

isc N-Channel MOSFET Transistor

2SK1278

DESCRIPTION

- Drain Current $-I_D = 10A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 500V(\text{Min})$
- Fast Switching Speed

APPLICATIONS

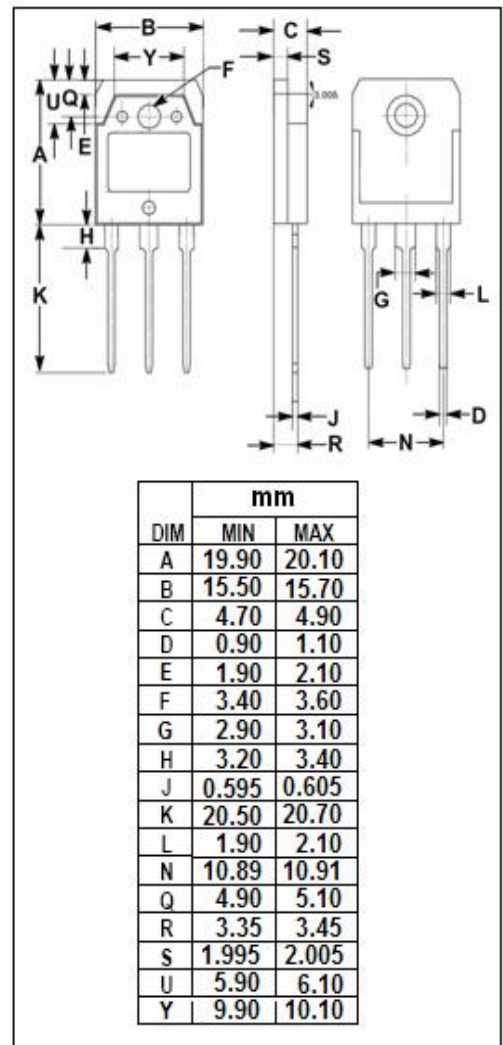
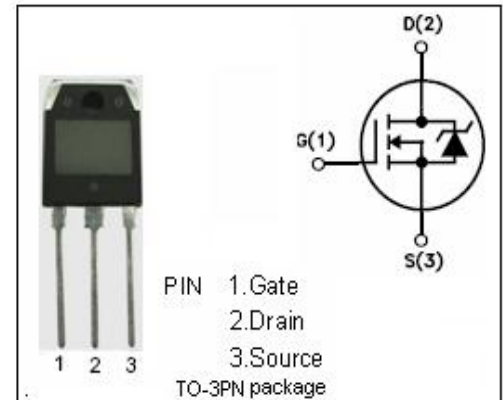
- Designed for high voltage, high speed power switching

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	± 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
th_{j-c}	Thermal Resistance, Junction to Case	1.25	$^\circ C/W$
th_{j-a}	Thermal Resistance, Junction to Ambient	35.0	$^\circ C/W$



isc N-Channel Mosfet Transistor

2SK1278

• ELECTRICAL CHARACTERISTICS ($T_C=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=1\text{mA}$	500			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=0\text{V}; I_D=10\text{mA}$	2.1	3.0	4.0	V
$R_{DS(on)}$	Drain-Source On-stage Resistance	$V_{GS}=10\text{V}; I_D=5\text{A}$		0.8	1.1	Ω
I_{GSS}	Gate Source Leakage Current	$V_{GS}=\pm 20\text{V}; V_{DS}=0$			± 100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=500\text{V}; V_{GS}=0$			500	μA
V_{SD}	Diode Forward Voltage	$I_F=10\text{A}; V_{GS}=0$		0.95	1.8	V
t_r	Rise time	$V_{GS}=10\text{V}; I_D=10\text{A}; R_L=25\ \Omega$		60	90	ns
t_{on}	Turn-on time			85	130	ns
t_f	Fall time			90	140	ns
t_{off}	Turn-off time			200	300	ns