

# isc N-Channel Mosfet Transistor

**BUZ10**
**• FEATURES**

- Drain Current  $-I_D=23A@ T_C=25^\circ C$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 0.07 \Omega$  (Max)
- $175^\circ C$  operating temperature
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• DESCRIPTION**

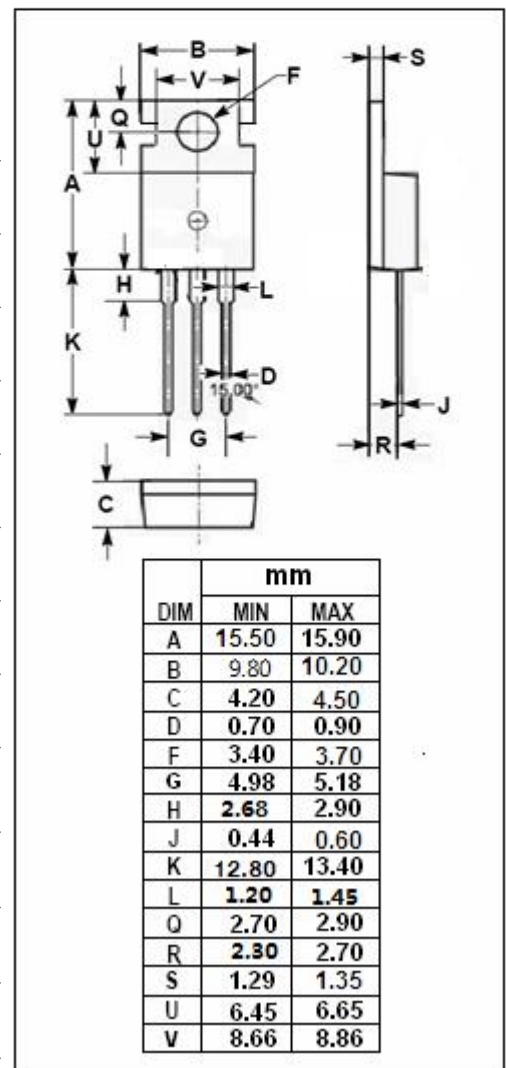
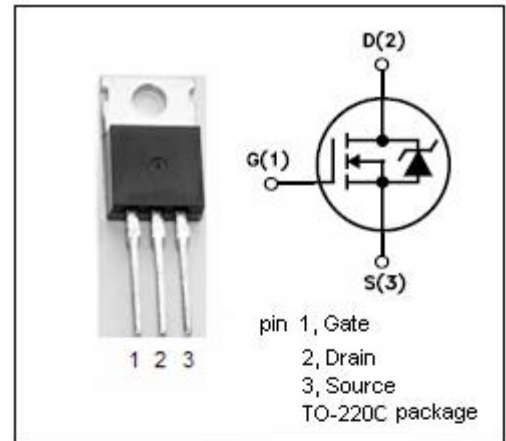
- High current , high speed switching
- Solenoid and relay drivers
- DC-DC & DC-AC converters

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage ( $V_{GS}=0$ )	50	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-continuous@ $T_C=25^\circ C$	23	A
$I_{DM}$	Drain Current-Single Pulsed	92	A
$P_{tot}$	Total Dissipation@ $T_C=25^\circ C$	75	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	2.0	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance,Junction to Ambient	62.5	$^\circ C/W$



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## ELECTRICAL CHARACTERISTICS

T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> = 0; I <sub>D</sub> = 0.25mA	50		V
V <sub>GS(TH)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> = 1mA	2.1	4	V
R <sub>DS(ON)</sub>	Drain-Source On-stage Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> = 14A		0.07	Ω
I <sub>GSS</sub>	Gate Source Leakage Current	V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0		±100	nA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> = 50V; V <sub>GS</sub> = 0		1	uA
V <sub>SD</sub>	Diode Forward Voltage	I <sub>F</sub> = 46A; V <sub>GS</sub> = 0		1.9	V
G <sub>fs</sub>	Forward Transconductance	V <sub>DS</sub> = 25V; I <sub>D</sub> =14A	6.0		S

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