

DNV-10 SERIES, 10WATT, 2:1 INPUT RANGE

FEATURES:

- ✓ 1500Vac isolation voltage
- ✓ Six-side shielded metal case with low ripple and noise
- ✓ Over voltage, over current, short circuit protection
- ✓ Operating temperature range -40°C to +85°C
- ✓ 3 year warranty



| Model | Input voltage (Vdc) | Output voltage (Vdc) | Output current (mA) | Efficiency Typ. |
|-------------|---------------------|----------------------|---------------------|-----------------|
| DNV10-1211 | 12(9~18) | 3.3 | 3000 | 85% |
| DNV10-1212 | | 5.1 | 2000 | 87% |
| DNV10-1213 | | 12.1 | 800 | 87% |
| DNV10-1214 | | 15.1 | 700 | 89% |
| DNV10-1215 | | 24.2 | 400 | 89% |
| DNV10-2411 | 24(18~36) | 3.3 | 3000 | 87% |
| DNV10-2412 | | 5.1 | 2000 | 88% |
| DNV10-2413 | | 12.1 | 800 | 89% |
| DNV10-2414 | | 15.1 | 700 | 90% |
| DNV10-2415 | | 24.2 | 400 | 90% |
| DNV10-4811 | 48(36~72) | 3.3 | 3000 | 87% |
| DNV10-4812 | | 5.1 | 2000 | 89% |
| DNV10-4813 | | 12.1 | 800 | 89% |
| DNV10-4814 | | 15.1 | 700 | 90% |
| DNV10-4815 | | 24.2 | 400 | 90% |
| DNV10-11012 | 110(66~160) | 5.1 | 2000 | 89% |
| DNV10-11013 | | 12.1 | 800 | 89% |
| DNV10-11014 | | 15.1 | 700 | 90% |
| DNV10-11015 | | 24.2 | 400 | 90% |

Notes:

1. Other input and output models may available on request;
2. You may request for the models with heatsink, plus "R" in the suffix, e.g. DNV10-1211R.

ELECTRICAL

| | | |
|--------------------------------------------|----------------------------|---------------------|
| Output voltage accuracy | --- | ≤1% |
| Line regulation | Nominal Load, full voltage | ±0.2% max. |
| Load regulation | 20% ~ 100% rated load | ±0.5% max. |
| Dynamic response (transient/recovery time) | 5%-50%-75% load capability | ΔVo/Δt: ±5.0%/500μs |
| Ripple and noise | 20MHz BM, full load | 1% Vout max. |

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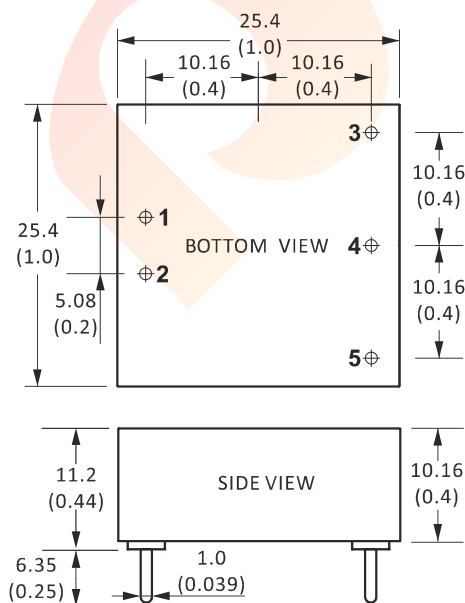
ELECTRICAL

| | | |
|--------------------------------------------|---------------------------------------|-------------------------------------------------|
| Isolation voltage ($<2\text{mA/min}$) | Input to output | 1500Vac |
| | Input to case | 1000Vac |
| | Output to case | 500Vac |
| Isolation resistance | 500Vdc | 20M Ω |
| Temperature coefficient | --- | $\pm 0.02\%/^{\circ}\text{C}$ max. |
| Operating temperature range | --- | -40°C to $+85^{\circ}\text{C}$ |
| Storage temperature range | --- | -45°C to $+120^{\circ}\text{C}$ |
| Over current protection | --- | Auto-recovery |
| Short circuit protection | --- | Continuous auto-recovery |
| Over voltage protection | --- | Auto-recovery |
| Relative humidity | --- | 10%-90% max. |
| Conducted emission | --- | CLASS A |
| MTBF | Bellcore TR-332, 25°C | 200KHrs |
| Weight | --- | 21g |

