

isc N-Channel MOSFET Transistor

2SK2398

DESCRIPTION

- Drain Current $I_D = 45A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 60V(\text{Min})$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

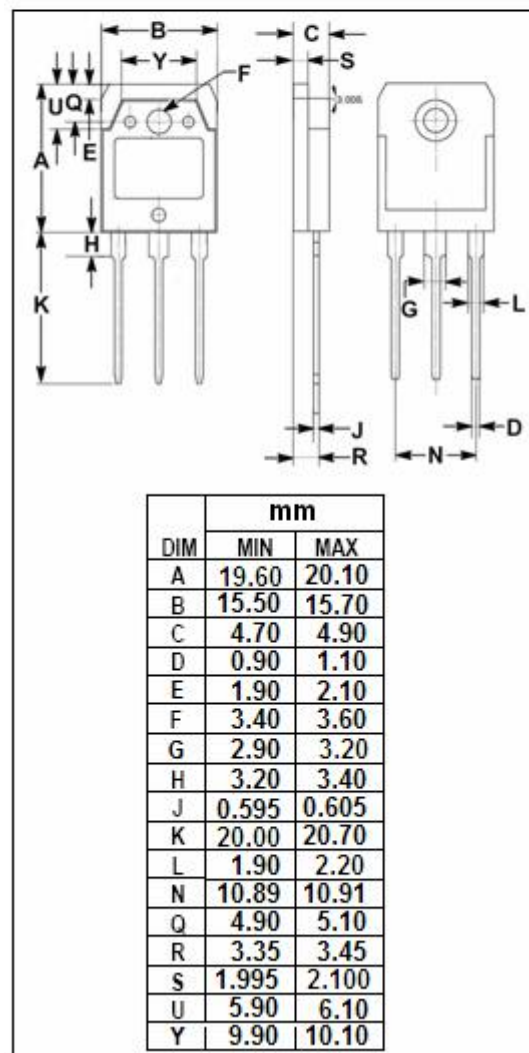
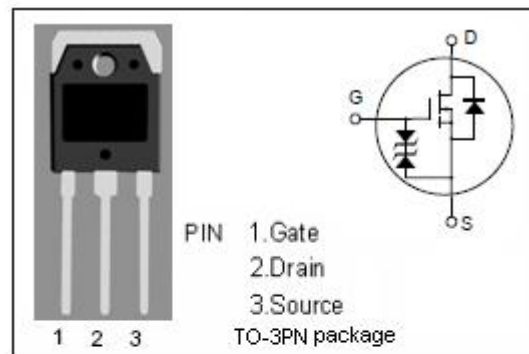
- Switching regulators
- UPS
- DC-DC converters
- General purpose power amplifier

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

SYMBOL	ARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS}=0$)	60	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-continuous@ $T_C = 25^\circ C$	45	A
$I_{D(puls)}$	Pulsed Drain Current	180	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	1.25	$^\circ C/W$
$R_{th j-a}$	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	60			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = 10V; I _D =1mA	1.5		3.0	V
V _{SD}	Diode Forward on-Voltage	I _S = 45A; V _{GS} = 0			1.8	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 25A			0.03	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±16V; V _{DS} = 0			±10	μA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 60V; V _{GS} = 0			100	μA
C _{iss}	Input Capacitance	V _{DS} =25V;		1800		pF
C _{rss}	Reverse Transfer Capacitance	V _{GS} =0V;		350		
C _{oss}	Output Capacitance	f _T =1MHz		900		
t _r	Rise Time	V _{GS} =10V;		20		ns
t _{on}	Turn-on Time	I _D =25A;		30		
t _f	Fall Time	V _{DD} =30V;		40		
t _{off}	Turn-off Time	R _L =1.2 Ω		130		

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