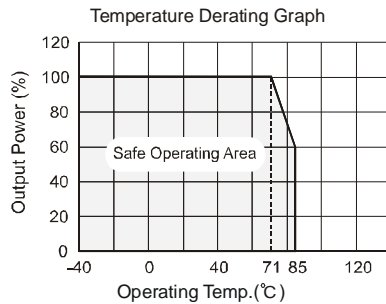


COMMON SPECIFICATIONS

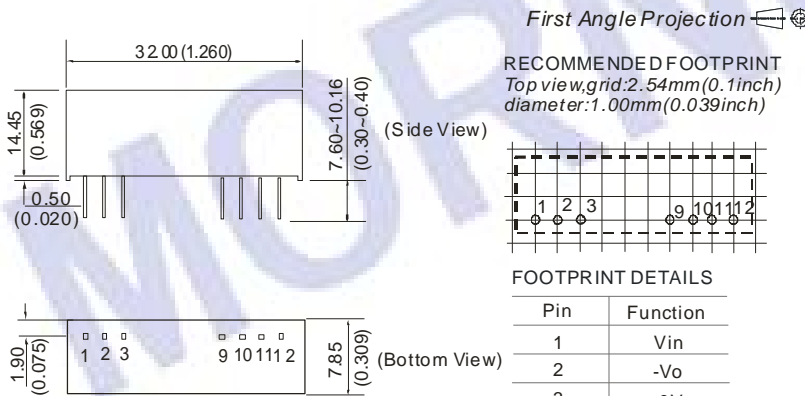
| Item | Test conditions | Min | Typ | Max | Units |
|---------------------------|--------------------------------|---------------------|-----|-----|---------|
| Storage humidity | | | | 95 | % |
| Operating temperature | | -25 | | 75 | °C |
| Storage temperature | | -45 | | 105 | |
| Temp.rise at full load | | | 20 | 30 | |
| Lead temperature | 1.5mm from case for 10 seconds | | | 300 | |
| Cooling | | Free air convection | | | |
| Case material | | Plastic (UL94-V0) | | | |
| Short circuit protection* | | | | 1 | S |
| MTBF | | 3500 | | | K hours |
| Weight | | | 6.3 | | g |

*Supply voltage must be discontinued at the end of short circuit duration.

TYPICAL CHARACTERISTICS



OUTLINE DIMENSIONS & PIN CONNECTIONS



Note:
 Unit: mm (inch)
 Pin section: 0.50 * 0.3 mm (0.020 * 0.012 inch)
 Pin section tolerances: ±0.10 mm (±0.004 inch)
 General tolerances: ±0.25 mm (±0.010 inch)

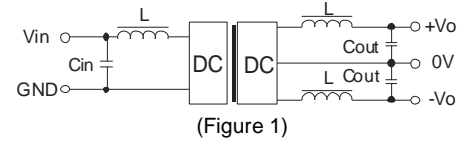
APPLICATION NOTE

Requirement on output load

To ensure this module can operate efficiently and reliably, During operation, the minimum output load is **not less than 10%** of the full load, and that **this product should never be operated under no load!** If the actual output power is very small, please connect a resistor with proper resistance at the output end in parallel to increase the load.

Recommended circuit

If you want to further decrease the input/output ripple, an "LC" filtering network may be connected to the input and output ends of the DC/DC converter, see (Figure 1).



It should also be noted that the inductance and the frequency of the "LC" filtering network should be staggered with the DC/DC frequency to avoid mutual interference. However, the capacitance of the output filter capacitor must be proper. If the capacitance is too big, a startup problem might arise. For every channel of output, provided the safe and reliable operation is ensured, the greatest capacitance of its filter capacitor sees (Table 1).

EXTERNAL CAPACITOR TABLE (Table 1)

| Vin (VDC) | Cin (uF) | Vout (VDC) | Cout (uF) |
|-----------|----------|------------|-----------|
| 5 | 4.7 | ±12 | 1 |
| 12 | 2.2 | ±15 | 0.47 |

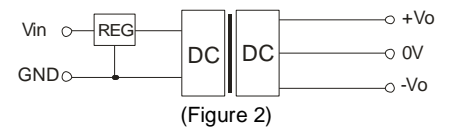
It's not recommend to connect any external capacitor in the application field with less than 0.5 watt output.

Overload Protection

Under normal operating conditions, the output circuit of these products has no protection against over-current and short-circuits. The simplest method is to connect a self-recovery fuse in series at the input end or add a circuit breaker to the circuit.

Input Over-voltage Protection Circuit

The simplest device for input over-voltage protection is a linear voltage regulator with overheat protection that is connected to the input end in series (Figure 2).



When the environment temperature is higher than 71°C, the product output power should be less then 60% of the rated power.

No parallel connection or plug and play.