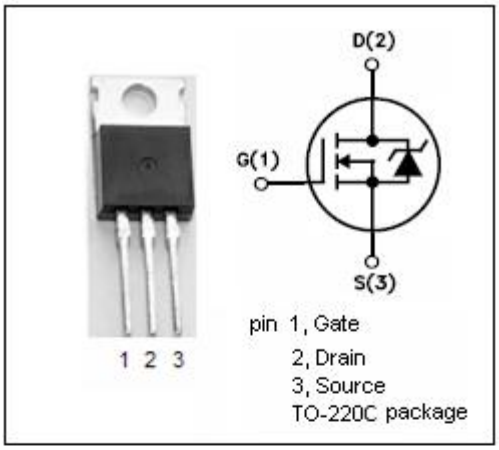
isc N-Channel Mosfet Transistor BUZ41A



• FEATURES

- SOA is Power Dissipation Limited
- Nanosecond Switching Speeds
- Linear Transfer Characteristics
- High speed switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRITION

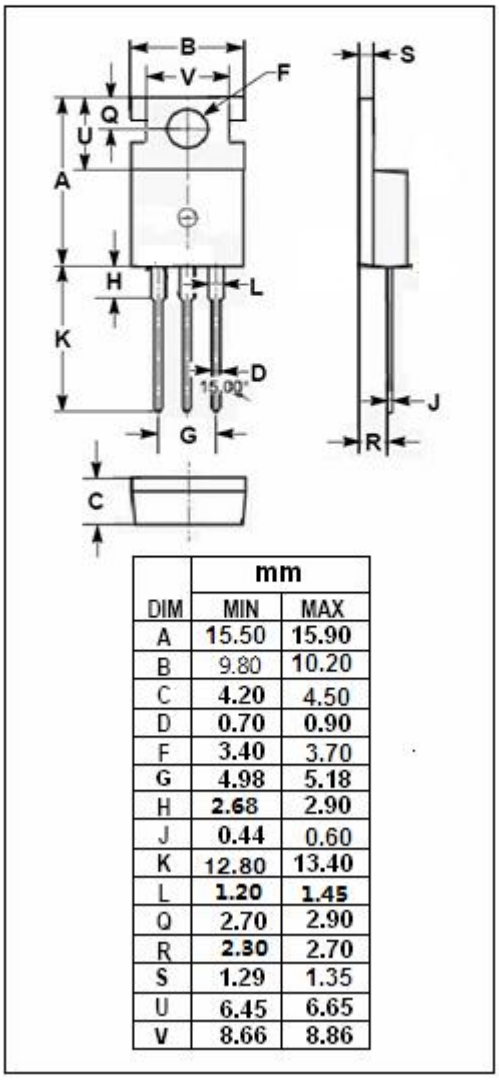
- Designed for applications such as switching regulators, switching converters, motor drivers,relay drivers and drivers for high power bipolar switching transistors requiring high speed and low gate drive power.This type can be operated directly from integrated circuits.

• ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	ARAMETER	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=36℃	4.5	A
I_{DM}	Drain Current-Single Plused	18	A
P_{tot}	Total Dissipation@TC=25℃	75	W
T_j	Max. Operating Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.67	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	75	℃/W



DIM	mm MIN	MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	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		4.0	V
V_{SD}	Diode Forward On-voltage	I_S= 9A ;V_{GS}= 0			1.2	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}= 10V; I_D= 3A			1.5	Ω
I_{GSS}	Gate-Body Leakage Current	V_{GS}= ±20V;V_{DS}= 0			±100	nA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}=500V; V_{GS}= 0			1	μA
Gfs	Forward Transconductance	V_{DS}= 25V； I_D=3A	2.5			S
$t_{d(on)}$	Turn-on Delay Time	V_{GS}=10V; I_D=2.6A; V_{DD}=30V; R_{GS}=50Ω			20	ns
t_r	Rise Time				70	
$t_{d(off)}$	Turn-off Delay Time				190	
t_f	Fall Time				70	