

**DSM-1 SERIES, 1WATT, 1KVDC, ISOLATED, UNREGULATED**
**FEATURES:**

- ✓ 1000Vdc isolation voltage
- ✓ Single and dual output models
- ✓ High efficiency, and low ripple and noise
- ✓ Operating temperature range -40°C to +85°C
- ✓ 3 year warranty



| Model     | Input voltage<br>(Vdc) | Output voltage<br>(Vdc) | Output current<br>(mA) |      | Efficiency<br>Typ. |
|-----------|------------------------|-------------------------|------------------------|------|--------------------|
|           |                        |                         | Min.                   | Max. |                    |
| DSM1-0310 | 3.3(3.0~3.6)           | 3.3                     | 30                     | 300  | 60%                |
| DSM1-0311 |                        | 5                       | 20                     | 200  | 68%                |
| DSM1-0312 |                        | 9                       | 11                     | 111  | 66%                |
| DSM1-0313 |                        | 12                      | 8.3                    | 83   | 77%                |
| DSM1-0314 |                        | 15                      | 6.7                    | 67   | 73%                |
| DSM1-0321 |                        | ±5                      | 10                     | 100  | 70%                |
| DSM1-0323 |                        | ±12                     | 4.2                    | 42   | 74%                |
| DSM1-0324 |                        | ±15                     | 3.3                    | 33   | 77%                |
| DSM1-0510 | 5(4.5~5.5)             | 3.3                     | 30                     | 300  | 60%                |
| DSM1-0511 |                        | 5                       | 20                     | 200  | 68%                |
| DSM1-0512 |                        | 9                       | 11                     | 111  | 76%                |
| DSM1-0513 |                        | 12                      | 8.3                    | 83   | 78%                |
| DSM1-0514 |                        | 15                      | 6.7                    | 67   | 78%                |
| DSM1-0521 |                        | ±5                      | 10                     | 100  | 70%                |
| DSM1-0522 |                        | ±9                      | 5.5                    | 55   | 73%                |
| DSM1-0523 |                        | ±12                     | 4.2                    | 42   | 77%                |
| DSM1-0524 | ±15                    | 3.3                     | 33                     | 78%  |                    |
| DSM1-1210 | 12(10.8~13.2)          | 3.3                     | 30                     | 300  | 60%                |
| DSM1-1211 |                        | 5                       | 20                     | 200  | 68%                |
| DSM1-1212 |                        | 9                       | 11                     | 111  | 73%                |
| DSM1-1213 |                        | 12                      | 8.3                    | 83   | 80%                |
| DSM1-1214 |                        | 15                      | 6.7                    | 67   | 81%                |
| DSM1-1221 |                        | ±5                      | 10                     | 100  | 70%                |
| DSM1-1222 |                        | ±9                      | 5.5                    | 55   | 73%                |
| DSM1-1223 |                        | ±12                     | 4.2                    | 42   | 73%                |
| DSM1-1224 | ±15                    | 3.3                     | 33                     | 78%  |                    |
| DSM1-1510 | 15(13.5~16.5)          | 3.3                     | 30                     | 300  | 60%                |
| DSM1-1511 |                        | 5                       | 20                     | 200  | 70%                |
| DSM1-1512 |                        | 9                       | 11                     | 111  | 71%                |

