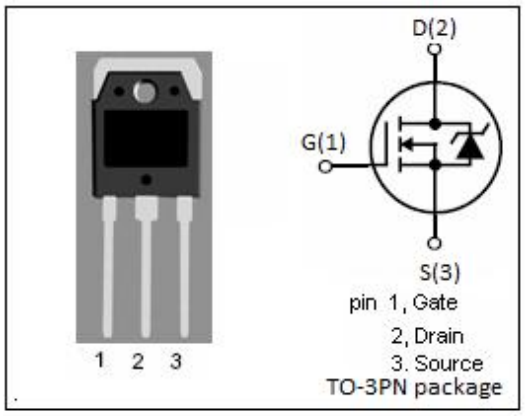
isc N-Channel MOSFET Transistor 2SK642

DESCRIPTION

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



APPLICATIONS

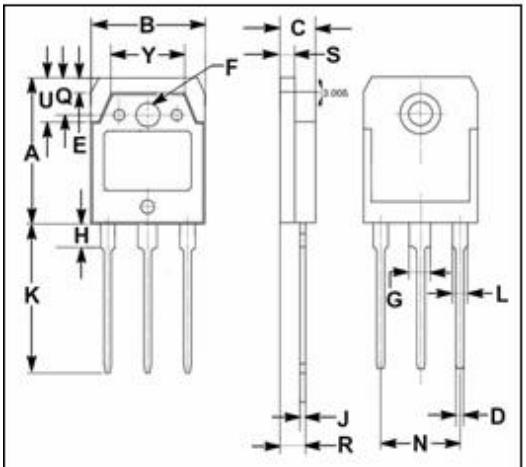
- low on–resistance
- High speed switching
- Low drive current
- No secondary breakdown
- Suitable for switchingregulator, DC–DC convertor

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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@ TC=25℃	10	A
P_{tot}	Total Dissipation@TC=25℃	100	W
T_j	Max. Operating Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

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



DIM	mm MIN	MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

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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= 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