



## GS30T48-5

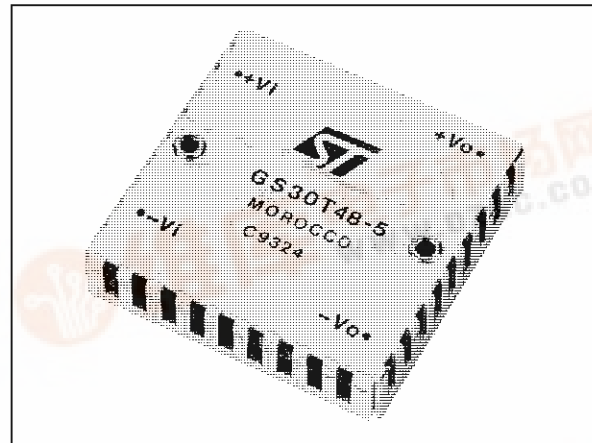
### 30 W DC-DC CONVERTER

| Type      | V <sub>in</sub> | V <sub>out</sub> | I <sub>out</sub> |
|-----------|-----------------|------------------|------------------|
| GS30T48-5 | 36 to 72 V      | 5 V              | 6 A              |

#### DESCRIPTION

The GS30T48-5 is a 30W DC-DC converter designed to provide a 5V/6A isolated power source.

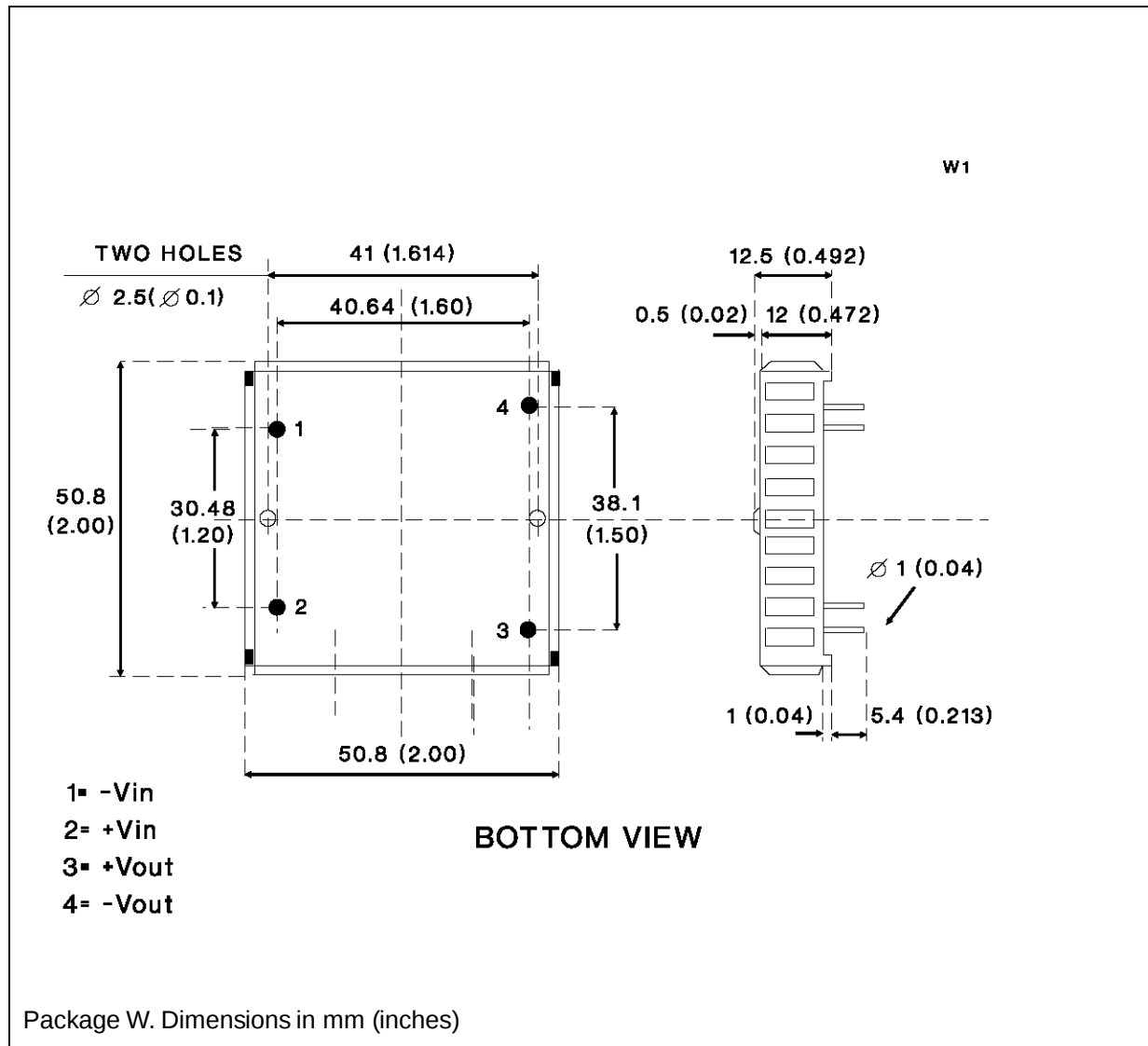
The module features a wide input voltage range (36 to 72V), low reflected input current and short-circuit protection.



