

isc N-Channel Mosfet Transistor

BUZ71A

• FEATURES

- Low $R_{DS(on)}$
- V_{GS} Rated at $\pm 20V$
- Silicon Gate for Fast Switching Speed
- Rugged
- Low Drive Requirements
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

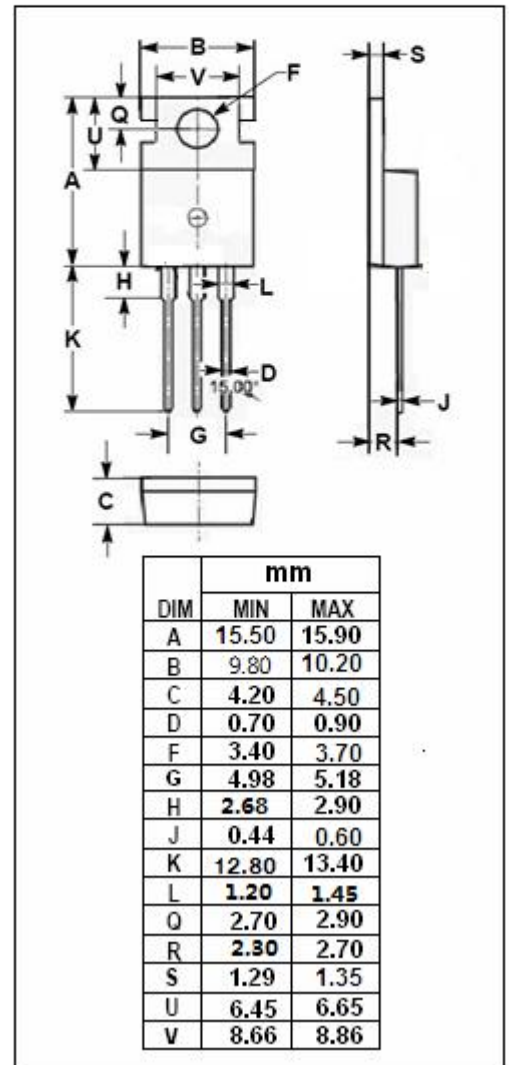
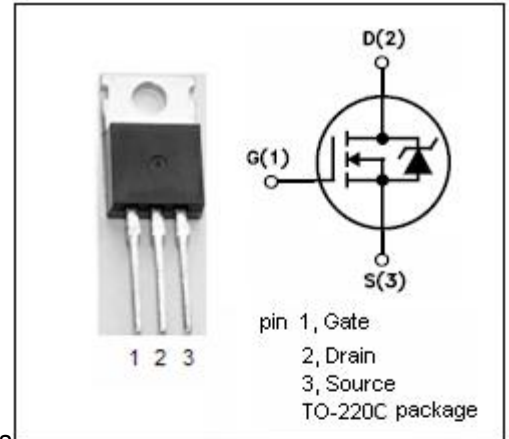
- Designed especially for applications such as switching regulators, switching converters, motor drivers, relay drivers.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	50	V
V_{GS}	Gate-Source Voltage-Continuous	± 20	V
I_D	Drain Current-Continuous	13	A
I_{DM}	Drain Current-Single Plused	48	A
P_D	Total Dissipation @ $T_c=25^\circ C$	40	W
T_j	Max. Operating Junction Temperature	-55~150	$^\circ C$
T_{stg}	Storage Temperature	-55~150	$^\circ C$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Thermal Resistance, Junction to Case	3.1	$^\circ C/W$
$R_{th(j-a)}$	Thermal Resistance, Junction to Ambient	75	$^\circ C/W$



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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	50		V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D = 1mA	2.1	4	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 9A		0.12	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±20V; V _{DS} = 0		±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =50V; V _{GS} =0		250	uA
V _{SD}	Forward On-Voltage	I _S = 26A; V _{GS} =0		2.2	V
G _{fs}	Forward Transconductance	V _{DS} = 25V; I _D =9A	3.0		

• Switching Times

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
T _{d(on)}	Turn-on Delay Time	V _{DD} =30V, I _D =3A V _{GS} =10V R _{GS} =50Ω		30	ns
T _r	Rise Time			85	ns
T _{d(off)}	Turn-off Delay Time			90	ns
T _f	Fall Time			110	ns

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