

# Isc N-Channel MOSFET Transistor

# IPB020N10N5LF

## • FEATURES

- With To-263(D2PAK) package
- Low input capacitance and gate charge
- Low gate input resistance
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • APPLICATIONS

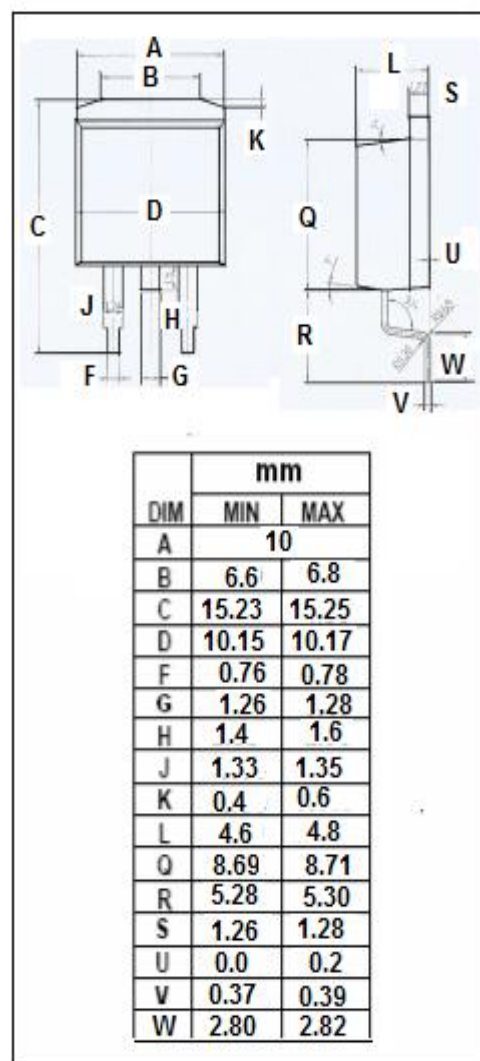
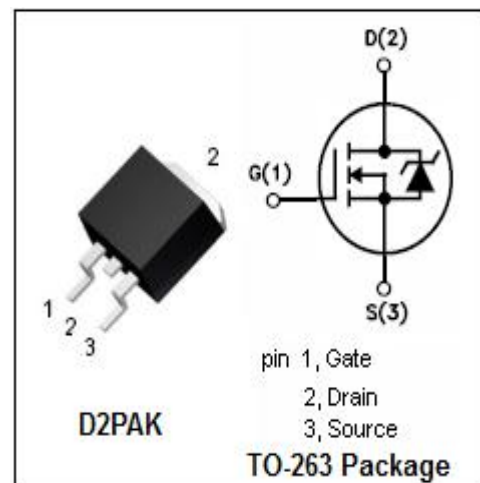
- Switching applications

## • ABSOLUTE MAXIMUM RATINGS( $T_a=25^{\circ}\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DS}$	Drain-Source Voltage	100	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous $T_c=25^{\circ}\text{C}$ $T_c=100^{\circ}\text{C}$	120	A
$I_{DM}$	Drain Current-Single Pulsed	480	A
$P_D$	Total Dissipation @ $T_c=25^{\circ}\text{C}$	313	W
$T_{ch}$	Max. Operating Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^{\circ}\text{C}$

## • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	0.4	$^{\circ}\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	40	$^{\circ}\text{C/W}$



**Isc N-Channel MOSFET Transistor****IPB020N10N5LF****ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=1mA$	100			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=5V; I_D=0.27mA$	2.5		4.1	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=100A$		1.8	2	$m\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 20V; V_{DS}=0V$			$\pm 0.1$	$\mu A$
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=100V; V_{GS}=0V; T_j=25^{\circ}\text{C}$ $V_{DS}=100V; V_{GS}=0V; T_j=125^{\circ}\text{C}$			10 100	$\mu A$
$V_{SDF}$	Diode forward voltage	$I_{SD}=100A, V_{GS}=0V$		0.89	1.2	V

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