

isc N-Channel MOSFET Transistor

15N15

• FEATURES

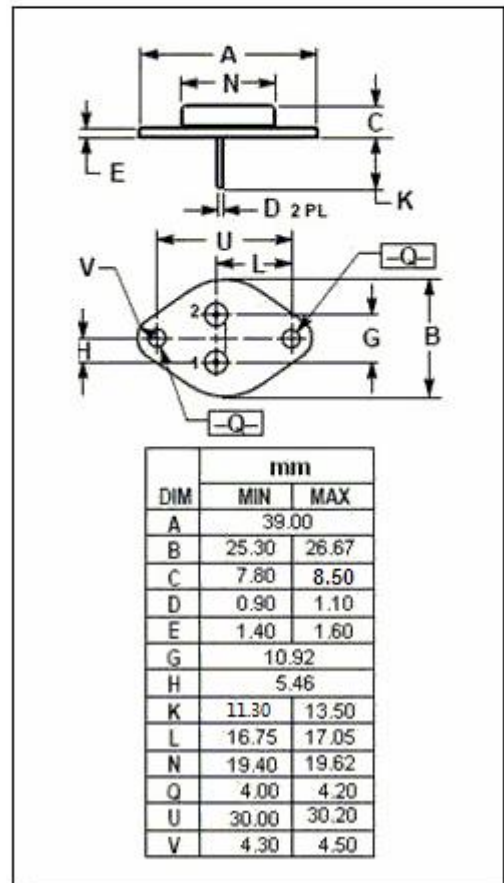
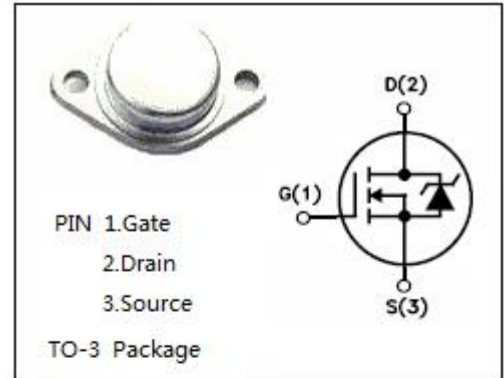
- Drain Current $I_D = 15A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 150V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.15 \Omega (\text{Max})$
- Fast Switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• 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 Plused	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	$^\circ C$



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• 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	

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