

30V P-Channel MOSFETs

General Description

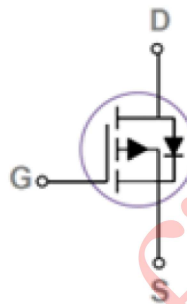
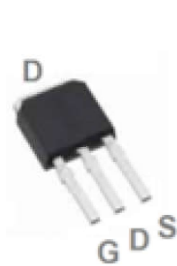
These P-Channel enhancement mode power field effect transistors are using trench DMOS technology. This advanced technology is designed to minimize on-state resistance, provide superior switching performance, and withstand high energy pulse in the avalanche period. These devices are well suited for high efficiency fast switching applications.

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
-30V	10.8m Ω	-55A

Features

- Fast switching
- Improved dv/dt capability
- Green Device Available

TO-251 Pin Configuration



Applications

- MB / VGA / Vcore
- POL Applications
- Load Switch
- LED Application

Absolute Maximum Ratings ($T_J=25^\circ\text{C}$, unless otherwise noted)

Symbol	Parameter		Value	Unit
V_{DS}	Drain-Source Voltage		-30	V
V_{GS}	Gate-Source Voltage		± 20	
I_D	Drain Current-Continuous ^A	$T_C = 25^\circ\text{C}$	-55	A
		$T_C = 100^\circ\text{C}$	-34	
		$T_A = 25^\circ\text{C}$	-10	
		$T_A = 70^\circ\text{C}$	-8	
I_{DM}	Drain Current-Pulsed ^{A, B}	$T_A = 25^\circ\text{C}$	-40	
I_{AS}	Non-repetitive Avalanche Current ^E		-50	
E_{AS}	Single Pulse Drain-to-Source Avalanche Energy ^E		125	mJ
P_D	Maximum Power Dissipation	$T_A = 25^\circ\text{C}$	2.0	W
T_J, T_{STG}	Operating and Storage Temperature Range		-55 to +150	$^\circ\text{C}$

Thermal Characteristics

Symbol	Parameter	Conditions	Value	Unit
$R_{\theta JA}$	Junction-to-Ambient ^C	Steady State	62.5	$^\circ\text{C/W}$
$R_{\theta JC}$	Junction-to-Case ^C	Steady State	2.1	$^\circ\text{C/W}$