

6W DC/DC Module power supply

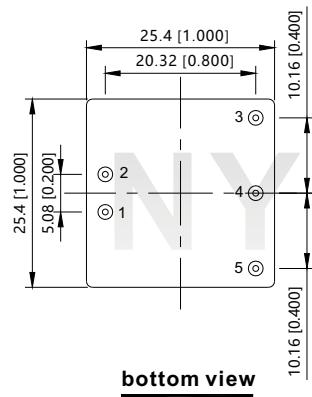


product property

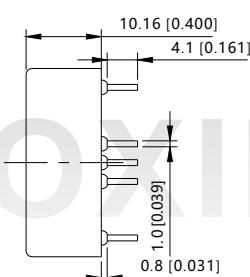
- ★ International standard pin mode
- ★ Output short-circuit protection, self-recovery
- ★ Isolation and pressure resistance 1500VDC
- ★ High efficiency, high power density, and low ripple noise
- ★ Industrial-grade product design, small volume
- ★ operating temperature range : -40~+85°C

V(U)RBxxYMD-6WR3 series----It is a 4 : 1 and 2:1 wide voltage input range, efficiency up to 88%, 1500VDC isolation voltage power module. This product is widely used in medical, industrial control, power, instrumentation, communication occasions and so on.

Figure of encapsulation size



bottom view



lateral view

| PIN | lateral view |
|-----|--------------|
| 1 | -Vi |
| 2 | +Vi |
| 3 | +Vo |
| 4 | NP |
| 5 | -Vo |

stakes:

Size unit: mm[inch]

Dimensional tolerance: ±0.5[±0.020]

NP: The pin is empty foot

product types choosing

| model | Input voltage range (VDC) | Output Voltage (VDC) | output current(mA) | productiveness(TYP) |
|-----------------|---------------------------|----------------------|--------------------|---------------------|
| VRB1203YMD-6WR3 | | 3.3V | 1500mA | 78% |
| VRB1205YMD-6WR3 | 9~18V | 5V | 1200mA | 79% |
| VRB1212YMD-6WR3 | (标称: 12VDC) | 12V | 500mA | 80% |
| VRB1215YMD-6WR3 | | 15V | 400mA | 81% |
| VRB1224YMD-6WR3 | | 24V | 250mA | 83% |
| VRB2403YMD-6WR3 | | 3.3V | 1500mA | 78% |
| VRB2405YMD-6WR3 | 18~36V | 5V | 1200mA | 79% |
| VRB2412YMD-6WR3 | (标称: 24VDC) | 12V | 500mA | 80% |
| VRB2415YMD-6WR3 | | 15V | 400mA | 81% |
| VRB2424YMD-6WR3 | | 24V | 250mA | 83% |
| VRB4803YMD-6WR3 | | 3.3V | 1500mA | 78% |
| VRB4805YMD-6WR3 | 36~75V | 5V | 1200mA | 79% |
| VRB4812YMD-6WR3 | (标称: 48VDC) | 12V | 500mA | 80% |
| VRB4815YMD-6WR3 | | 15V | 400mA | 81% |
| VRB4824YMD-6WR3 | | 24V | 250mA | 83% |

| | | | | |
|-----------------|--------|------|--------|-----|
| URB2403YMD-6WR3 | 9~36V | 3.3V | 1500mA | 78% |
| URB2405YMD-6WR3 | | 5V | 1200mA | 79% |
| URB2412YMD-6WR3 | | 12V | 500mA | 80% |
| URB2415YMD-6WR3 | | 15V | 400mA | 81% |
| URB2424YMD-6WR3 | | 24V | 250mA | 83% |
| URB4803YMD-6WR3 | 18~75V | 3.3V | 1500mA | 78% |
| URB4805YMD-6WR3 | | 5V | 1200mA | 79% |
| URB4812YMD-6WR3 | | 12V | 500mA | 80% |
| URB4815YMD-6WR3 | | 15V | 400mA | 81% |
| URB4824YMD-6WR3 | | 24V | 250mA | 83% |

