

isc N-Channel MOSFET Transistor

IXTH12N70X2

• FEATURES

- Drain Source Voltage-
: $V_{DS} \geq 700V$
- Static Drain-Source On-Resistance
: $R_{DS(on)} \leq 300m\Omega @ V_{GS} = 10V$
- Fast Switching
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

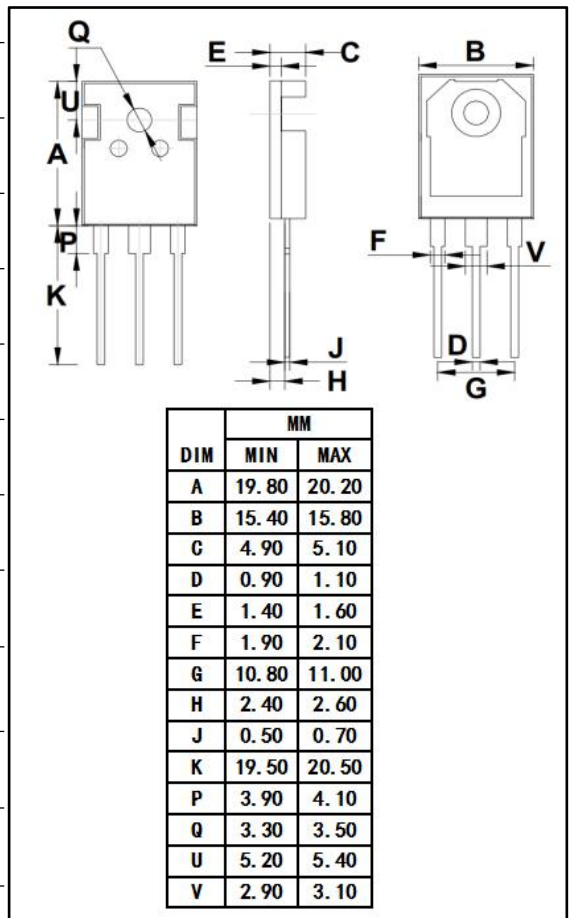
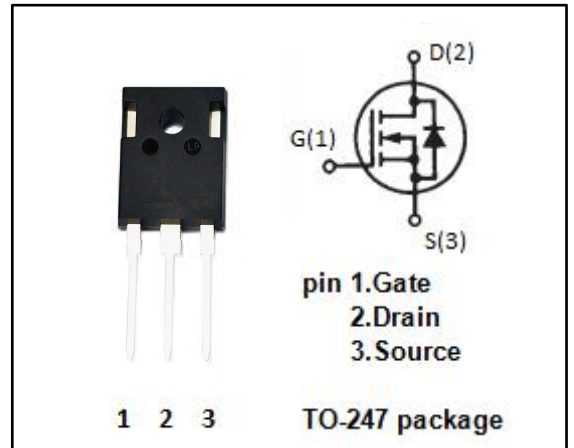
- DC-DC Converters
- Switch-Mode and Resonant-Mode Power Supplies

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	700	V
V_{GS}	Gate-Source Voltage-Continuous	± 30	V
I_D	Drain Current-Continuous	12	A
I_{DM}	Drain Current-Single Pulsed	24	A
P_D	Total Dissipation @ $T_c=25^\circ C$	180	W
T_j	Max. Operating Junction Temperature	-55~150	$^\circ C$
T_{stg}	Storage Temperature	-55~150	$^\circ C$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	0.69	$^\circ C/W$



isc N-Channel MOSFET Transistor**IXTH12N70X2****• 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	$V_{GS}=0$; $I_D=250\mu\text{A}$	700			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}$; $I_D=250\mu\text{A}$	2.5		4.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}$; $I_D=6\text{A}$			300	$\text{m}\Omega$
I_{GSS}	Gate-Body Leakage Current	$V_{GS}=\pm 30\text{V}$; $V_{DS}=0$			± 100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=700\text{V}$; $V_{GS}=0$ $V_{DS}=700\text{V}$; $V_{GS}=0$; $T_J=125^{\circ}\text{C}$			5 75	μA
V_{SD}	Diode Forward On-voltage	$I_F=12\text{A}$; $V_{GS}=0$			1.4	V

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