

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

2SK422

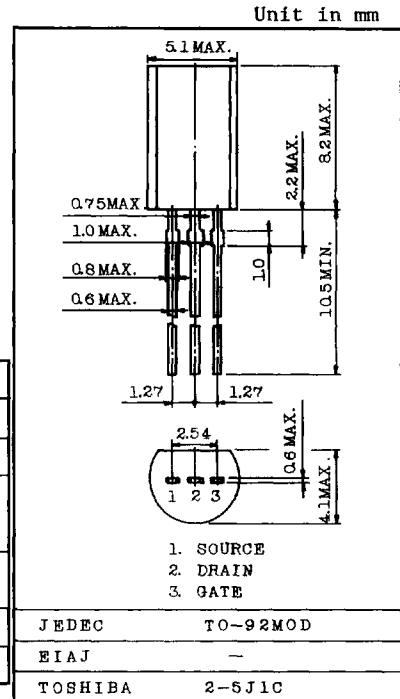
HIGH SPEED SWITCHING APPLICATIONS.
DC-DC CONVERTER AND INTERFACE APPLICATIONS.

FEATURES:

- . Excellent Switching Times : $t_{off}=12ns$ (Typ.)
- . High Forward Transfer Admittance : $|Y_{fs}|=220mS$ (Typ.)
@ $I_D=0.5A$
- . Low Leakage Current : $I_{GSS}=\pm 100nA$ (Max.) @ $V_{GS}=\pm 20V$
 $I_{DSS}=1mA$ (Max.) @ $V_{DS}=60V$
- . Enhancement-Mode : $V_{th}=1.5 \sim 3.5V$ @ $I_D=1mA$

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Drain-Source Voltage		V_{DSX}	60	V
Gate-Source Voltage		V_{GSS}	± 20	V
Drain Current	DC	I_D	0.7	A
	Pulse	I_{DP}	1.0	
Drain Power Dissipation ($T_a=25^\circ C$)		P_D	900	mW
Channel Temperature		T_{ch}	150	$^\circ C$
Storage Temperature Range		T_{stg}	-55 ~ 150	$^\circ C$



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

Weight : 0.36g

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0$	-	-	± 100	nA
Drain Cut-off Current		I_{DSS}	$V_{DS}=60V, V_{GS}=0$	-	-	1.0	mA
Drain-Source Breakdown Voltage		$V(BR)_{DSS}$	$I_D=10mA, V_{GS}=0$	60	-	-	V
Gate Threshold Voltage		V_{th}	$V_{DS}=10V, I_D=1mA$	1.5	-	3.5	V
Forward Transfer Admittance		$ Y_{fs} $	$V_{DS}=10V, I_D=0.5A$	80	220	-	mS
Drain-Source ON Resistance		$R_{DS(ON)}$	$I_D=0.5A, V_{GS}=10V$	-	1.4	2.8	Ω
Drain-Source ON Voltage		$V_{DS(ON)}$	$I_D=1A, V_{GS}=10V$	-	2	4	V
Input Capacitance		C_{iss}	$V_{DS}=10V, V_{GS}=0, f=1MHz$	-	45	70	pF
Reverse Transfer Capacitance		C_{rss}	$V_{DS}=10V, V_{GS}=0, f=1MHz$	-	20	35	pF
Output Capacitance		C_{oss}	$V_{DS}=10V, V_{GS}=0, f=1MHz$	-	60	100	pF
Switching Time	Rise Time	t_r		-	11	20	ns
	Turn-on Time	t_{on}		-	17	35	
	Fall Time	t_f		-	6	10	
	Turn-off Time	t_{off}		-	12	25	

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

