

IRL3302SPbF

HEXFET® Power MOSFET

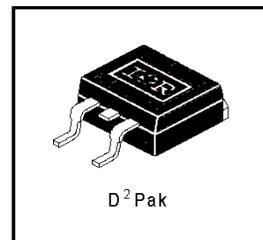
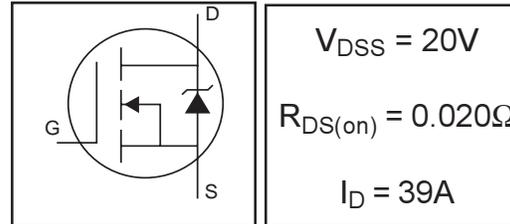
- Advanced Process Technology
- Surface Mount
- Optimized for 4.5V-7.0V Gate Drive
- Ideal for CPU Core DC-DC Converters
- Fast Switching

- Lead-Free

Description

These HEXFET Power MOSFETs were designed specifically to meet the demands of CPU core DC-DC converters. Advanced processing techniques combined with an optimized gate oxide design results in a die sized specifically to offer maximum efficiency at minimum cost.

The D²Pak is a surface mount power package capable of accommodating die sizes up to HEX-4. It provides the highest power capability and the lowest possible on-resistance in any existing surface mount package. The D²Pak is suitable for high current applications because of its low internal connection resistance and can dissipate up to 2.0W in a typical surface mount application.



Absolute Maximum Ratings

	Parameter	Max.	Units
$I_D @ T_C = 25^\circ\text{C}$	Continuous Drain Current, $V_{GS} @ 4.5\text{V}^{\text{③}}$	39	A
$I_D @ T_C = 100^\circ\text{C}$	Continuous Drain Current, $V_{GS} @ 4.5\text{V}^{\text{③}}$	25	
I_{DM}	Pulsed Drain Current ①③	160	
$P_D @ T_C = 25^\circ\text{C}$	Power Dissipation	57	W
	Linear Derating Factor	0.45	W/°C
V_{GS}	Gate-to-Source Voltage	± 10	V
E_{AS}	Single Pulse Avalanche Energy②③	130	mJ
I_{AR}	Avalanche Current①	23	A
E_{AR}	Repetitive Avalanche Energy①	5.7	mJ
dv/dt	Peak Diode Recovery dv/dt ③⑤	5.0	V/ns
T_J	Operating Junction and	-55 to + 150	°C
T_{STG}	Storage Temperature Range		
	Soldering Temperature, for 10 seconds		

Thermal Resistance

	Parameter	Typ.	Max.	Units
R_{gJC}	Junction-to-Case	---	2.2	°C/W
R_{gJA}	Junction-to-Ambient (PCB Mounted, steady-state)**	---	40	