

isc N-Channel MOSFET Transistor

IXFK90N60X

• FEATURES

- Drain Source Voltage-
: $V_{DS} = 600V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 38m\Omega (\text{Max}) @ V_{GS} = 10V$
- Fast Switching
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

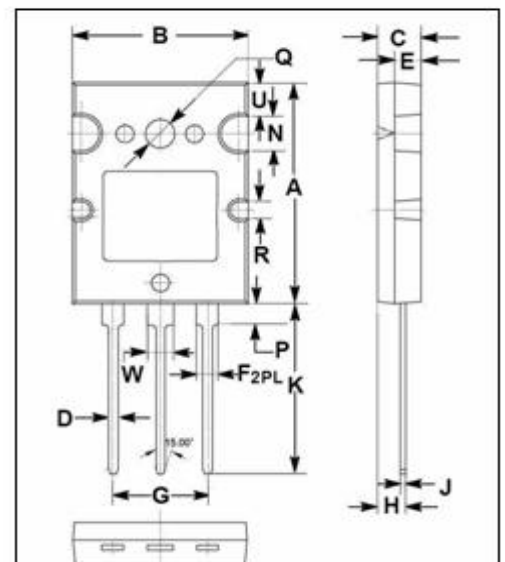
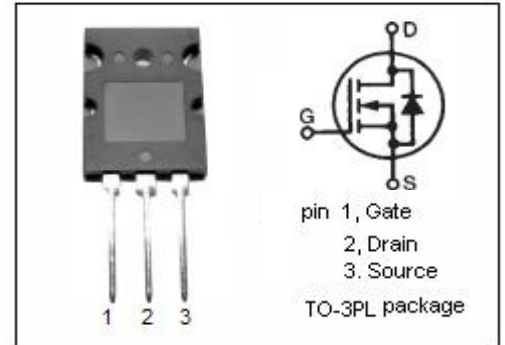
- Switch-Mode and Resonant-Mode Power Supplies
- DC-DC Converters
- AC and DC Motor Drives

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	600	V
V_{GS}	Gate-Source Voltage-Continuous	± 30	V
I_D	Drain Current-Continuous	90	A
I_{DM}	Drain Current-Single Plused	200	A
P_D	Total Dissipation @ $T_c = 25^\circ\text{C}$	1100	W
T_j	Max. Operating Junction Temperature	-55~150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	0.113	$^\circ\text{C/W}$



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**IXFK90N60X****• ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=3\text{mA}$	600			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=8\text{mA}$	2.5		4.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}; I_D=45\text{A}$			38	$\text{m}\Omega$
I_{GSS}	Gate-Body Leakage Current	$V_{GS}=\pm 30\text{V}; V_{DS}=0$			± 100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=600\text{V}; V_{GS}=0$ $V_{DS}=600\text{V}; V_{GS}=0; T_J=150^{\circ}\text{C}$			50 1500	μA
V_{SD}	Diode Forward On-voltage	$I_F=90\text{A}; V_{GS}=0$			1.4	V

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