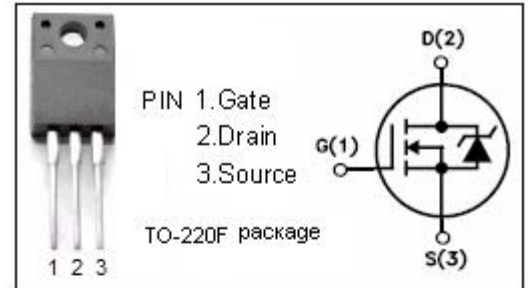


**isc N-Channel MOSFET Transistor**
**2SK2002-01M**
**DESCRIPTION**

- Drain Current  $-I_D = 3A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS} = 600V(\text{Min})$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

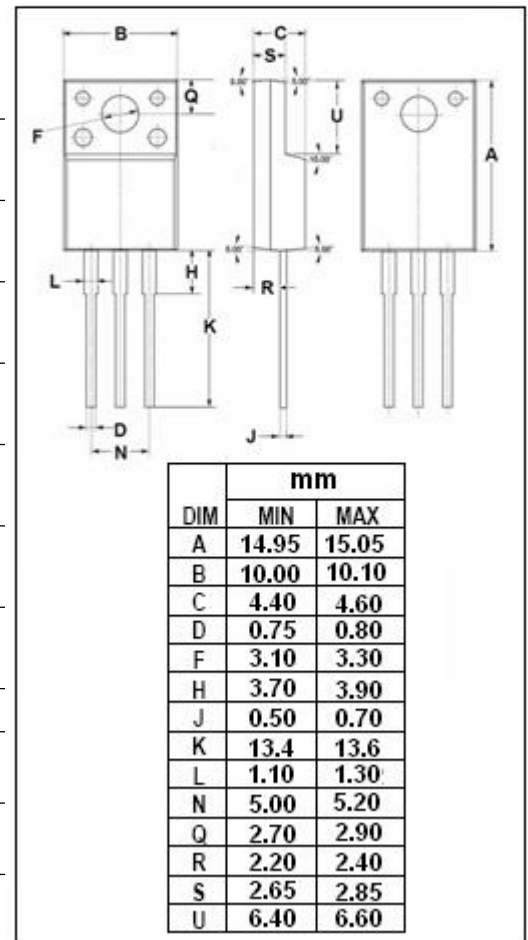
- Switching regulators
- UPS
- General purpose power amplifier


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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage ( $V_{GS} = 0$ )	600	V
$V_{GS}$	Gate-Source Voltage	$\pm 30$	V
$I_D$	Drain Current-continuous@ $T_C = 25^\circ C$	3	A
$P_{tot}$	Total Dissipation@ $T_C = 25^\circ C$	30	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	4.17	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ C/W$



## isc N-Channel Mosfet Transistor

## 2SK2002-01M

## • ELECTRICAL CHARACTERISTICS (TC=25°C)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=1mA$	600			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=1mA$	2.5		3.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=1.5A$		4.0	4.5	$\Omega$
$I_{GSS}$	Gate-Body Leakage Current	$V_{GS}= \pm 30V; V_{DS}=0$			$\pm 100$	nA
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS}=600V; V_{GS}=0$			500	$\mu A$
$C_{iss}$	Input capacitance	$V_{DS}=25V; V_{GS}=0V; f_r=1MHz$		600	900	pF
$C_{rss}$	Reverse transfer capacitance			10	15	
$C_{oss}$	Output capacitance			50	75	
$t_r$	Rise time	$V_{GS}=10V; I_D=3A;$ $V_{DD}=300V;$ $R_L=10\Omega$		10	15	ns
$t_{d(on)}$	Turn-on delay time			15	25	
$t_f$	Fall time			10	15	
$t_{d(off)}$	Turn-off delay time			40	60	

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