

DESCRIPTION

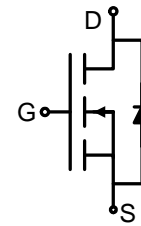
The TCS4400 uses advanced trench technology to provide excellent $R_{DS(ON)}$, low gate charge and operation with gate voltages as low as 2.5V. This device is suitable for use as a Battery protection or in other Switching application.

GENERAL FEATURES

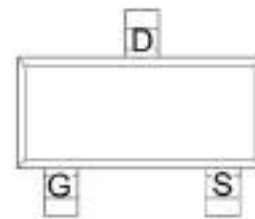
- $V_{DS} = 40V, I_D = 3A$
 $R_{DS(ON)} < 45m\Omega @ V_{GS} = 10V$
- High Power and current handling capability
- Lead free product is acquired
- Surface Mount Package

Application

- Battery Switch
- DC/DC Converter



Schematic diagram



Marking and pin Assignment



SOT-23 top view

Absolute Maximum Ratings (TA=25°C unless otherwise noted)

| Parameter | Symbol | Limit | Unit |
|--|----------------|------------|------|
| Drain-Source Voltage | V_{DS} | 40 | V |
| Gate-Source Voltage | V_{GS} | ± 20 | V |
| Drain Current-Continuous | I_D | 3 | A |
| Drain Current-Pulsed (Note 1) | I_{DM} | 10 | A |
| Maximum Power Dissipation | P_D | 1.7 | W |
| Operating Junction and Storage Temperature Range | T_J, T_{STG} | -55 To 150 | °C |

Thermal Characteristic

| | | | |
|--|-----------------|------|------|
| Thermal Resistance, Junction-to-Ambient (Note 2) | $R_{\theta JA}$ | 73.5 | °C/W |
|--|-----------------|------|------|

Electrical Characteristics (TA=25°C unless otherwise noted)

| Parameter | Symbol | Condition | Min | Typ | Max | Unit |
|---------------------------------|------------|-------------------------------|-----|-----|-----|---------|
| Off Characteristics | | | | | | |
| Drain-Source Breakdown Voltage | BV_{DSS} | $V_{GS} = 0V, I_D = 250\mu A$ | 40 | - | - | V |
| Zero Gate Voltage Drain Current | I_{DSS} | $V_{DS} = 40V, V_{GS} = 0V$ | - | - | 1 | μA |