

isc N-Channel MOSFET Transistor

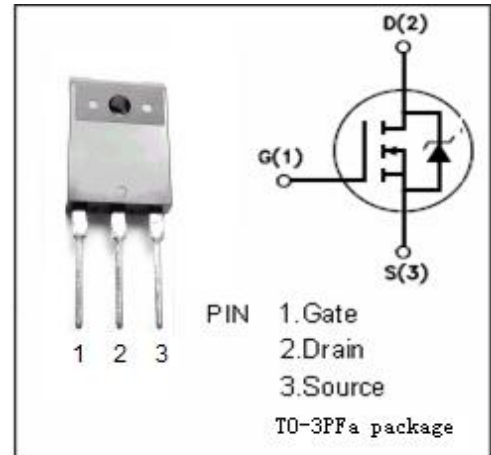
2SK809

DESCRIPTION

- Drain Current $-I_D=5A @ T_C=25^\circ C$
- Drain Source Voltage-
: $V_{DSS}=800V(\text{Min})$
- Fast Switching Speed

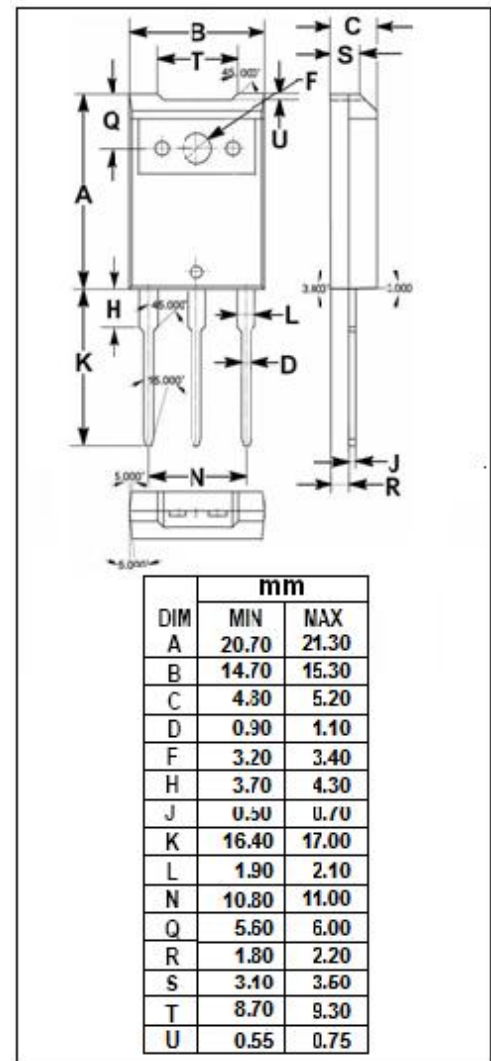
APPLICATIONS

- Designed for high voltage, high speed power switching applications such as switching regulators, converters, solenoid and relay drivers.



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

SYMBOL	ARAMETER	VALUE	NIT
V_{DSS}	Drain-Source Voltage ($V_{GS}=0$)	800	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-continuous@ $TC=25^\circ C$	5	A
P_{tot}	Total Dissipation@ $TC=25^\circ C$	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	1.0	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance,Junction to Ambient	62.5	$^\circ C/W$

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=10\text{mA}$	800			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=25 V_{GS}; I_D=1\text{mA}$	1.0		5.0	V
$R_{DS(on)}$	Drain-Source On-stage Resistance	$V_{GS}=10\text{V}; I_D=3\text{A}$		1.5	3.0	Ω
I_{GSS}	Gate Source Leakage Current	$V_{GS}= \pm 20\text{V}; V_{DS}=0$			± 1	μA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=640\text{V}; V_{GS}=0$			0.1	mA
t_{on}	Turn-on time	$V_{GS}=10\text{V}; I_D=3\text{A};$		60		ns
t_{off}	Turn-off time	$R_L=66 \Omega$		365		ns