

isc N-Channel MOSFET Transistor

15N45

• FEATURES

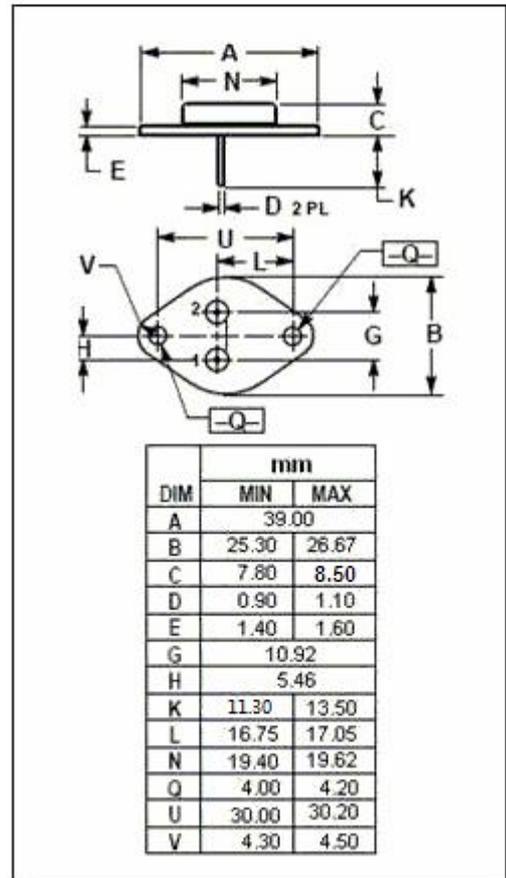
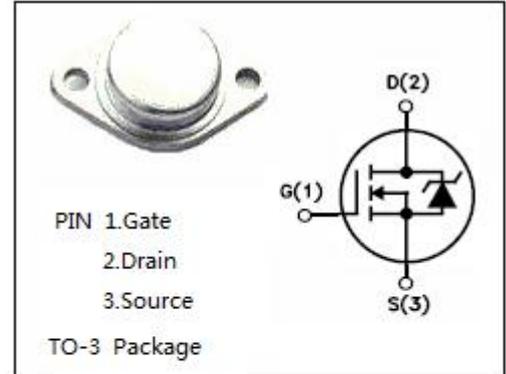
- Drain Current $I_D = 15A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 450V (Min)$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.4 \Omega (Max)$
- Fast Switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• 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	450	V
V_{GS}	Gate-Source Voltage-Continuous	± 30	V
I_D	Drain Current-Continuous	15	A
I_{DM}	Drain Current-Single Plused	65	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	450			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D =1mA	2.0		4.5	V
V _{SD}	Diode Forward On-voltage	I _S = 15A; V _{GS} = 0			1.4	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 7.5A			0.4	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±20V; V _{DS} = 0			±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =450V; V _{GS} = 0			0.2	mA
C _{iss}	Input Capacitance	V _{DS} =25V;			3000	pF
C _{rss}	Reverse Transfer capacitance	V _{GS} =0V;			200	
C _{oss}	Output Capacitance	f _T =1MHz			500	
t _r	Rise Time	V _{GS} =10V; I _D =7.5A; V _{DD} =25V;			180	ns
t _{d(on)}	Turn-on Delay Time				60	
t _f	Fall Time				180	
t _{d(off)}	Turn-off Delay Time				450	

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