

**isc N-Channel MOSFET Transistor**

**BUZ12A**

**DESCRIPTION**

- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 0.035 \Omega$  (Max)
- SOA is Power Dissipation Limited
- High input impedance

**APPLICATIONS**

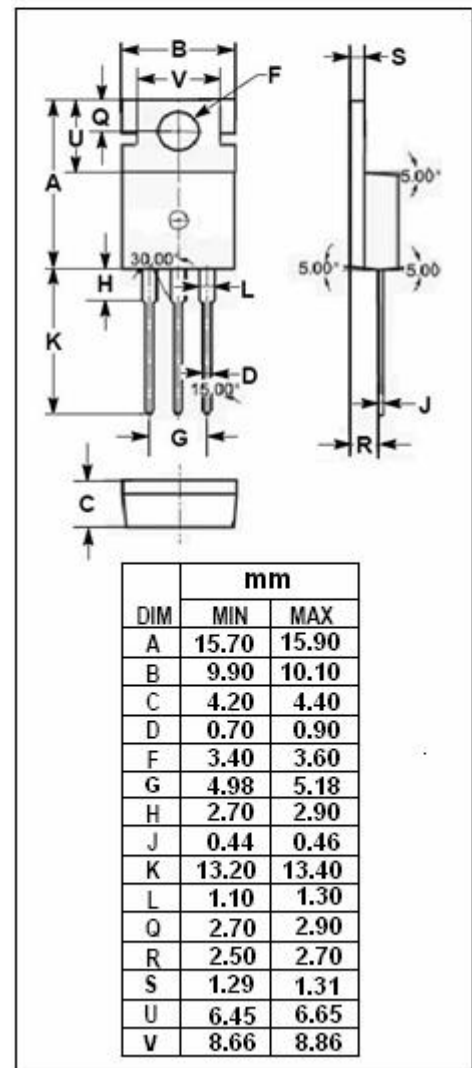
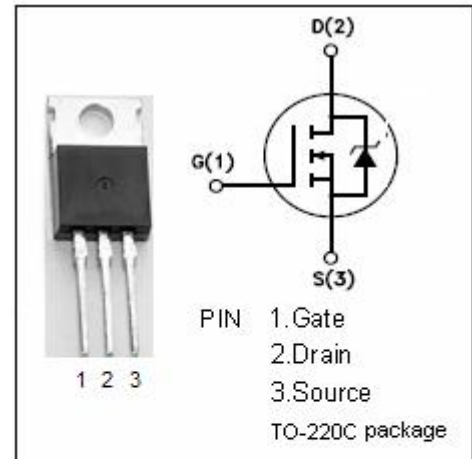
designed for applications such as switching regulators, switching converters, motor drivers, relay drivers and drivers for high power bipolar switching transistors requiring high speed and low gate drive power.

**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	$\pm 20$	V
$I_D$	Drain Current-continuous@ $TC=37^\circ\text{C}$	42	A
$P_{tot}$	Total Dissipation@ $TC=25^\circ\text{C}$	125	W
$T_j$	Max. Operating Junction Temperature	-55~150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	75	$^\circ\text{C/W}$



**isc N-Channel Mosfet Transistor****BUZ12A****• ELECTRICAL CHARACTERISTICS (T<sub>C</sub>=25°C)**

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> = 32A		0.035	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> = 84A; V <sub>GS</sub> = 0		2.2	V