X3N7R93P-A

30V N-Channel MOSFETs

General Description

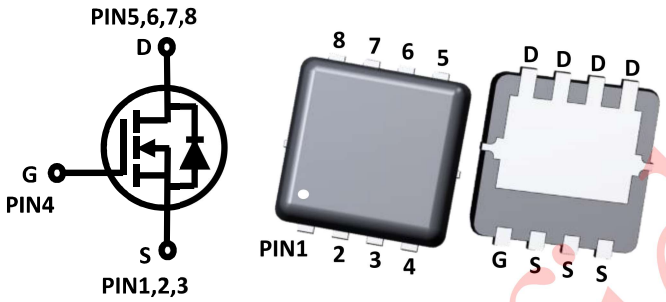
These N-Channel enhancement mode power field effect transistors are using trench - technology. This advanced technology is designed to minimize on-state resistance, provide superior switching performance, and withstand high energy pulse in the avalanche period. These devices are well suited for high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

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
30V	7.9mΩ	39A

Features

- Advanced Trench Process
- Low-$R_{DS(ON)}$
- Low Gate Charge

Power PAK 3333 Pin Configuration



Applications

- Load Switch
- Switching Power Supplies
- General Purpose Applications

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_A = 25°C	14	A
		T_A = 70°C	11	
		T_C = 25°C	39	
		T_C = 100°C	25	
I_{DM}	Drain Current-Pulsed [A, B]	T_A = 25°C	140	
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_A = 25°C	3.0	W
		T_C = 25°C	22.3	
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	40	°C/W
$R_{\theta JC}$	Junction-to-Case	Steady State	5.6	°C/W