

isc N-Channel MOSFET Transistor

15N15

• FEATURES

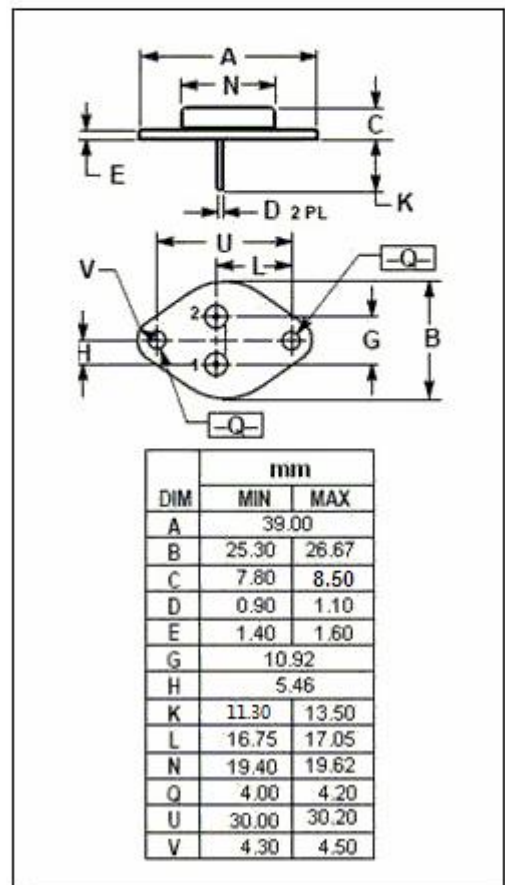
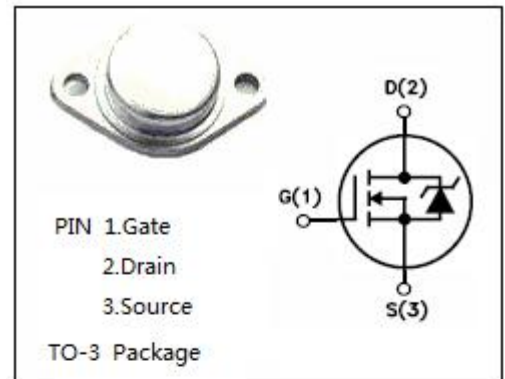
- Drain Current $I_D = 15A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 150V (Min)$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.15 \Omega (Max)$
- Fast Switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

- Switching regulators
- Switching converters, motor drivers, relay drivers.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	150	V
V_{GS}	Gate-Source Voltage-Continuous	± 30	V
I_D	Drain Current-Continuous	15	A
I_{DM}	Drain Current-Single Pulsed	40	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	100	W
T_j	Max. Operating Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature	-55~150	$^\circ C$



isc N-Channel MOSFET Transistor

15N15

• ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0; I _D =1mA	150			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D =1mA	2.0		4.0	V
V _{SD}	Diode Forward On-voltage	I _S = 7.5A; V _{GS} = 0			1.4	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 7.5A			0.15	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±20V; V _{DS} = 0			±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =120V; V _{GS} = 0			1	μA
C _{iss}	Input Capacitance	V _{DS} =25V;		1700		pF
C _{rss}	Reverse Transfer capacitance	V _{GS} =0V;		350		
C _{oss}	Output Capacitance	f _T =1MHz		750		
t _r	Rise Time	V _{GS} =10V;		150	225	ns
t _{d(on)}	Turn-on Delay Time	I _D =7.5A;		50	75	
t _f	Fall Time	V _{DD} =75V;		125	190	
t _{d(off)}	Turn-off Delay Time	R _{GS} =50 Ω		185	280	

NOTICE:

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.