# TCS1135

P-Channel Enhancement Mode Power MOSFET

## Description

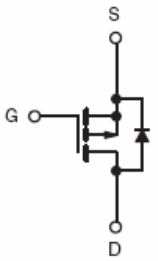
The TCS1135 uses advanced trench technology to provide excellent $R_{DS(ON)}$, low gate charge and operation with gate voltages as low as 4.5V. This device is suitable for use as a load switch or in PWM applications.

## General Features

- $V_{DS}$ = -30V,$I_D$ = -35A
  $R_{DS(ON)}$ < 12mΩ @ $V_{GS}$=-10V
  $R_{DS(ON)}$ < 16mΩ @ $V_{GS}$=-4.5V
- High Power and current handing capability
- Lead free product is acquired
- Surface mount package

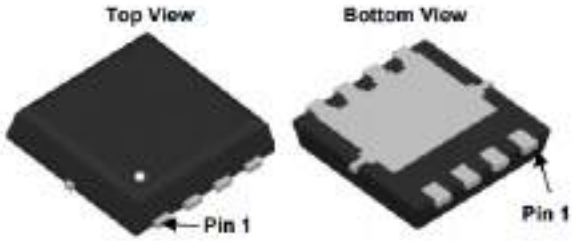
## Application

- PWM applications
- Load switch
- Power management




**Schematic diagram**


**Marking and Pin Assignment**




**PDFN3.3x3.3-8L**

## Absolute Maximum Ratings ($T_A$=25℃unless otherwise noted)

| Parameter | Symbol | Limit | Unit |
|---|---|---|---|
| Drain-Source Voltage | $V_{DS}$ | -30 | V |
| Gate-Source Voltage | $V_{GS}$ | ±20 | V |
| Drain Current-Continuous, $T_C$=25℃ | $I_D$ | -35 | A |
| Drain Current-Pulsed (Note 1) | $I_{DM}$ | -90 | A |
| Drain Current-Continuous, $T_A$=25℃ | $I_{DSM}$ | -13 | A |
| Maximum Power Dissipation, $T_A$=25℃ | $P_{DSM}$ | 3.1 | W |
| Maximum Power Dissipation, $T_C$=25℃ | $P_D$ | 29 | W |
| Operating Junction and Storage Temperature Range | $T_J$,$T_{STG}$ | -55 To 150 | ℃ |

## Thermal Characteristic

| | | | |
|---|---|---|---|
| Thermal Resistance,Junction-to-Ambient (Note 2) | $R_{\theta JA}$ | 40 | ℃/W |
| Thermal Resistance,Junction-to-Case, Steady State | $R_{\theta JC}$ | 4.2 | ℃/W |