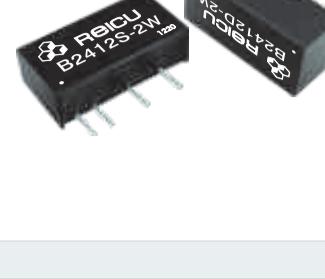


**Features**

- RoHS compliant
- Efficiency up to 83%
- 1kVDC Isolation
- Single output
- Short circuit protection( Suffix " R2 " only SIP,optional)
- Industry standard required
- Wide temperature performance at full 2 Watt load,-40° to 85°

**Model Selection Guide**

| Order Code      | Vin(V)  |           | Output |        | Max capacitive Load | Efficiency(%) (Typ) |
|-----------------|---------|-----------|--------|--------|---------------------|---------------------|
|                 | Nominal | Range     | Vo(V)  | Io(mA) |                     |                     |
| B0505S/D-2W(R2) | 5       | 4.5-5.5   | 5      | 400    | 330                 | 80                  |
| B0509S/D-2W(R2) |         |           | 9      | 222    | 220                 | 83                  |
| B0512S/D-2W(R2) |         |           | 12     | 167    | 220                 | 83                  |
| B0515S/D-2W(R2) |         |           | 15     | 133    | 220                 | 84                  |
| B0524S/D-2W(R2) |         |           | 24     | 83     | 150                 | 82                  |
| B1205S/D-2W(R2) |         |           | 5      | 400    | 330                 | 81                  |
| B1209S/D-2W(R2) |         |           | 9      | 222    | 220                 | 81                  |
| B1212S/D-2W(R2) |         |           | 12     | 167    | 220                 | 84                  |
| B1215S/D-2W(R2) |         |           | 15     | 133    | 220                 | 82                  |
| B1224S/D-2W(R2) |         |           | 24     | 83     | 150                 | 80                  |
| B2405S/D-2W(R2) | 24      | 21.6-26.4 | 5      | 400    | 330                 | 80                  |
| B2409S/D-2W(R2) |         |           | 9      | 222    | 220                 | 83                  |
| B2412S/D-2W(R2) |         |           | 12     | 167    | 220                 | 83                  |
| B2415S/D-2W(R2) |         |           | 15     | 133    | 220                 | 83                  |
| B2424S/D-2W(R2) |         |           | 24     | 83     | 150                 | 84                  |

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

**Input Characteristics**

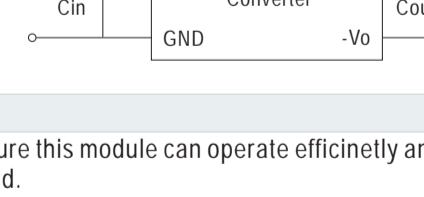
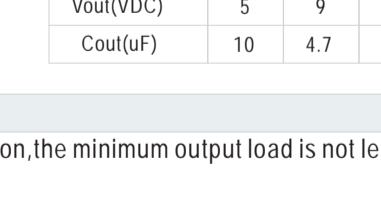
| Parameter                         | Condition         | Min  | Typ | Max                | Units |
|-----------------------------------|-------------------|------|-----|--------------------|-------|
| Input Surge Voltage (1 sec. Max.) | 3.3V Input Models | -0.7 | --  | 6                  | VDC   |
|                                   | 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**

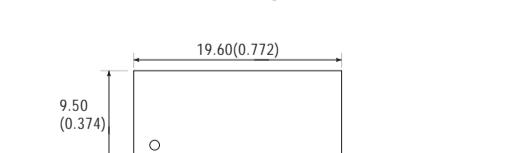
| Parameter                | Condition               | Min  | Typ | Max                           | Units |
|--------------------------|-------------------------|------|-----|-------------------------------|-------|
| Line regulation          | Vin change 1%           | ±1.2 | --  | ±1.5                          | %     |
| 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 |
| Short circuit Protection | Suffix " R2 "           |      |     | Continuous,Automatic Recovery |       |

**General Characteristics**

| Parameter             | Condition           | Min               | Typ | Max  | Units   |
|-----------------------|---------------------|-------------------|-----|------|---------|
| Operating Temperature | All output types    | -40               | --  | +85  |         |
| Storage               |                     | -55               | --  | +125 |         |
| Storage humidity      |                     | --                | --  | +95  | %       |
| Cooling               | Free air convection | --                | --  | --   |         |
| Isolation voltage     | 1mA 1minute         | 1000              | --  | --   | VDC     |
| Isolation resistance  | 500VDC              | 1000              | --  | --   | M       |
| Switching Frequency   |                     | --                | 100 | 110  | KHz     |
| MTBF                  |                     | $3.5 \times 10^6$ |     |      | 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**

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

**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 contact us.
3. Specifications subject to change without notice.

**Mechanical Dimension & Pin Connections**

## B\*\*\*\*S-2W



## B\*\*\*\*D-2W



| Pin      | 1   | 2   | 4   | 6   |
|----------|-----|-----|-----|-----|
| Function | Vin | GND | -Vo | +Vo |

Note:  
Unit:mm(inch)

| Pin      | 1   | 7  | 8   | 9   | 14  |
|----------|-----|----|-----|-----|-----|
| Function | GND | NC | -Vo | +Vo | Vin |