

isc N-Channel MOSFET Transistor

IXFH40N50Q

FEATURES

- Drain Current $-I_D = 40A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 500V (Min)$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 140m\Omega (Max) @ V_{GS} = 10V$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

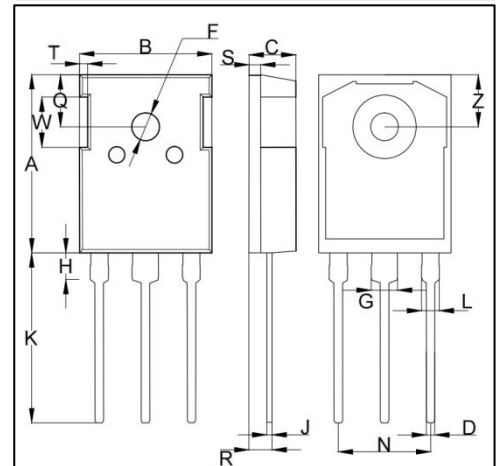
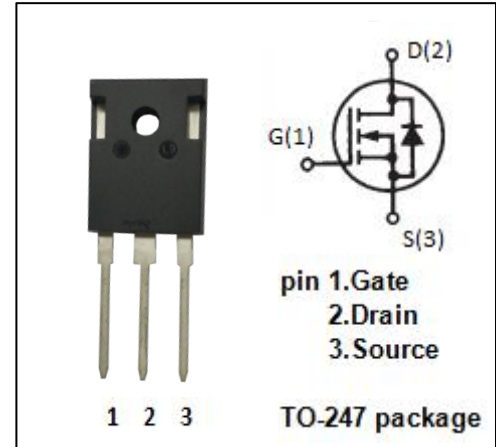
- motor drive, DC-DC converter, power switch and solenoid drive.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	500	V
V_{GS}	Gate-Source Voltage-Continuous	± 30	V
I_D	Drain Current-Continuous	40	A
I_{DM}	Drain Current-Single Pluse	160	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	500	W
T_J	Max. Operating Junction Temperature	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	0.25	$^\circ C/W$



DIM	mm	
	MIN	MAX
A	19.80	21.50
B	15.40	15.90
C	4.70	5.30
D	0.90	1.26
F	3.50	3.90
G	2.70	3.30
H	3.90	4.10
J	0.500	0.700
K	19.50	20.50
L	1.90	2.20
N	10.80	11.00
Q	6.00	6.30
R	2.90	3.30
S	1.80	2.20
T	2.15	2.35
W	4.90	5.10
Z	6.00	6.30

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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0; I _D = 0.25mA	500	--	V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D = 4mA	2.5	4.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =20A	--	140	mΩ
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±30V; V _{DS} = 0	--	±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =500V; V _{GS} = 0	--	25	uA
V _{SD}	Forward On-Voltage	I _S =40A; V _{GS} = 0	--	1.5	V

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