

isc N-Channel Mosfet Transistor

BUZ11A

• FEATURES

- Static Drain-Source On-Resistance : $R_{DS(on)} = 0.055 \Omega$ (Max)
- Avalanche rugged technology
- High current capability
- 175°C Operating Temperature
- High speed switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

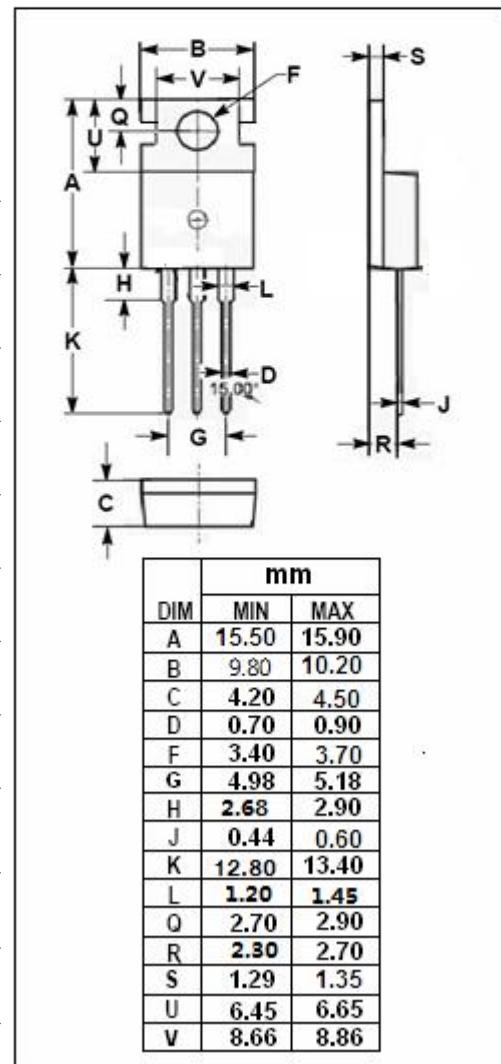
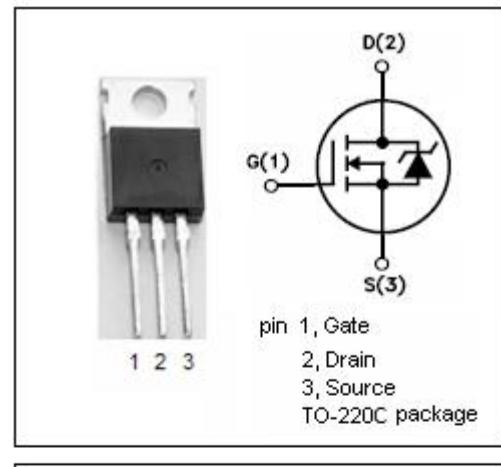
- High current,high speed switching
- Solenoid and relay drivers
- Regulators
- DC-DC & DC-AC converters

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS}=0$)	50	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-continuous@ $TC=25^\circ\text{C}$	26	A
I_{DM}	Drain Current-Single Plused	104	A
P_{tot}	Total Dissipation@ $TC=25^\circ\text{C}$	75	W
T_j	Max. Operating Junction Temperature	175	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~175	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance,Junction to Case	1.67	$^\circ\text{C}/\text{W}$
$R_{th j-a}$	Thermal Resistance,Junction to Ambient	62.5	$^\circ\text{C}/\text{W}$



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ELECTRICAL CHARACTERISTICS

 $T_c=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(\text{BR})\text{DSS}}$	Drain-Source Breakdown Voltage	$V_{\text{GS}}= 0$; $I_D=0.25\text{mA}$	50			V
$V_{\text{GS}(\text{th})}$	Gate Threshold Voltage	$V_{\text{DS}}= V_{\text{GS}}$; $I_D=1\text{mA}$	2.1		4.0	V
V_{SD}	Diode Forward On-voltage	$I_S= 60\text{A}$; $V_{\text{GS}}= 0$			1.8	V
$R_{\text{DS}(\text{on})}$	Drain-Source On-Resistance	$V_{\text{GS}}= 10\text{V}$; $I_D= 19\text{A}$			0.055	Ω
I_{GSS}	Gate-Body Leakage Current	$V_{\text{GS}}= \pm 20\text{V}$; $V_{\text{DS}}= 0$			± 100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{\text{DS}}=50\text{V}$; $V_{\text{GS}}= 0$			1	μA
G_{fs}	Forward Transconductance	$V_{\text{DS}}= 25\text{V}$; $I_D=19\text{A}$	10			S
t_r	Rise Time	$V_{\text{GS}}=10\text{V}$; $I_D=15\text{A}$; $V_{\text{GS}}=10\text{V}$; $R_{\text{GS}}=4.7\Omega$		95		ns
$t_{\text{d}(\text{on})}$	Turn-on Delay Time			18		
t_f	Fall Time			20		
$t_{\text{d}(\text{off})}$	Turn-off Delay Time			50		

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