | 24 |      |
| Cin(uF)   | 4.7 | 2.2 | 2.2 | 1  |      |
| Vout(VDC) | 5   | 9   | 12  | 15 | 24   |
| Cout(uF)  | 10  | 4.7 | 2.2 | 1  | 0.47 |

**Note**

1. To ensure this module can operate efficiently and reliably, During operation, the minimum output load is not less than 10% of the full load.
2. Other input and output voltage may be available, please
3. Specifications subject to change without notice

**Mechanical Dimension & Pin Connections**



Note:  
Unit:mm(inch)

| Pin  | 1   | 2   | 4    | 5    | 6    | 7    |
|------|-----|-----|------|------|------|------|
| D_S  | Vin | GND | -Vo1 | +Vo1 | -Vo2 | +Vo2 |
| D_NS | Vin | GND | +Vo1 | -Vo1 | +Vo2 | -Vo2 |