

isc N-Channel MOSFET Transistor

BUZ42

DESCRIPTION

- 4A, 500V
- SOA is Power Dissipation Limited
- Nanosecond Switching Speeds
- Linear Transfer Characteristics
- High Input Impedance
- Majority Carrier Device
- Related Literature

APPLICATIONS

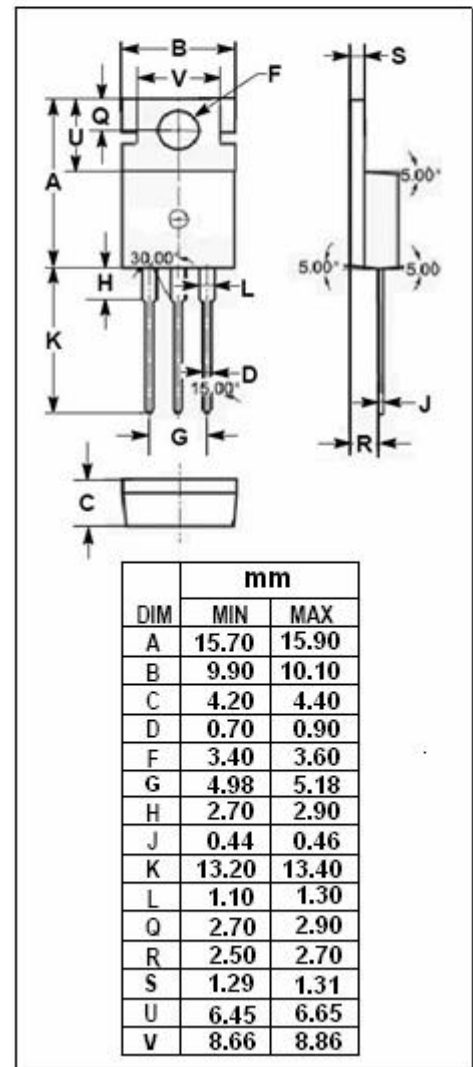
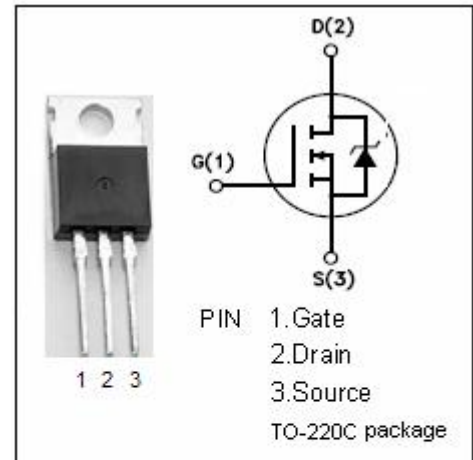
- applications such as switching regulators, switching converters, motor drivers, relay drivers, and drivers for high power bipolar switching transistors requiring high speed and low gate drive power

ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>DSS</sub>	Drain-Source Voltage (V <sub>GS</sub> =0)	500	V
V <sub>GS</sub>	Gate-Source Voltage	±20	V
I <sub>D</sub>	Drain Current-continuous@ TC=37°C	4	A
P <sub>tot</sub>	Total Dissipation@TC=25°C	75	W
T <sub>j</sub>	Max. Operating Junction Temperature	-55~150	°C
T <sub>stg</sub>	Storage Temperature Range	-55~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal Resistance,Junction to Case	1.67	°C/W
R <sub>th j-a</sub>	Thermal Resistance,Junction to Ambient	75	°C/W



**isc N-Channel Mosfet Transistor****BUZ42****• 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	500		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> = 2.5A		2	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> = 500V; V <sub>GS</sub> = 0		250	uA
V <sub>SD</sub>	Diode Forward Voltage	I <sub>F</sub> = 8A; V <sub>GS</sub> = 0		1.5	V