

isc N-Channel MOSFET Transistor

2SK2150

DESCRIPTION

- Drain Current $I_D = 15A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 500V(\text{Min})$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

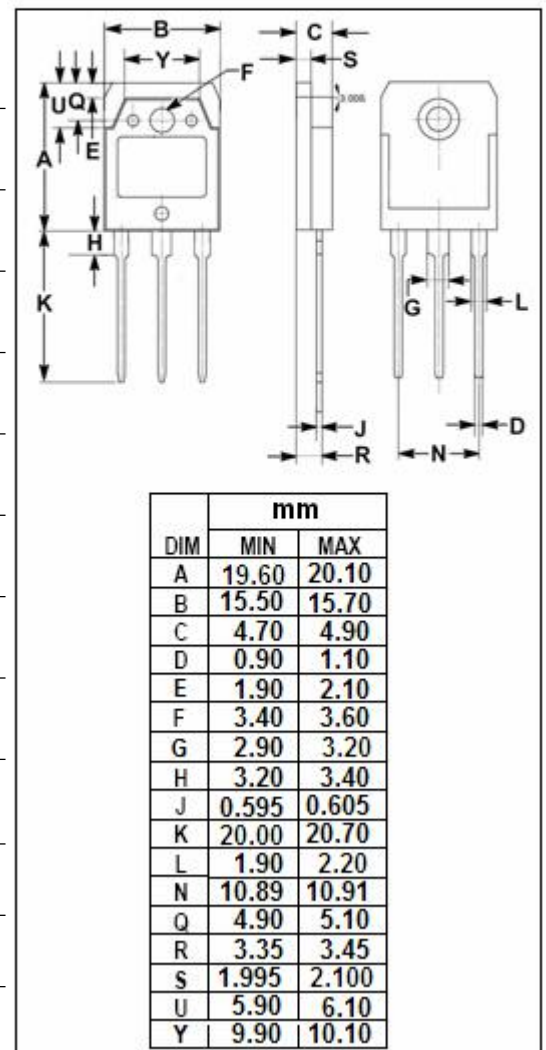
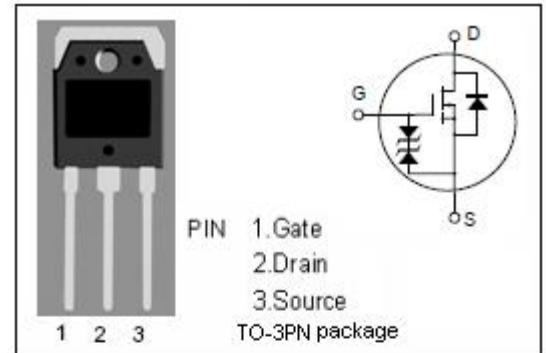
- Switching regulators
- General purpose power amplifier

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS}=0$)	500	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-continuous@ $T_C = 25^\circ C$	15	A
$I_{D(\text{puls})}$	Pulsed Drain Current	60	A
P_{tot}	Total Dissipation@ $T_C = 25^\circ C$	150	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
$R_{\text{th j-c}}$	Thermal Resistance, Junction to Case	0.833	$^\circ C/W$
$R_{\text{th j-a}}$	Thermal Resistance, Junction to Ambient	50	$^\circ C/W$



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• ELECTRICAL CHARACTERISTICS (T_c=25°C)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	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
V _{DS}	Diode Forward Voltage	I _{DR} =15A; V _{GS} = 0			1.7	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 7A		0.29	0.4	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±25V; V _{DS} = 0			± 10	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 500V; V _{GS} = 0			100	μA
C _{iss}	Input Capacitance	V _{DS} =25V;		2350		pF
C _{rss}	Reverse Transfer Capacitance	V _{GS} =0V;		200		
C _{oss}	Output Capacitance	f _r =1MHz		730		
t _r	Rise Time	V _{GS} =10V;		20		ns
t _{on}	Turn-on Time	I _D =7A;		55		
t _f	Fall Time	V _{DD} =210V;		40		
t _{off}	Turn-off Time	R _L =30 Ω		235		

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