

## isc N-Channel MOSFET Transistor

## BUK555-50A/B

## DESCRIPTION

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

## APPLICATIONS

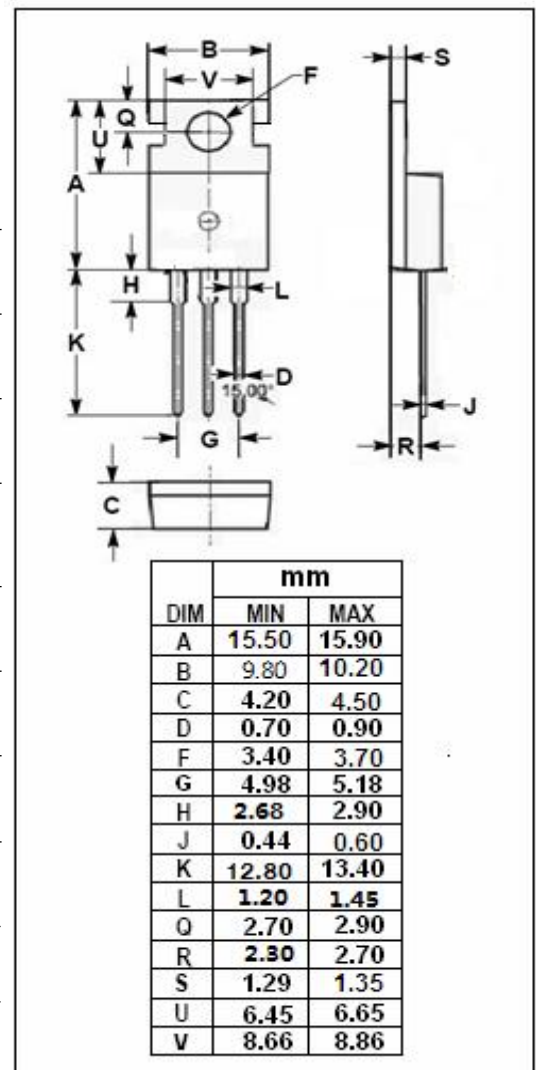
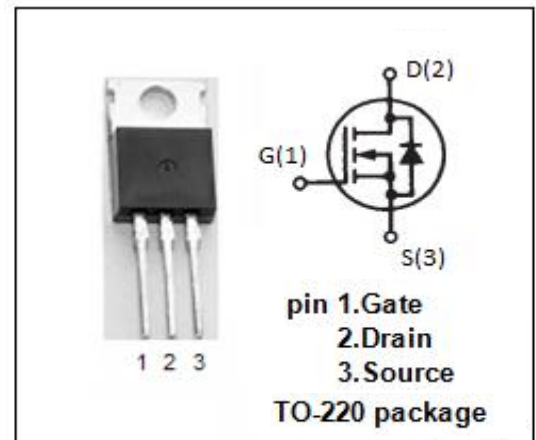
- Designed for Switched Mode Power Supplies (SMPS), motor control, welding, and in general purpose switching resistance applications

ABSOLUTE MAXIMUM RATINGS( $T_a = 25^\circ\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DS}$	Drain-Source Voltage ( $V_{GS}=0$ )	50	V
$V_{GS}$	Gate-Source Voltage	$\pm 15$	V
$I_D$	Drain Current-continuous @ $T_C = 25^\circ\text{C}$	BUK555-50A	A
		BUK555-50B	
$P_{tot}$	Total Dissipation @ $T_C = 25^\circ\text{C}$	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<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		50	--	V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> = 1.0mA		1.0	2.0	V
R <sub>DS(on)</sub>	Drain-Source On-stage Resistance	V <sub>GS</sub> = 5V; I <sub>D</sub> = 20A	BUK555-50A	--	42	mΩ
			BUK555-50B	--	55	mΩ
I <sub>GSS</sub>	Gate Source Leakage Current	V <sub>GS</sub> = ±15V; V <sub>DS</sub> = 0		--	±100	nA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> = 50V; V <sub>GS</sub> = 0		--	10	μA
V <sub>SD</sub>	Forward On-Voltage	I <sub>S</sub> = 39A; V <sub>GS</sub> = 0		--	2	V

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