International
IOR Rectifier

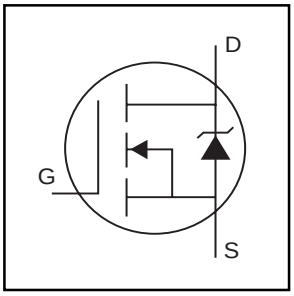
PD - 9.1362A

PRELIMINARY

IRFI520N

HEXFET® Power MOSFET

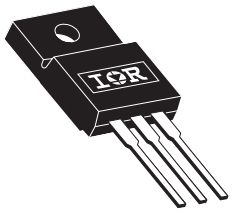
- Advanced Process Technology
- Isolated Package
- High Voltage Isolation = 2.5KVRMS ⑤
- Sink to Lead Creepage Dist. = 4.8mm
- Fully Avalanche Rated



V_{DSS} = 100V

$R_{DS(on)}$ = 0.20Ω

I_D = 7.6A



TO-220 FULLPAK

Description

Fifth Generation HEXFETs from International Rectifier utilize advanced processing techniques to achieve the lowest possible on-resistance per silicon area. This benefit, combined with the fast switching speed and ruggedized device design that HEXFET Power MOSFETs are well known for, provides the designer with an extremely efficient device for use in a wide variety of applications.

The TO-220 Fullpak eliminates the need for additional insulating hardware in commercial-industrial applications. The moulding compound used provides a high isolation capability and a low thermal resistance between the tab and external heatsink. This isolation is equivalent to using a 100 micron mica barrier with standard TO-220 product. The Fullpak is mounted to a heatsink using a single clip or by a single screw fixing.

Absolute Maximum Ratings

	Parameter	Max.	Units
I_D @ T_C = 25°C	Continuous Drain Current, V_{GS} @ 10V	7.6	A
I_D @ T_C = 100°C	Continuous Drain Current, V_{GS} @ 10V	5.3	
I_{DM}	Pulsed Drain Current ①⑥	38	
P_D @T_C = 25°C	Power Dissipation	30	W
	Linear Derating Factor	0.20	W/°C
V_{GS}	Gate-to-Source Voltage	±20	V
E_{AS}	Single Pulse Avalanche Energy ②⑥	91	mJ
I_{AR}	Avalanche Current①⑥	5.7	A
E_{AR}	Repetitive Avalanche Current①	3.0	mJ
dv/dt	Peak Diode Recovery dv/dt ③⑥	5.0	V/ns
T_J	Operating Junction and	-55 to + 175	°C
T_{STG}	Storage Temperature Range		
	Soldering Temperature, for 10 seconds	300 (1.6mm from case)	
	Mounting torque, 6-32 or M3 screw.	10 lbf•in (1.1N•m)	

Thermal Resistance

	Parameter	Min.	Typ.	Max.	Units
$R_{\theta JC}$	Junction-to-Case	——	——	5.0	°C/W
$R_{\theta JA}$	Junction-to-Ambient	——	——	65	