

# isc N-Channel MOSFET Transistor IPD180N10N3, IIPD180N10N3

## • FEATURES

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

## • DESCRIPTION

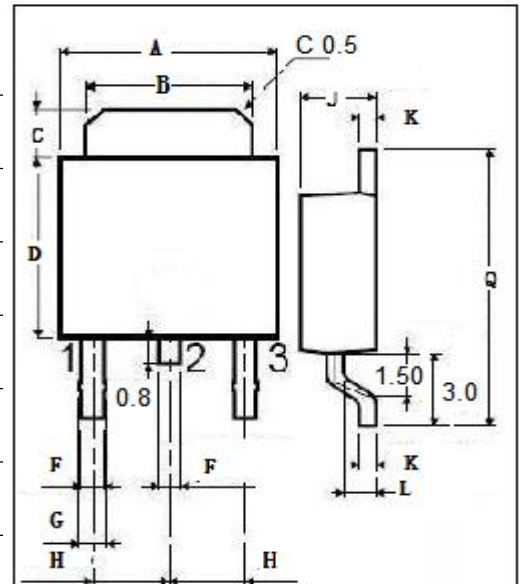
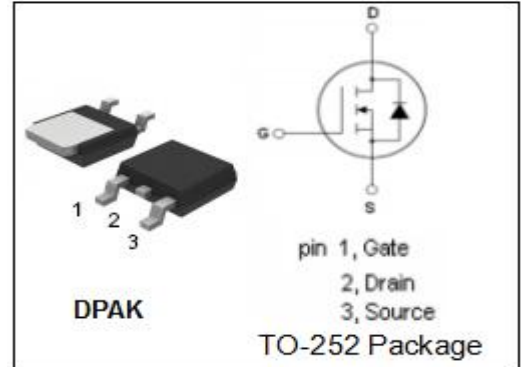
- High frequency switching

## • 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	43	A
$I_{DM}$	Drain Current-Single Pulsed	172	A
$P_D$	Total Dissipation @ $T_c=25^\circ\text{C}$	71	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
$R_{th(j-c)}$	Channel-to-case thermal resistance	2.1	$^\circ\text{C/W}$
$R_{th(j-a)}$	Channel-to-ambient thermal resistance	75	$^\circ\text{C/W}$



DIM	mm	
	MIN	MAX
A	6.40	6.60
B	5.20	5.40
C	1.15	1.35
D	5.70	6.10
F	0.65	
G	0.75	
H	2.10	2.50
J	2.10	2.40
K	0.40	0.60
L	0.90	1.10
Q	9.90	10.1

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### 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	$V_{DS}=V_{GS}; I_D=33\mu A$	2		3.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=33A$			18	$m\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=20V$			0.1	$\mu A$
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=100V; V_{GS}=0V$			1	$\mu A$
$V_{SD}$	Diode forward voltage	$I_F=33A, V_{GS}=0V$			1.2	V

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