

2SK423

FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE (π -MOS)

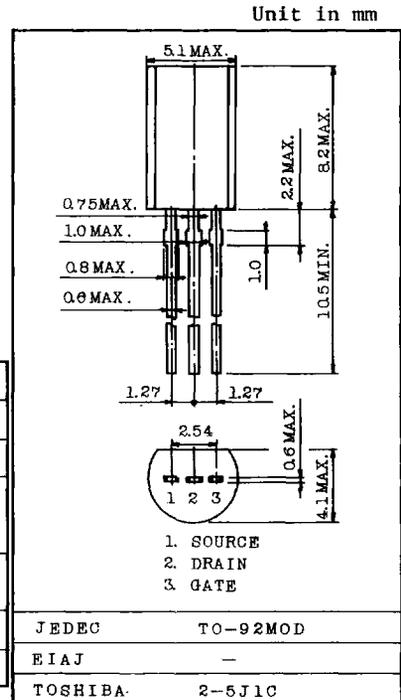
HIGH SPEED SWITCHING APPLICATIONS.
DC-DC CONVERTER AND INTERFACE APPLICATIONS.

FEATURES:

- Excellent Switching Times : $t_{off}=20\text{ns}$ (Typ.)
- High Forward Transfer Admittance : $|Y_{fs}|=150\text{mS}$ (Typ.)
@ $I_D=0.3\text{A}$
- Low Leakage Current : $I_{GSS}=\pm 100\text{nA}$ (Max.) @ $V_{GS}=\pm 20\text{V}$
 $I_{DSS}=1\text{mA}$ (Max.) @ $V_{DS}=100\text{V}$
- Enhancement-Mode : $V_{th}=1.5 \sim 3.5\text{V}$ @ $I_D=1\text{mA}$

MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Drain-Source Voltage		V_{DSX}	100	V
Gate-Source Voltage		V_{GSS}	± 20	V
Drain Current	DC	I_D	0.5	A
	Pulse	I_{DP}	0.8	
Drain Power Dissipation ($T_a=25^\circ\text{C}$)		P_D	900	mW
Channel Temperature		T_{ch}	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	$-55 \sim 150$	$^\circ\text{C}$



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

Weight : 0.36g

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		I_{GSS}	$V_{GS}=\pm 20\text{V}$, $V_{DS}=0$	-	-	± 100	nA
Drain Cut-off Current		I_{DSS}	$V_{DS}=100\text{V}$, $V_{GS}=0$	-	-	1.0	mA
Drain-Source Breakdown Voltage		$V(BR)_{DSS}$	$I_D=10\text{mA}$, $V_{GS}=0$	100	-	-	V
Gate Threshold Voltage		V_{th}	$V_{DS}=10\text{V}$, $I_D=1\text{mA}$	1.5	-	3.5	V
Forward Transfer Admittance		$ Y_{fs} $	$V_{DS}=10\text{V}$, $I_D=0.3\text{A}$	50	150	-	mS
Drain-Source ON Resistance		$R_{DS(ON)}$	$I_D=0.3\text{A}$, $V_{GS}=10\text{V}$	-	2.4	4.5	Ω
Drain-Source ON Voltage		$V_{DS(ON)}$	$I_D=0.8\text{A}$, $V_{GS}=10\text{V}$	-	2.5	4.3	V
Input Capacitance		C_{iss}	$V_{DS}=10\text{V}$, $V_{GS}=0$, $f=1\text{MHz}$	-	40	70	pF
Reverse Transfer Capacitance		C_{rss}	$V_{DS}=10\text{V}$, $V_{GS}=0$, $f=1\text{MHz}$	-	14	30	pF
Output Capacitance		C_{oss}	$V_{DS}=10\text{V}$, $V_{GS}=0$, $f=1\text{MHz}$	-	50	80	pF
Switching Time	Rise Time	t_r		-	10	20	ns
	Turn-on Time	t_{on}		-	15	30	
	Fall Time	t_f		-	13	25	
	Turn-off Time	t_{off}		-	20	40	

THIS TRANSISTOR IS THE ELECTROSTATIC SENSITIVE DEVICE. PLEASE HANDLE WITH CAUTION.