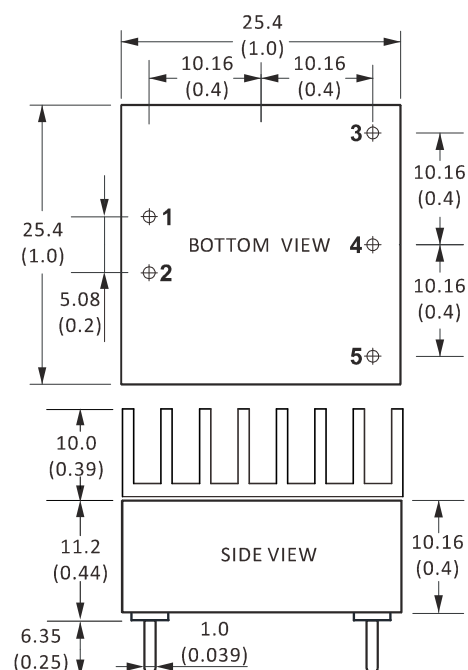
Notes: All the parameters are measured at 25°C ambient temperature, humidity $< 75\%$, nominal input voltage, full load and after warm-up, unless otherwise specified.

MECHANICAL

WITHOUT HEATSINK



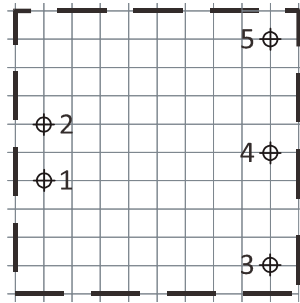
WITH HEATSINK



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MECHANICAL

PCB LAYOUT



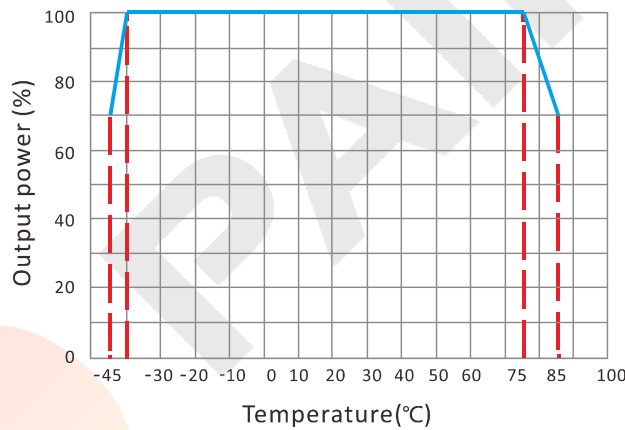
Unit : mm(inch)
PCB vertical view
Grid spacing: 2.54mm(0.1 inch)

CONNECTION

| PIN # | SINGLE |
|-------|--------|
| 1 | +Vin |
| 2 | -Vin |
| 3 | +Vo |
| 4 | No Pin |
| 5 | GND |

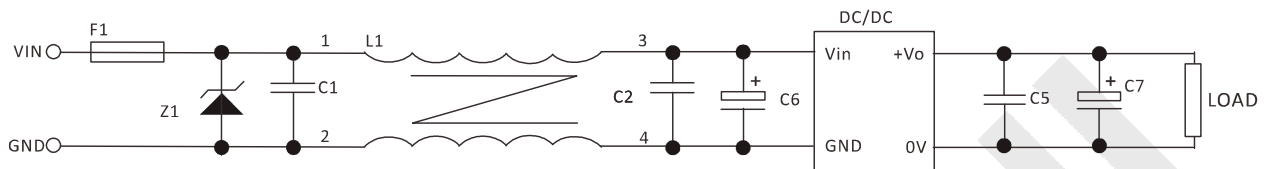
Note:
* Unit is mm(inch).

TEMPERATURE PROFILE



CAPACITIVE LOADS SELECTION

| Vout: 3.3V 5V | | Vout: 12V 5V | | Vout: 24V | |
|-------------------|------------|-------------------|------------|-------------------|------------|
| Recommended value | MAX. value | Recommended value | MAX. value | Recommended value | MAX. value |
| 10000µF | 15000µF | 1000µF | 2200µF | 470µF | 1000µF |

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NOTES
RECOMMENDED TEST AND APPLICATION CIRCUIT


1. TVS&FUSE will be helpful with over voltage protection and inrush limiting. Recommended FUSE should better be 1.5~2times of the rated current ;
2. The input filter capacitor C6 could select the aluminum electrolytic capacitors or tantalum capacitors, and the withstand voltage should be greater than the highest input voltage. Recommended capacitor should be between 22 μ F~100 μ F;
3. C1,C2 for the input filter capacitor, 0.1~1 μ F high-frequency ceramics capacitor or chip capacitor are recommended. The withstand voltage of output filter C5, C7 should be greater than the highest output voltage. Recommended capacitor of C7 should within 100 μ F and C5 connected with the chip to reduce the input voltage peak, recommended 0.1~1 μ F high-frequency ceramics capacitor or chip capacitor.