

# Isc N-Channel MOSFET Transistor

# IXTK102N30P

### • FEATURES

- With To-3PL 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

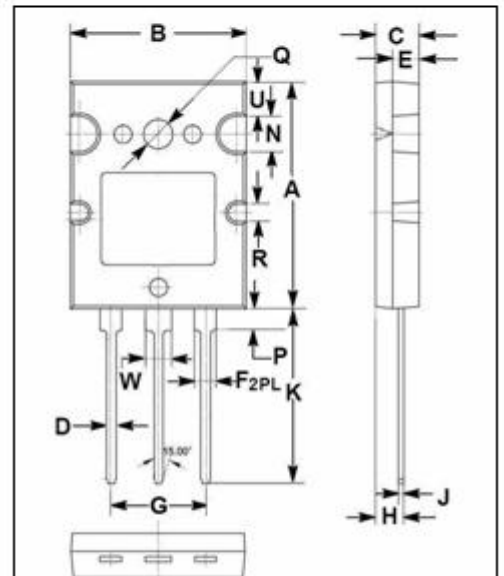
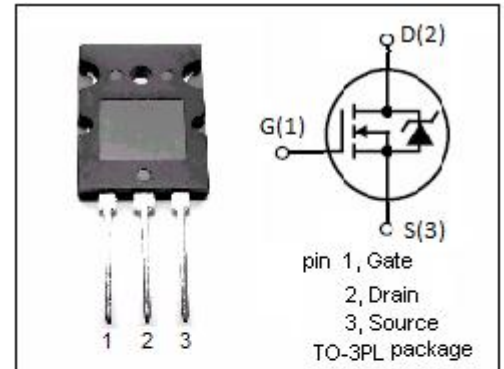
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	300	V
$V_{GSS}$	Gate-Source Voltage	$\pm 30$	V
$I_D$	Drain Current-Continuous	102	A
$I_{DM}$	Drain Current-Single Pulsed	250	A
$P_D$	Total Dissipation @ $T_c=25^{\circ}\text{C}$	700	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	0.18	$^{\circ}\text{C}/\text{W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	62	$^{\circ}\text{C}/\text{W}$



DIM	mm	
	MIN	MAX
A	25.50	26.50
B	19.80	20.20
C	4.50	5.50
D	0.90	1.10
E	2.80	3.20
F	2.40	2.60
G	10.80	11.00
H	3.10	3.30
J	0.50	0.70
K	20.00	21.00
N	3.90	4.50
P	2.40	2.60
Q	3.10	3.50
R	1.90	2.60
U	3.90	4.10
W	2.90	3.25

**Isc N-Channel MOSFET Transistor****IXTK102N30P****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=0.25mA$	300			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=0.5mA$	2.5		5.0	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=51A$			33	$m\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 20V; V_{DS}=0V$			$\pm 0.2$	$\mu A$
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=300V; V_{GS}=0V; T_j=25^{\circ}\text{C}$ $V_{DS}=300V; V_{GS}=0V; T_j=150^{\circ}\text{C}$			25 250	$\mu A$
$V_{SDF}$	Diode forward voltage	$I_{SD}=102A, V_{GS}=0V$			1.5	V

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