**DSM-1 SERIES, 1WATT, 1KVDC, ISOLATED, UNREGULATED**

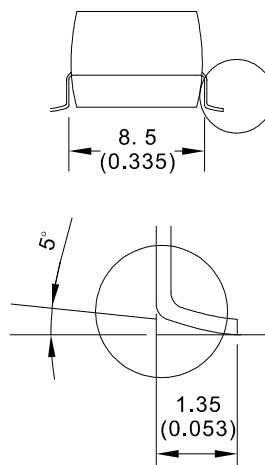
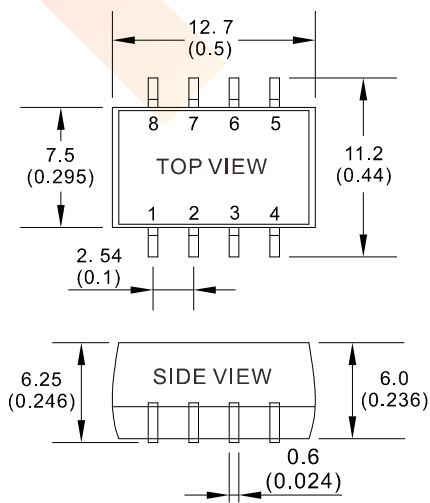
| Model     | Input voltage<br>(Vdc) | Output voltage<br>(Vdc) | Output current<br>(mA) |      | Efficiency<br>Typ. |
|-----------|------------------------|-------------------------|------------------------|------|--------------------|
|           |                        |                         | Min.                   | Max. |                    |
| DSM1-1513 | 15(13.5~16.5)          | 12                      | 8.3                    | 83   | 72%                |
| DSM1-1514 |                        | 15                      | 6.7                    | 67   | 72%                |
| DSM1-1521 |                        | ±5                      | 10                     | 100  | 70%                |
| DSM1-1524 |                        | ±15                     | 3.3                    | 33   | 78%                |

Notes: Other input and output models may available on request.

**ELECTRICAL**

|                             |                             |                 |
|-----------------------------|-----------------------------|-----------------|
| Line regulation             | ---                         | 1.2% max.       |
| Load regulation             | 10% ~ 100% full load        | 10%max.         |
| Isolation voltage           | Leakage current < 1mA/1min. | 1000Vdc min.    |
| Isolation resistance        | Test at 500VDC              | 1000mΩ min.     |
| Switching frequency         | ---                         | 100KHz typ.     |
| Ripple and noise            | Bend width 20MHz            | 75mVp-p max.    |
| Temperature coefficient     | Rated load                  | ±0.03%/°C max.  |
| Operating temperature range | ---                         | -40°C to +85°C  |
| Storage temperature range   | ---                         | -55°C to +125°C |
| Short circuit protection    | ---                         | 1S              |
| MTBF                        | ---                         | 3500KHrs        |
| Weight                      | ---                         | 1.4g            |

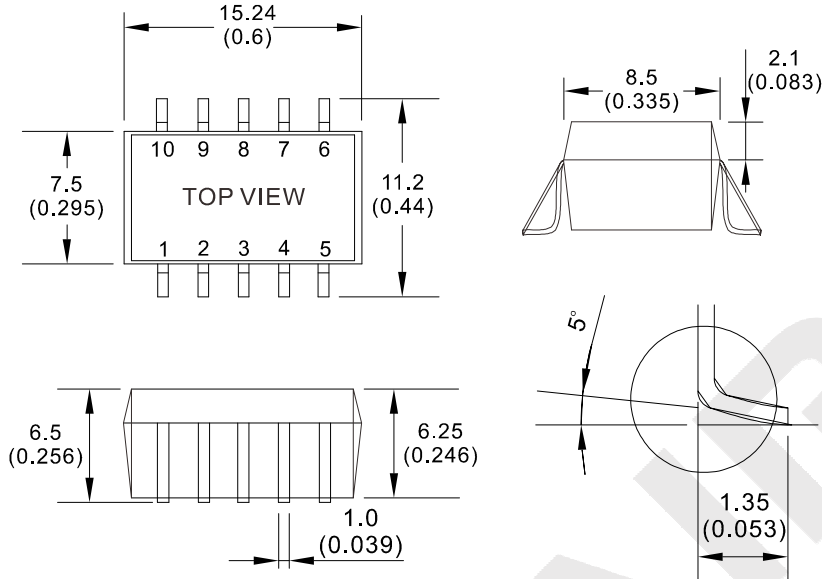
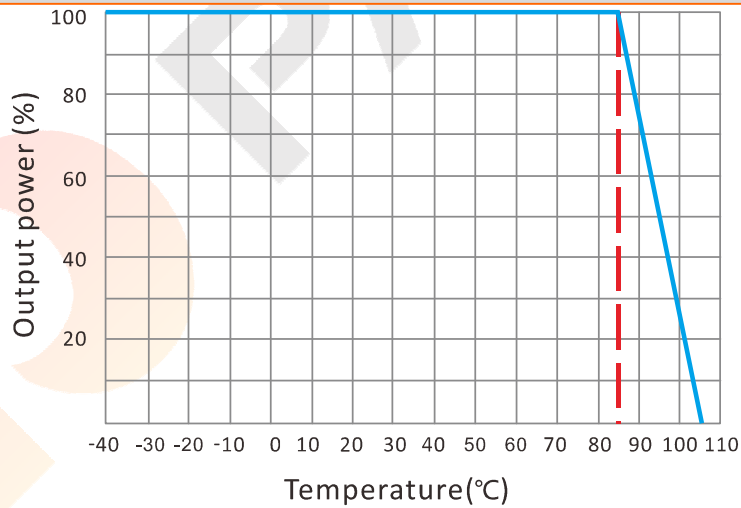
Notes: All the parameters are measured at 25°C ambient temperature, humidity < 75%, nominal input voltage, full load and after warm-up, unless otherwise specified.