#### ELECTRICAL CHARACTERISTICS (T<sub>amb.</sub> = 25° C unless otherwise specified)

| Symbol           | Parameter                        | Test Conditions                                              | Min  | Typ  | Max  | Unit |
|------------------|----------------------------------|--------------------------------------------------------------|------|------|------|------|
| V <sub>i</sub>   | Input Voltage                    | V <sub>o</sub> = 5V I <sub>o</sub> = 0.05 to 6A              | 36   | 48   | 72   | V    |
| I <sub>i</sub>   | Input Current                    | V <sub>i</sub> = 48V V <sub>o</sub> = 5V I <sub>o</sub> = 6A |      | 0.79 | 0.82 | A    |
| I <sub>ir</sub>  | Input Reflected Current          | V <sub>i</sub> = 48V V <sub>o</sub> = 5V I <sub>o</sub> = 6A |      | 250  | 300  | mApp |
| I <sub>inr</sub> | Input Inrush Current             | V <sub>i</sub> = 48V V <sub>o</sub> = 5V I <sub>o</sub> = 6A |      | 18   | 22   | Ap   |
| I <sub>isc</sub> | Input Shortcircuit Current       | V <sub>i</sub> = 48V V <sub>o</sub> = 0V                     |      | 45   | 70   | mA   |
| V <sub>o</sub>   | Output Voltage                   | V <sub>i</sub> = 36 to 72V I <sub>o</sub> = 0.05 to 6A       | 4.75 | 5.00 | 5.25 | V    |
| V <sub>or</sub>  | Output Ripple Voltage            | V <sub>i</sub> = 48V V <sub>o</sub> = 5V I <sub>o</sub> = 6A |      | 150  | 200  | mVpp |
| δV <sub>o</sub>  | Line Regulation                  | V <sub>i</sub> = 36 to 72V I <sub>o</sub> = 6A               |      | 2    | 10   | mV   |
| δV <sub>o</sub>  | Load Regulation                  | V <sub>i</sub> = 48V I <sub>o</sub> = 0.05 to 6A             |      | 2    | 10   | mV   |
| I <sub>o</sub>   | Output Current                   | V <sub>i</sub> = 36 to 72V V <sub>o</sub> = 5V               | 0.05 |      | 6    | A    |
| I <sub>osc</sub> | Output Short-circuit Current     | V <sub>i</sub> = 48V V <sub>o</sub> = 0V                     |      | 0.85 | 1.1  | A    |
| V <sub>is</sub>  | Isolation Voltage                |                                                              | 500  |      |      | Vdc  |
| f <sub>s</sub>   | Switching Frequency              | V <sub>i</sub> = 36 to 72V I <sub>o</sub> = 0.05 to 6A       |      | 450  |      | kHz  |
| η                | Efficiency                       | V <sub>i</sub> = 48V V <sub>o</sub> = 5V I <sub>o</sub> = 6A | 77   | 80   |      | %    |
| R <sub>th</sub>  | Thermal Resistance               | Case-to-Ambient                                              |      | 13   |      | °C/W |
| T <sub>cop</sub> | Operating Case Temperature Range |                                                              | 0    |      | +85  | °C   |
| T <sub>stg</sub> | Storage Temperature Range        |                                                              | -20  |      | +105 | °C   |

## CONNECTION DIAGRAM AND MECHANICAL DATA



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