output characteristic

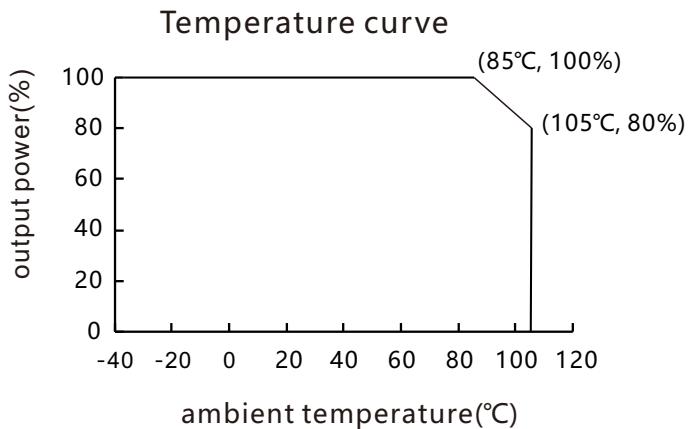
| project | going | Min | Typ | Max |
|----------------------------------|---------------------------------|-----|-------|-----------|
| output power | | 0 | -- | 6W |
| Output voltage accuracy | Input voltage range, 100% load | -- | ±2% | -- |
| voltage regulation | Under rated load, input voltage | -- | ±0.2% | -- |
| load regulation | ± 1% | -- | ±0.5% | -- |
| Output ripple noise ^① | 10% to 100% load | -- | 100mV | -- |
| Temperature drift coefficient | 20 MHz bandwidth (peak-peak) | -- | -- | ±0.03%/°C |

* pour:^①The test method of ripple noise adopts the parallel line test method, and please refer to the "DC-DC Module Power Supply Application Guide" for the specific operation method.

general characteristic

| project | going | Min | Typ | Max |
|------------------------------------|---------------------------------------|-------|----------------------|--------|
| Insulation and pressure resistance | Input-output, with a test time of 60s | -- | 1500VDC | -- |
| working temperature | | -40°C | -- | +85°C |
| Storage temperature | | -55°C | | +125°C |
| Store humidity | | -- | -- | 95%RH |
| switching frequency | | -- | 300KHz | -- |
| MTBF | MIL-HDBK-217F, 25°C | | 3500,000h | |
| Module shell material | | | Metal aluminum shell | |

Product performance curve



Refer to the scheme

- 1 Diagram representation of the typical application circuit

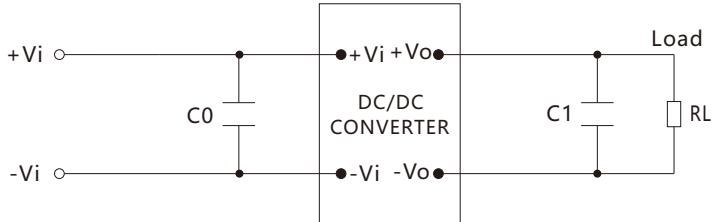


Figure [1] Typical application circuit

| input voltage | 12V | 24V | 48V |
|---------------|------|------|------|
| C0 | 10μF | 22μF | 47μF |

| output voltage | 3.3V | 5V | 12V | 15V | 24V |
|----------------|-------|-------|-------|-------|-------|
| C1 | 220μF | 220μF | 100μF | 100μF | 100μF |

Notes (Figure 1)

a. The external capacitor at the input or output end of the product is recommended. It is not recommended to use tantalum capacitors with ceramic capacitors or electrolytic capacitors, otherwise there is a certain risk of failure.

b. The product does not support output parallel power or hot swap use

Safety precautions and statements

- No power supply product shall exceed the rated output power, and shall not exceed the rated input voltage range;
- If the power supply product is multi-channel output, each output must be loaded at a proportional time;
- The power supply product without short circuit protection function shall not have the output terminal short circuit situation;
- If the definition of physical pin of the power supply product is inconsistent with the product selection manual, the definition of physical pin shall prevail;
- Do not transform our power supply products at will, and our company is not responsible for all the consequences caused by this;