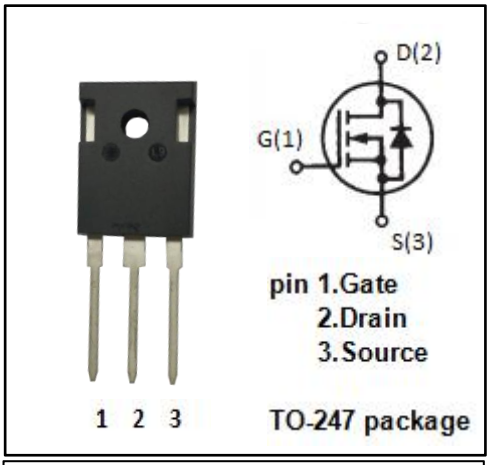
isc N-Channel MOSFET Transistor IXFH15N100Q3



DESCRIPTION

- Drain Current : I_D= 15A@ T_C=25℃
- Drain Source Voltage
  : V_{DSS}= 1000V(Min)
- Static Drain-Source On-Resistance
  : $R_{DS(on)}$ = 1.05Ω(Max) @ V_{GS}= 10V
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

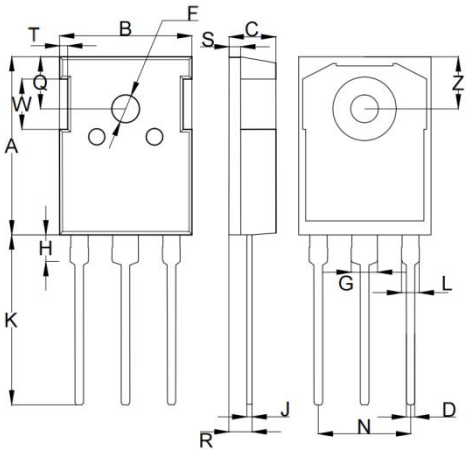
- motor drive, DC-DC converter, power switch and solenoid drive.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	ARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage (V_{GS}=0)	1000	V
V_{GS}	Gate-Source Voltage	±30	V
I_D	Drain Current-continuous@ TC=25℃	15	A
I_{DM}	Drain Current-Single Pluse	45	A
P_{tot}	Total Dissipation@TC=25℃	600	W
T_j	Max. Operating Junction Temperature	-55~150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	0.21	℃/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℃)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	V_{GS}= 0; I_D= 0.25mA	1000	--	--	V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}= V_{GS}; I_D= 0.25mA	2.5	--	4.5	V
$R_{DS(on)}$	Drain-Source On-stage Resistance	V_{GS}= 10V; I_D= 7.5A	--	--	1.05	Ω
I_{GSS}	Gate Source Leakage Current	V_{GS}= ±30V;V_{DS}= 0	--	--	±0.1	uA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}= 1000V; V_{GS}= 0	--	--	25	uA
V_{SD}	Forward On-Voltage	I_S= 15A; V_{GS}= 0	--	--	1.4	V
C_{iss}	Input Capacitance	V_{GS} = 0V, V_{DS} = 25V, f = 1.0MHz	--	7600	--	pF
C_{oss}	Output Capacitance		--	760	--	
C_{rss}	Reverse Transfer Capacitance		--	88	--	
Q_g	Total Gate Charge	V_{DD} = 500V, I_D = 12A, V_{GS} = 10V	--	193	--	nC
Q_{gs}	Gate-Source Charge		--	37	--	
Q_{gd}	Gate-Drain Charge		--	70	--	
$t_{d(on)}$	Turn-on Delay Time	V_{DD} = 500V, I_D = 12A, V_{GS} = 10V, R_G = 25Ω	--	66	--	ns
t_r	Turn-on Rise Time		--	48	--	
$t_{d(off)}$	Turn-off Delay Time		--	80	--	
t_f	Turn-off Fall Time		--	50	--	
t_{rr}	Reverse Recovery Time	V_{GS} = 0V,I_S = 24A, di_F/dt = 100A /μs	--	550	-	ns
Q_{rr}	Reverse Recovery Charge		--	5.0	-	uC

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