

**isc N-Channel MOSFET Transistor**

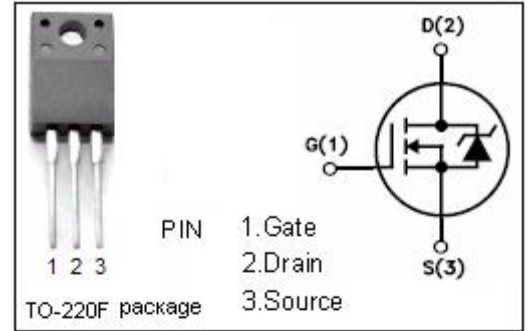
**2SK1603**

**DESCRIPTION**

- Drain Current  $-I_D = 2.5A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS} = 900V(\text{Min})$

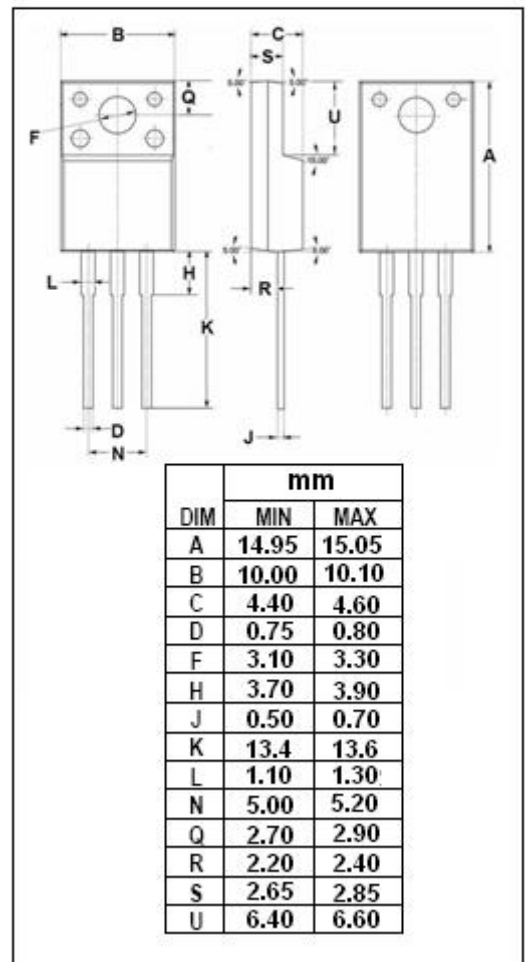
**APPLICATIONS**

- 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	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage ( $V_{GS} = 0$ )	900	V
$V_{GS}$	Gate-Source Voltage	$\pm 30$	V
$I_D$	Drain Current-continuous@ $T_C = 25^\circ C$	2.5	A
$P_{tot}$	Total Dissipation@ $T_C = 25^\circ C$	40	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	3.125	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ C/W$

## isc N-Channel Mosfet Transistor

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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	$V_{GS}=0; I_D=10\text{mA}$	900			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=10 V_{GS}; I_D=1\text{mA}$	1.5		3.5	V
$R_{DS(on)}$	Drain-Source On-stage Resistance	$V_{GS}=10\text{V}; I_D=1.5\text{A}$			6.4	$\Omega$
$I_{GSS}$	Gate Source Leakage Current	$V_{GS}= \pm 25\text{V}; V_{DS}= 0$			$\pm 100$	nA
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS}=720\text{V}; V_{GS}= 0$			100	$\mu\text{A}$
$V_{SD}$	Diode Forward Voltage	$I_F=2.5\text{A}; V_{GS}=0$			2.0	V
$t_r$	Rise time	$V_{GS}=10\text{V}; I_D=1.5\text{A}; R_L=267 \Omega$		25	50	ns
$t_{on}$	Turn-on time			40	60	ns
$t_f$	Fall time			40	80	ns
$t_{off}$	Turn-off time			150	300	ns