

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

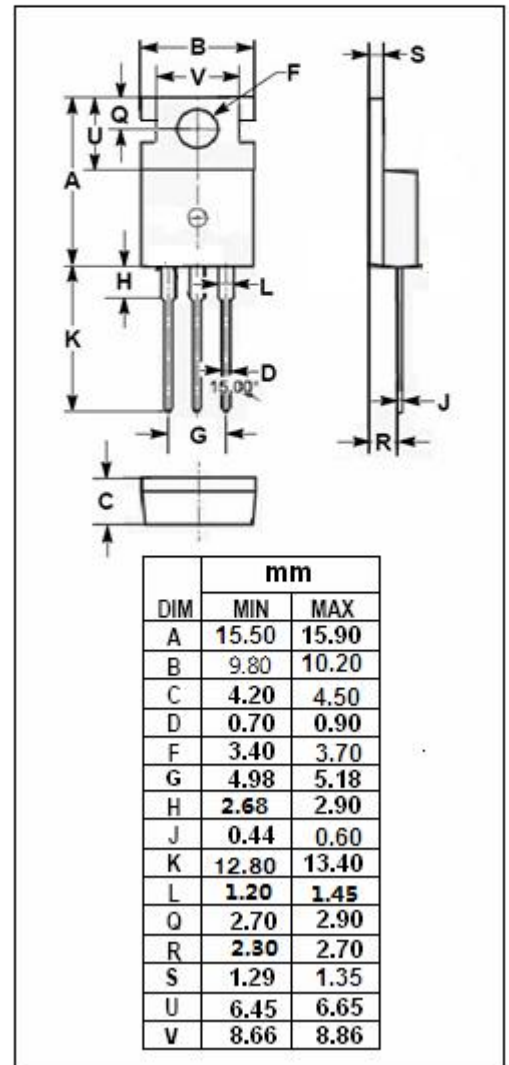
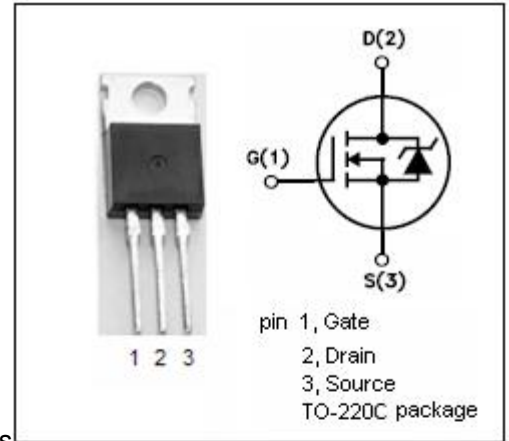
- Designed especially for applications such as switching regulators, switching converters, motor drivers, relay drivers.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	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 Pulsed	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	$^\circ C/W$



isc N-Channel Mosfet Transistor**BUZ71A****ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0$; $I_D=0.25\text{mA}$	50		V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}$; $I_D=1\text{mA}$	2.1	4	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}$; $I_D=9\text{A}$		0.12	Ω
I_{GSS}	Gate-Body Leakage Current	$V_{GS}=\pm 20\text{V}$; $V_{DS}=0$		± 100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=50\text{V}$; $V_{GS}=0$		250	μA
V_{SD}	Forward On-Voltage	$I_S=26\text{A}$; $V_{GS}=0$		2.2	V
Gfs	Forward Transconductance	$V_{DS}=25\text{V}$; $I_D=9\text{A}$	3.0		

• Switching Times

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$T_d(on)$	Turn-on Delay Time	$V_{DD}=30\text{V}$, $I_D=3\text{A}$ $V_{GS}=10\text{V}$ $R_{GS}=50\Omega$		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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