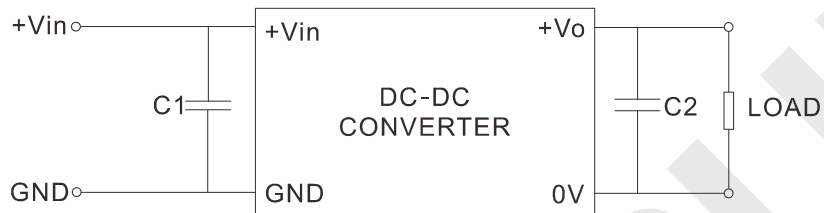
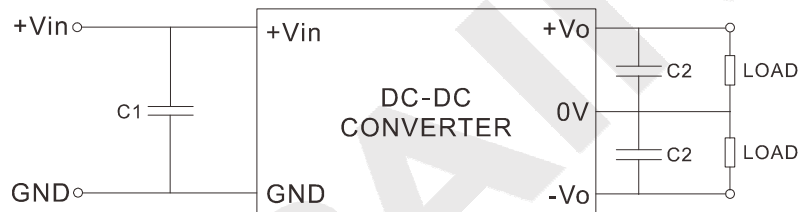
**MECHANICAL**
**Single output**

**CONNECTION**

| PIN # | SINGLE | DUAL |
|-------|--------|------|
| 1     | GND    | GND  |
| 2     | +Vin   | +Vin |
| 3     | NC     | NC   |
| 4     | 0V     | 0V   |
| 5     | +Vo    | -Vo  |
| 6     | NC     | NC   |
| 7     | NC     | +Vo  |
| 8     | NC     | NC   |

Note:

\* Unit is mm(inch).

**DSM-1 SERIES, 1WATT, 1KVDC, ISOLATED, UNREGULATED**
**MECHANICAL**
**Dual output**

**ELECTRICAL CURVE**


**DSM-1 SERIES, 1WATT, 1KVDC, ISOLATED, UNREGULATED**
**NOTE**
**RECOMMENDED TEST AND APPLICATION CIRCUIT**
**SINGLE OUTPUT**

**DUAL OUTPUT**

**CAPACITOR SELECTION**

| INPUT VOLTAGE | C1          | SINGLE OUTPUT | C2           | DUAL OUTPUT | C2           |
|---------------|-------------|---------------|--------------|-------------|--------------|
| 3.3VDC        | 4.7 $\mu$ F | 3.3VDC        | 10.0 $\mu$ F | $\pm$ 5VDC  | 10.0 $\mu$ F |
| 5VDC          | 4.7 $\mu$ F | 5VDC          | 10.0 $\mu$ F | $\pm$ 9VDC  | 4.7 $\mu$ F  |
| 12VDC         | 2.2 $\mu$ F | 9VDC          | 4.7 $\mu$ F  | $\pm$ 12VDC | 2.2 $\mu$ F  |
| 15VDC         | 2.2 $\mu$ F | 12VDC         | 2.2 $\mu$ F  | $\pm$ 15VDC | 1.0 $\mu$ F  |
| --            | --          | 15VDC         | 2.2 $\mu$ F  | --          | --           |