PS3N9R45PM

30V N-Channel MOSFET

General Description

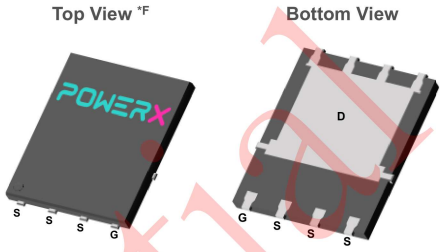
This MOSFET developed through advanced trench technology, is designed to minimize on-state resistance, thereby making it suitable for power management and load switching in commercial applications.

$V_{(BR)DSS}$	$R_{DS(ON)}$ MAX	ID
30 V	5.75 mΩ@10 V	61 A
	9.4 mΩ@4.5 V	

Features

- Low $R_{DS(on)}$
- Low Capacitance
- Low Gate Charge
- RoHS Compliant and Halogen-free

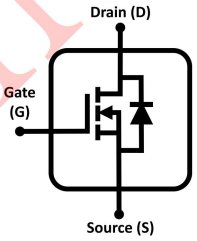
PPAK5X6



Applications

- Load Switch
- DC-DC Converters
- Synchronous Rectification
- Voltage Regulator Components

Pin Configuration



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	19	A
		T_A=70 °C	15	
		T_C=25 °C	61	
		T_C=100 °C	38	
I_{DM}	Drain Current-Pulsed *A,B	T_A=25°C	120	A
I_{AS}	Non-repetitive Avalanche Current *E		19.9	A
E_{AS}	Single Pulse Drain-to-Source Avalanche Energy *E		19.9	mJ
P_D	Maximum Power Dissipation	T_A=25 °C	3.6	W
		T_C=25 °C	33.8	
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	35	°C/W
$R_{\theta JC}$	Junction-to-Case	Steady State	3.7	°C/W