



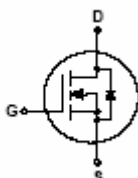
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOT-523 Plastic-Encapsulate Transistors

2N7002T MOSFET (N-Channel)

FEATURES

- High density cell design for low $R_{DS(ON)}$
- Voltage controlled small signal switch
- Rugged and reliable
- High saturation current capability



Marking: K72

SOT-523



1. GATE
2. SOURCE
3. DRAIN

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{DS}	Drain-Source voltage	60	V
I_D	Drain Current	115	mA
P_D	Power Dissipation	150	mW
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0\text{ V}$, $I_D=10\text{ }\mu\text{A}$	60			V
Gate-Threshold Voltage	$V_{th(GS)}$	$V_{DS}=V_{GS}$, $I_D=250\text{ }\mu\text{A}$	1		2.5	
Gate-body Leakage	I_{GSS}	$V_{DS}=0\text{ V}$, $V_{GS}=\pm 25\text{ V}$			± 80	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=60\text{ V}$, $V_{GS}=0\text{ V}$			80	nA
On-state Drain Current	$I_{D(ON)}$	$V_{GS}=10\text{ V}$, $V_{DS}=7\text{ V}$	500			mA
Drain-Source On-Resistance	$r_{DS(on)}$	$V_{GS}=10\text{ V}$, $I_D=500\text{ mA}$	1		7.5	Ω
		$V_{GS}=5\text{ V}$, $I_D=50\text{ mA}$	1		7.5	
Forward Trans conductance	g_{fs}	$V_{DS}=10\text{ V}$, $I_D=200\text{ mA}$	80		500	ms
Drain-source on-voltage	$V_{DS(on)}$	$V_{GS}=10\text{ V}$, $I_D=500\text{ mA}$	0.5		3.75	V
		$V_{GS}=5\text{ V}$, $I_D=50\text{ mA}$	0.05		0.375	V
Diode Forward Voltage	V_{SD}	$I_S=115\text{ mA}$, $V_{GS}=0\text{ V}$	0.55		1.2	V
Input Capacitance	C_{iss}	$V_{DS}=25\text{ V}$, $V_{GS}=0\text{ V}$, $f=1\text{ MHz}$			50	pF
Output Capacitance	C_{OSS}				25	
Reverse Transfer Capacitance	C_{rSS}				5	

SWITCHING TIME

Turn-on Time	$t_{d(on)}$	$V_{DD}=25\text{ V}$, $R_L=50\Omega$ $I_D=500\text{ mA}$, $V_{GEN}=10\text{ V}$ $R_G=25\Omega$			20	ns
Turn-off Time	$t_{d(off)}$				40	

Typical characteristics

2N7002T

