

## isc N-Channel MOSFET Transistor

IPA180N10N3, IIPA180N10N3

## • FEATURES

- Low drain-source on-resistance:  
 $R_{DS(on)} \leq 18m\Omega$  (max)
- Enhancement mode
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • DESCRIPTION

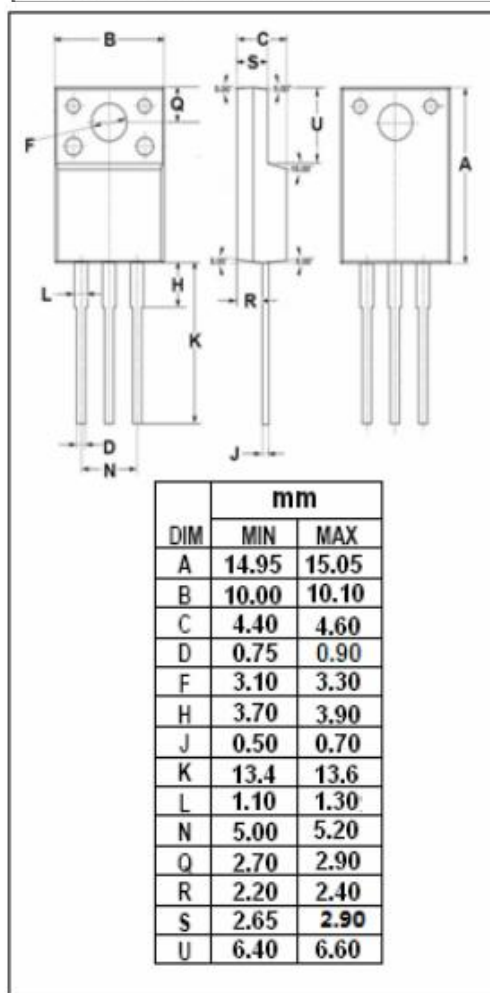
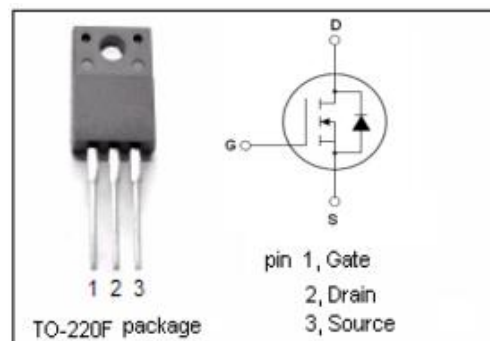
- It is intended for general purpose switching applications

• 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	28	A
$I_{DM}$	Drain Current-Single Pulsed	112	A
$P_D$	Total Dissipation @ $T_c=25^\circ\text{C}$	30	W
$T_j$	Max. Operating Junction Temperature	175	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~175	$^\circ\text{C}$

## • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	5.0	$^\circ\text{C/W}$



**isc N-Channel MOSFET Transistor****IPA180N10N3,IIPA180N10N3****ELECTRICAL CHARACTERISTICS****T<sub>c</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V; I <sub>D</sub> =1mA	100			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> =35uA	2.0		3.5	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> =10V; I <sub>D</sub> =28A			18	mΩ
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = 20V; V <sub>DS</sub> = 0V			100	nA
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> =100V; V <sub>GS</sub> = 0V V <sub>DS</sub> =100V; V <sub>GS</sub> = 0V; T <sub>j</sub> =125°C			1 100	μA
V <sub>SD</sub>	Diode forward voltage	I <sub>DR</sub> =28A, V <sub>GS</sub> = 0 V			1.2	V

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