

isc N-Channel MOSFET Transistor
BUK455-50A/B
DESCRIPTION

- Drain Source Voltage
: $V_{DSS} = 50V(\text{Min})$
- Low $R_{DS(\text{ON})}$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

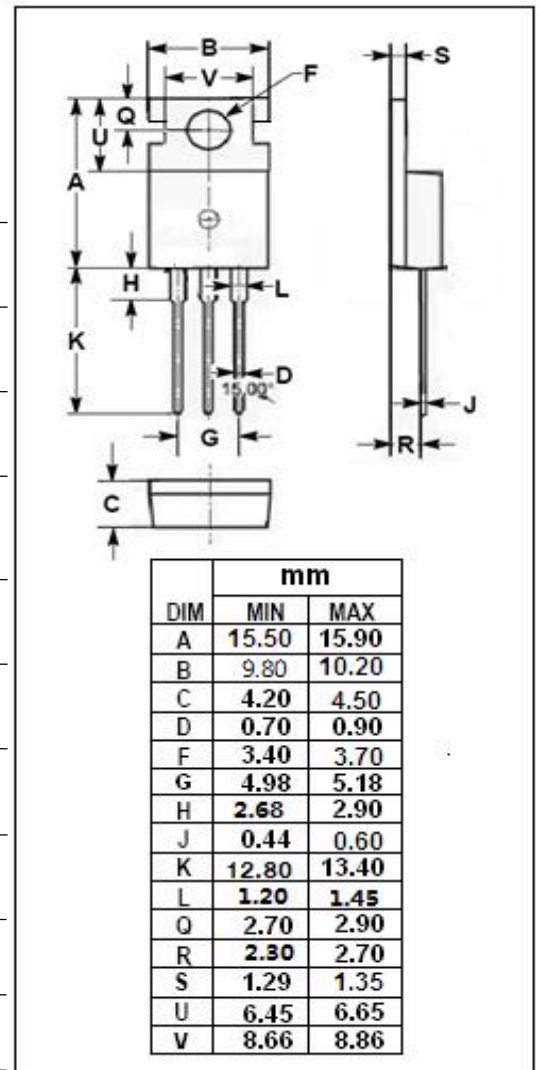
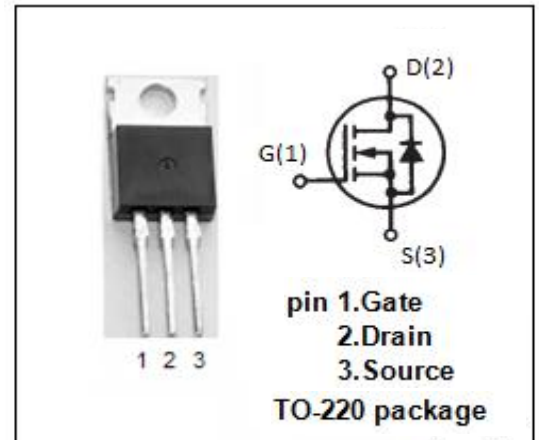
- Designed for Switched Mode Power Supplies (SMPS), motor control, welding, and in general purpose switching resistance applications

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	± 30	V
I_D	Drain Current-continuous @ $TC=25^\circ\text{C}$	BUK455-50A	41
		BUK455-50B	38
P_{tot}	Total Dissipation @ $TC=25^\circ\text{C}$	125	W
T_j	Max. Operating Junction Temperature	175	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55-175	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.2	$^\circ\text{C/W}$



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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	50	--	V	
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D = 1.0mA	2.1	4.0	V	
R _{DS(on)}	Drain-Source On-stage Resistance	V _{GS} = 10V; I _D = 20A	BUK455-50A	--	38	mΩ
			BUK455-50B	--	45	mΩ
I _{GSS}	Gate Source Leakage Current	V _{GS} = ±30V; V _{DS} = 0	--	±100	nA	
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 50V; V _{GS} = 0	--	10	μA	
V _{SD}	Forward On-Voltage	I _S = 41A; V _{GS} = 0	--	2	V	

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