

isc N-Channel MOSFET Transistor

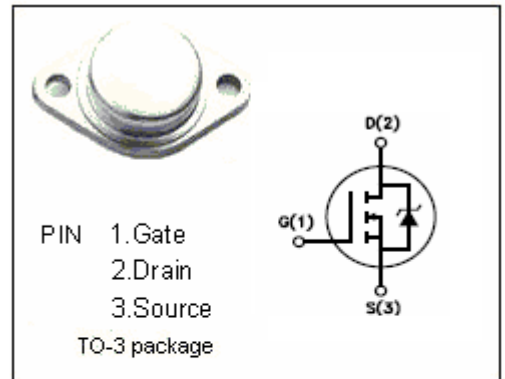
BUZ45B

DESCRIPTION

- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.5 \Omega$ (Max)
- SOA is Power Dissipation Limited

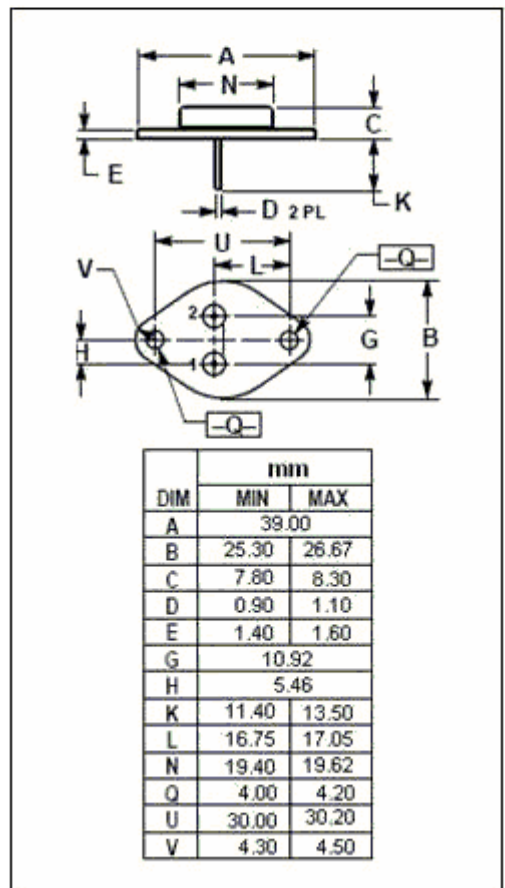
APPLICATIONS

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 ($V_{GS}=0$)	500	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-continuous@ $TC=37^\circ\text{C}$	10	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	35	$^\circ\text{C/W}$

isc N-Channel Mosfet Transistor**BUZ45B****• ELECTRICAL CHARACTERISTICS (T_c=25°C)**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0; I _D = 0.25mA	500		V
V _{GS(TH)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D = 1mA	2.1	4	V
R _{DS(ON)}	Drain-Source On-stage Resistance	V _{GS} = 10V; I _D = 5A		0.5	Ω
I _{GSS}	Gate Source Leakage Current	V _{GS} = ± 20V; V _{DS} = 0		± 100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 500V; V _{GS} = 0		250	uA
V _{SD}	Diode Forward Voltage	I _F = 20A; V _{GS} = 0		1.7	V