

isc N-Channel Mosfet Transistor

BUZ72A

• FEATURES

- Low $R_{DS(on)}$
- SOA is Power Dissipation Limited
- Nanosecond Switching Speeds
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

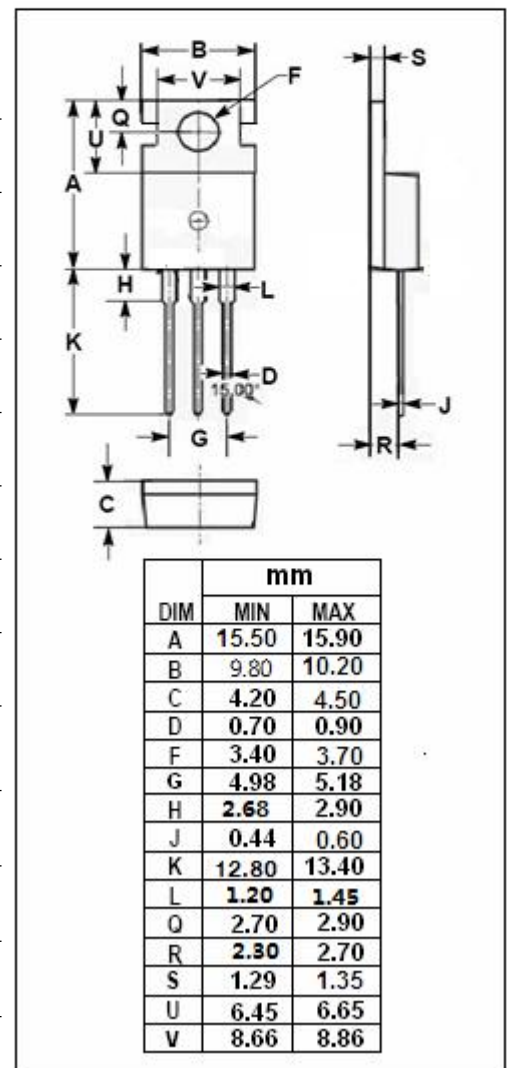
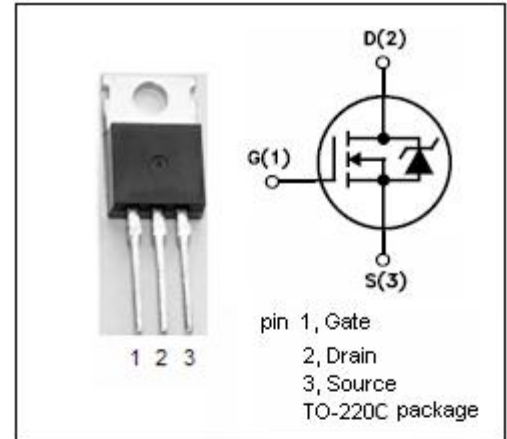
- High current , high speed switching
- Solenoid and relay drivers
- DC-DC & DC-AC converters

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS}=0$)	100	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-continuous@ $TC=25^\circ C$	11	A
I_{DM}	Drain Current-Single Pulsed	44	A
P_{tot}	Total Dissipation@ $TC=25^\circ C$	70	W
T_j	Max. Operating Junction Temperature	175	$^\circ C$
T_{stg}	Storage Temperature Range	-65~175	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance,Junction to Case	2.14	$^\circ C/W$
$R_{th\ j-a}$	Thermal Resistance,Junction to Ambient	62.5	$^\circ C/W$



isc N-Channel Mosfet Transistor

BUZ72A

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 =0.25mA	100			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D =0.25mA	2		4.0	V
V _{SD}	Diode Forward On-voltage	I _S = 22A; V _{GS} = 0			1.6	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 5A			0.25	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±20V; V _{DS} = 0			±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =100V; V _{GS} = 0			250	μA
G _{fs}	Forward Transconductance	V _{DS} = 25V; I _D =5A	2.7			S
t _{d(on)}	Turn-on Delay Time	V _{GS} =10V; I _D =5.5A; V _{DD} =50V; R _{GS} =4.7 Ω			15	ns
t _r	Rise Time				75	
t _{d(off)}	Turn-off Delay Time				40	
t _f	Fall Time				30	

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.