

isc N-Channel MOSFET Transistor

2SK642

DESCRIPTION

- Drain Current $-I_D=10A@ T_C=25^{\circ}C$
- Drain Source Voltage-
: $V_{DSS}=500V(\text{Min})$
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

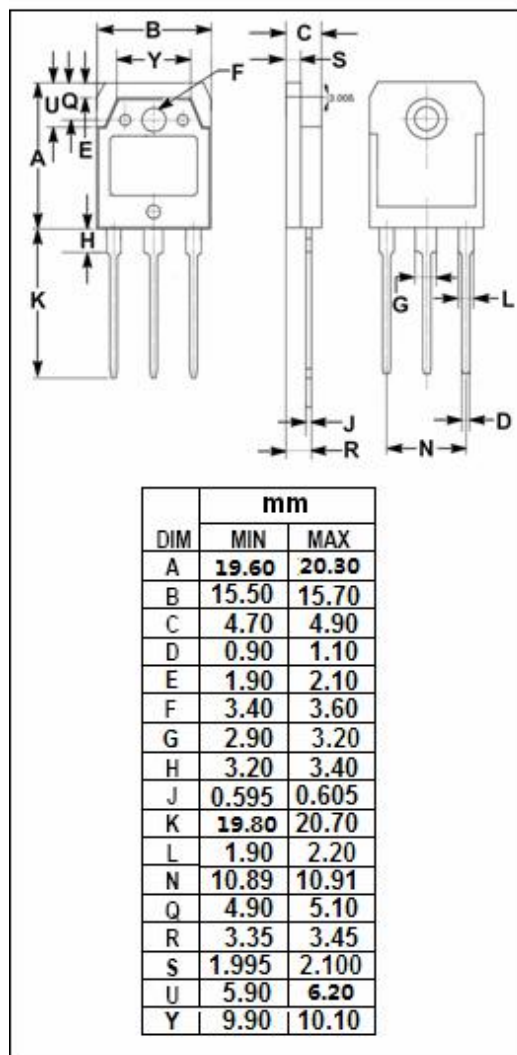
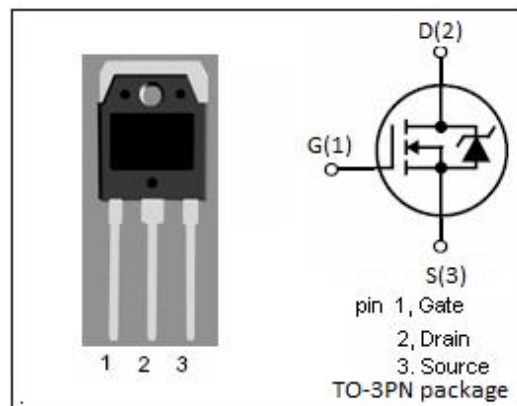
- low on-resistance
- High speed switching
- Low drive current
- No secondary breakdown
- Suitable for switching regulator, DC-DC convertor

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

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@ $T_C=25^{\circ}C$	10	A
P_{tot}	Total Dissipation@ $T_C=25^{\circ}C$	100	W
T_j	Max. Operating Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1.67	$^{\circ}C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^{\circ}C/W$



isc N-Channel Mosfet Transistor**2SK642****• ELECTRICAL CHARACTERISTICS (T_c=25°C)**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0; I _D = 10mA	500			V
V _{GS(TH)}	Gate Threshold Voltage	V _{DS} = 10V; I _D = 1mA	2.0		4.0	V
R _{DS(ON)}	Drain-Source On-stage Resistance	V _{GS} = 10V; I _D =5A		0.7	1.0	Ω
V _{SD}	Diode Forward Voltage	I _F = 10A; V _{GS} =0		1.0		V
I _{GSS}	Gate Source Leakage Current	V _{GS} = ±16V; V _{DS} = 0			±10	uA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =400V; V _{GS} = 0			250	uA

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