SGS-THOMSON MICROELECTRONICS

# GS1T5-5D15

## 1 W TRIPLE OUTPUT DC-DC CONVERTER

| Type | $V_i$ | $V_o$ | $I_o$ |
|---|---|---|---|
| GS1T5-5D15 | 5 V | + 5 V | + 20 mA |
| | | + 15 V | + 15 mA |
| | | – 15 V | – 15 mA |


### DESCRIPTION

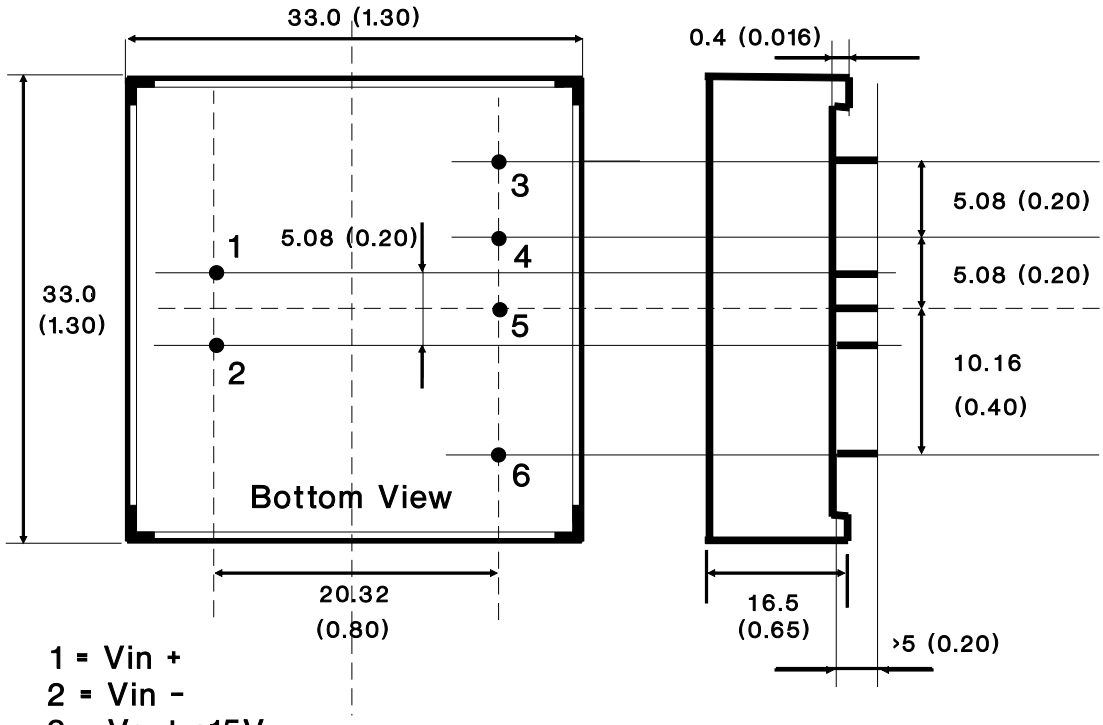
The GS1T5-5D15 is a 0.6W DC-DC converter designed to provide an isolated 5V/20mA, +15V/15mA and -15V/15mA power source.

The module operates from a 5V input source and offers 2500$V_{DC}$ isolation.

**ELECTRICAL CHARACTERISTICS** ($T_{amb.}$= 25° C unless otherwise specified)

| Symbol | Parameter | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| $V_i$ | Input Voltage | $V_{o1}$ = +5V $I_{o1}$ = 3 to 20mA<br>$V_{o2}$ = +15V $I_{o2}$ = 5 to 15mA<br>$V_{o3}$ = – 15V $I_{o2}$ = – 5 to – 15mA | 4.7 | 5.0 | 5.3 | V |
| $I_{ir}$ | Input Reflected Current | $V_i$ = 4.7 to 5.3V Full Load | | | 10 | mApp |
| $V_{o1}$ | Output Voltage 1 | $V_i$ = 4.7 to 5.3V $I_{o1}$ = 3 to 20mA | 4.75 | 5.00 | 5.25 | V |
| $V_{o2}$ | Output Voltage 2 | $V_i$ = 4.7 to 5.3V $I_{o2}$ = 5 to 15mA | 14.25 | 15.00 | 15.75 | V |
| $V_{o3}$ | Output Voltage 3 | $V_i$ = 4.7 to 5.3V $I_{o3}$ = – 5 to – 15mA | – 14.25 | – 15.00 | – 15.75 | V |
| $I_{o1}$ | Output Current 1 | $V_i$ = 4.7 to 5.3V $V_{o1}$ = 5V | 3 | | 20 | mA |
| $I_{o2}$ | Output Current 2 | $V_i$ = 4.7 to 5.3V $V_{o2}$ = +15V | 5 | | 15 | mA |
| $I_{o3}$ | Output Current 3 | $V_i$ = 4.7 to 5.3V $V_{o3}$ = – 15V | – 5 | | – 15 | mA |
| $V_{or1}$ | Output Ripple Voltage 1 | $V_i$= 4.7 to 5.3V $I_{o1}$= 20mA | | | 30 | mVpp |
| $V_{or2}$ | Output Ripple Voltage 2 | $V_i$ = 4.7 to 5.3V $I_{o2}$ = 15mA | | | 70 | mVpp |
| $V_{or3}$ | Output Ripple Voltage 3 | $V_i$ = 4.7 to 5.3V $I_{o3}$ = – 15mA | | | 70 | mVpp |
| $V_{is}$ | Isolation voltage | | 2500 | | | Vdc |
| $\eta$ | Efficiency | $V_i$ = 5V Full Load | 68 | 73 | | % |
| $f_S$ | Switching Frequency | $V_i$ = 5V Full Load | | 150 | | kHz |
| Top | Operating Ambient Temperature Range | | 0 | | +80 | °C |
| Tstg | Storage Temperature Range | | – 40 | | +85 | °C |

## CONNECTION DIAGRAM AND MECHANICAL DATA




Package C. Dimensions in mm (inches)