

isc N-Channel MOSFET Transistor

IXTH12N65X2

• FEATURES

- Drain Source Voltage-
: $V_{DSS} = 650V(\text{Min})$
- Static drain-source on-resistance:
 $R_{DS(on)} \leq 300m\Omega @ V_{GS} = 10V$
- Fully characterized avalanche voltage and current
- 100% Avalanche Tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATION

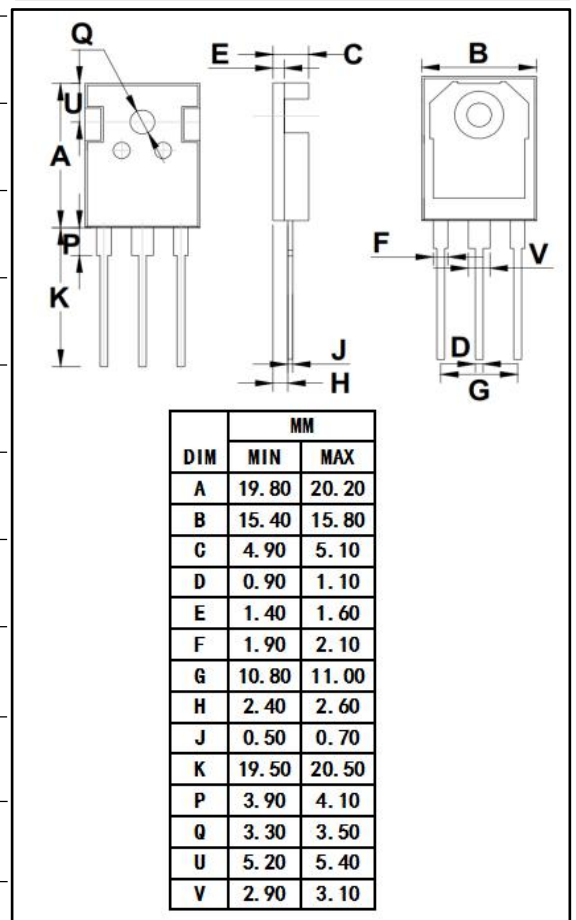
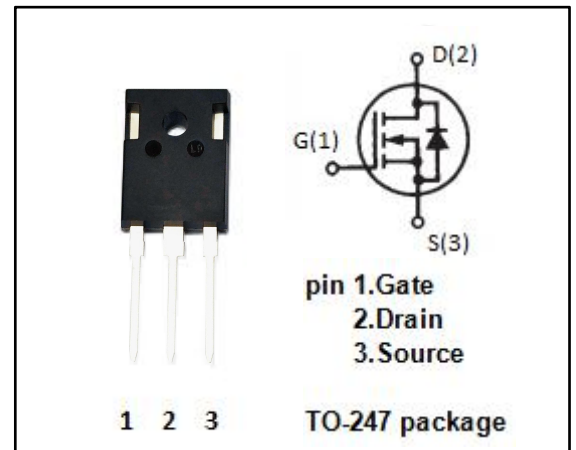
- Switched mode power supplies
- DC-DC converters

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	650	V
V_{GS}	Gate-Source Voltage	± 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	Operating Junction Temperature	-55~150	$^\circ C$
T_{stg}	Storage Temperature	-55~150	$^\circ C$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Junction-to-case thermal resistance	0.69	$^\circ C/W$



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0V; I _D = 250 μ A	650		V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D = 250 μ A	2.5	4.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D = 6A		300	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±30V; V _{DS} =0V		± 100	nA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = V _{DSS} ; V _{GS} = 0V		5	μ A
		V _{DS} = V _{DSS} ; V _{GS} = 0V; T _J = 125°C		50	
V _{SD}	Diode forward voltage	I _F = 12A; V _{GS} = 0V		1.4	V

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