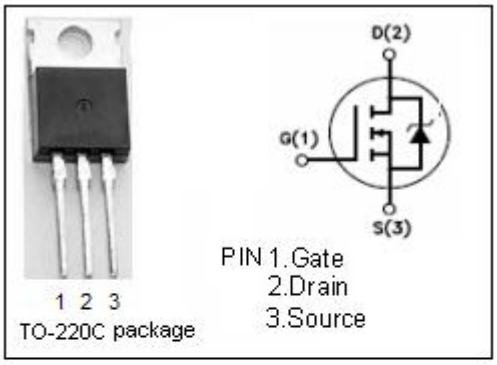
isc N-Channel MOSFET Transistor BUK456-60A/B



DESCRIPTION

- Drain Source Voltage-
  : V_{DSS}=60V(Min)
- Low $R_{DS(ON)}$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

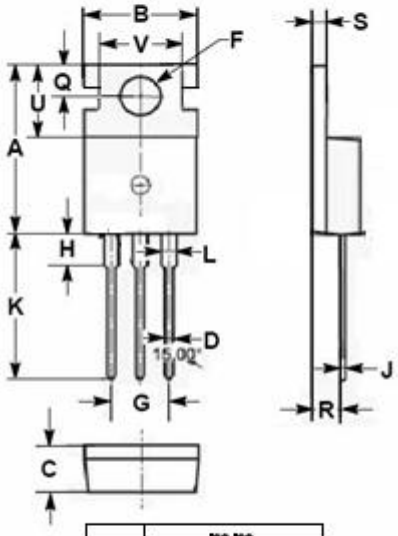
- Designed for Switched Mode Power Supplies (SMPS), motor control,welding, and in general purpose switching resistance application

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	ARAMETER		VALUE	UNIT
V_{DSS}	Drain-Source Voltage (V_{GS}=0)		60	V
V_{GS}	Gate-Source Voltage		±30	V
I_D	Drain Current-continuous@ TC=25℃	BUK456-60A	52	A
		BUK456-60B	51	
P_{tot}	Total Dissipation@TC=25℃		150	W
T_j	Max. Operating Junction Temperature		175	℃
T_{stg}	Storage Temperature Range		175	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.0	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	60	℃/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℃)**

SYMBOL	PARAMETER	CONDITIONS		MIN	TYP	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	V_{GS}=0; I_D= 0.25mA		60			V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}=V_{GS}; I_D=1mA		2.1		4.0	V
$R_{DS(on)}$	Drain-Source On-stage Resistance	V_{GS}=10V; I_D=29A	BUK456-60A			0.028	Ω
			BUK456-60B			0.030	Ω
I_{GSS}	Gate Source Leakage Current	V_{GS}= ±30V;V_{DS}= 0				±100	nA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}=60V; V_{GS}= 0				10	uA
V_{SD}	Diode Forward Voltage	I_F=52A; V_{GS}=0				2.5	V
Gfs	Forward Transconductance	V_{DS}= 25V； I_D= 29A		17			S
tr	Rise time	V_{GS}=10V;I_D=3A;R_{GS}=50 Ω			70	100	ns
ton	Turn-on time				20	30	ns
tf	Fall time				120	160	ns
toff	Turn-off time				170	220	ns

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