X3N0125P1

30V N-Channel MOSFETs

General Description

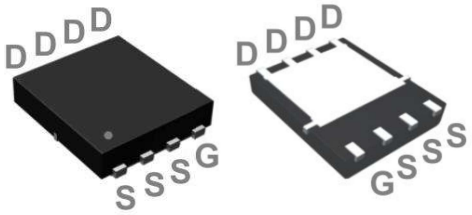
These N-Channel enhancement mode power field effect transistors are using trench DMOS technology. This advanced technology is designed to minimize on-state resistance, provide superior switching performance, and withstand high energy pulse in the avalanche period. These devices are well suited for high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

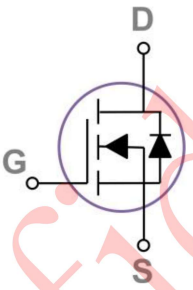
$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
30V	7.2mΩ	65A

Features

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

Power PAK 5060 Pin Configuration





Applications

- MB / VGA / Vcore
- POL Applications
- SMPS 2nd SR

Absolute Maximum Ratings (T_J=25°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°C	65	A
		T_C = 100°C	41	
I_{DM}	Drain Current-Pulsed [A,B]		260	
I_{AS}	Non-repetitive Avalanche Current [E]		30	
E_{AS}	Single Pulse Drain-to-Source Avalanche Energy [E]		45	mJ
P_D	Maximum Power Dissipation	T_C = 25°C	54	W
T_J, T_{STG}	Operating and Storage Temperature Range		-55 to +150	°C

Thermal Characteristics

Symbol	Parameter	Conditions	Value	Unit
$R_{\theta JA}$	Junction-to-Ambient [C]	Steady State	62	°C/W
$R_{\theta JC}$	Junction-to-Case	Steady State	2.3	°C/W