

isc N-Channel MOSFET Transistor

BUK657-500A/B/C

DESCRIPTION

- Drain Source Voltage
: $V_{DS} = 500V(\text{Min})$
- Low $R_{DS(ON)}$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

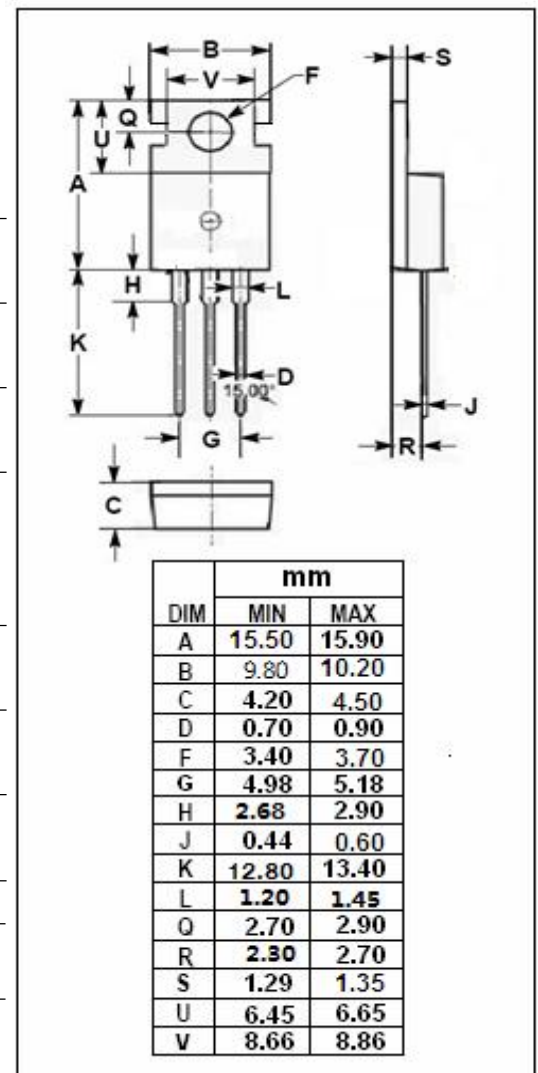
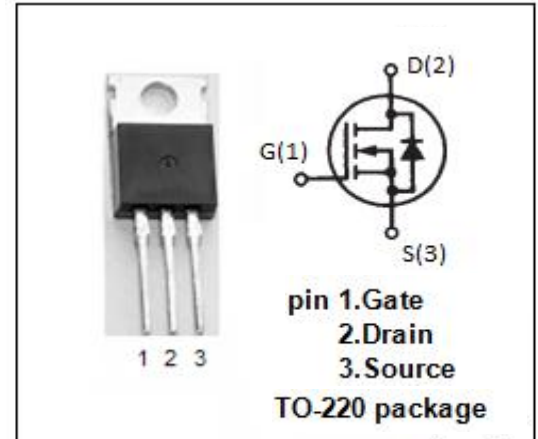
- Designed for Switched Mode Power Supplies (SMPS), motor control, welding, and in general purpose switching resistance applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage ($V_{GS}=0$)	500	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-continuous @ $T_C = 25^\circ\text{C}$	BUK657-500A	10
		BUK657-500B	9
		BUK657-500C	8.5
P_{tot}	Total Dissipation @ $T_C = 25^\circ\text{C}$	150	W
T_j	Max. Operating Junction Temperature	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	0.83	$^\circ\text{C/W}$



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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		500	--	V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D = 1.0mA		2.1	40	V
R _{DS(on)}	Drain-Source On-stage Resistance	V _{GS} = 10V; I _D = 6.5A	BUK657-500A	--	0.65	Ω
			BUK657-500B	--	0.8	Ω
			BUK657-500C		0.9	Ω
I _{GSS}	Gate Source Leakage Current	V _{GS} = ±30V; V _{DS} = 0		--	±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 500V; V _{GS} = 0		--	20	uA
V _{SD}	Forward On-Voltage	I _S = 10A; V _{GS} = 0		--	1.5	V

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