

isc N-Channel MOSFET Transistor

IXTH420N04T2

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 2m\Omega @ V_{GS}=10V$
- Fully characterized avalanche voltage and current
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATION

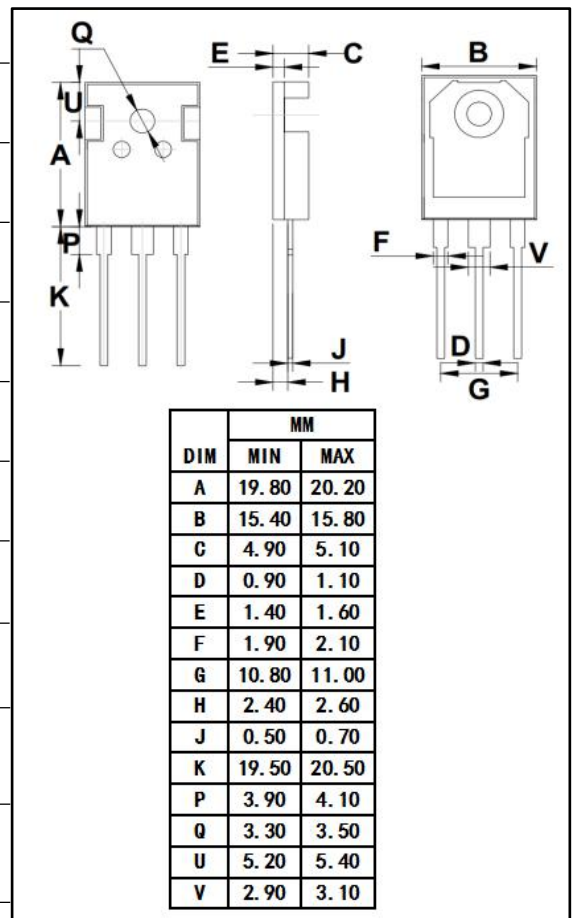
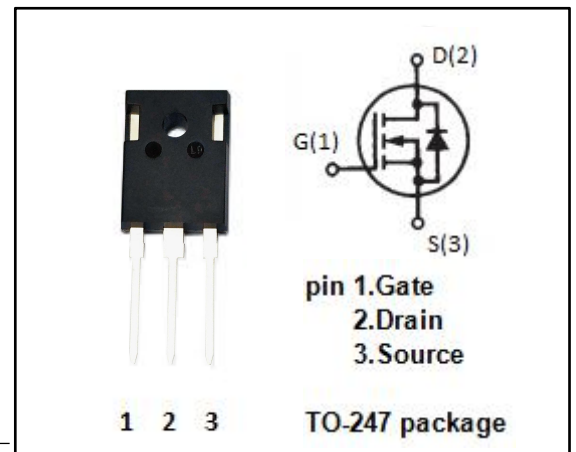
- DC/DC Converters
- High Current Switching Applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	40	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous	420	A
I_{DM}	Drain Current-Single Pulsed	1050	A
P_D	Total Dissipation @ $T_C=25^\circ C$	935	W
T_j	Operating Junction Temperature	-55~175	$^\circ C$
T_{stg}	Storage Temperature	-55~175	$^\circ C$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Junction-to-case thermal resistance	0.16	$^\circ C/W$



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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	40		V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} ; I _D = 250 μ A	1.5	3.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D = 100A		2	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V; V _{DS} =0V		±200	nA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = V _{DSS} ; V _{GS} = 0V		10	μ A
		V _{DS} = V _{DSS} ; V _{GS} = 0V; T _J = 150°C		300	
V _{SD}	Diode forward voltage	I _F = 100A; V _{GS} = 0V		1.3	V

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