

9097250 TOSHIBA (DISCRETE/OPTO)

查询 2SK422 供应商

99D 16674 D

T-35-25



SEMICONDUCTOR

## TECHNICAL DATA

TOSHIBA FIELD EFFECT TRANSISTOR

2SK422

SILICON N CHANNEL MOS TYPE

(π-MOS)

INDUSTRIAL APPLICATIONS

Unit in mm

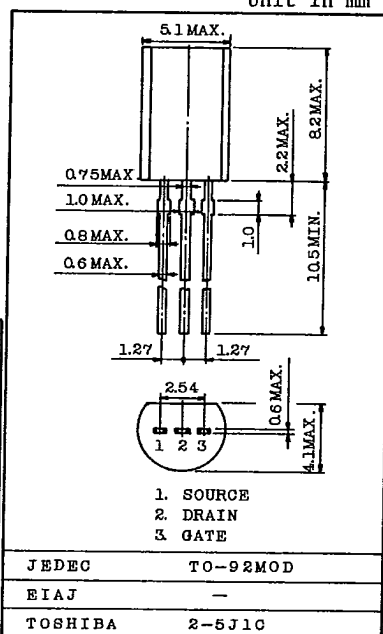
HIGH SPEED SWITCHING APPLICATIONS.  
DC-DC CONVERTER AND INTERFACE APPLICATIONS.

## FEATURES:

- Excellent Switching Times :  $t_{off}=12\text{ns(Typ.)}$
- High Forward Transfer Admittance :  $|Y_{fs}|=220\text{mS(Typ.)}$   
@ $I_D=0.5\text{A}$
- Low Leakage Current :  $I_{GSS}=\pm 100\text{nA(Max.)}$  @ $V_{GS}=\pm 20\text{V}$   
 $I_{DSS}=1\text{mA(Max.)}$  @ $V_{DS}=60\text{V}$
- 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	$V_{DSX}$	60	V
Gate-Source Voltage	$V_{GSS}$	$\pm 20$	V
Drain Current	DC	$I_D$	0.7
	Pulse	$I_{DP}$	1.0
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 ~ 150	$^\circ\text{C}$

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT		
Gate Leakage Current	$I_{GSS}$	$V_{GS}=\pm 20\text{V}, V_{DS}=0$	-	-	$\pm 100$	nA		
Drain Cut-off Current	$I_{DSS}$	$V_{DS}=60\text{V}, V_{GS}=0$	-	-	1.0	mA		
Drain-Source Breakdown Voltage	$V(BR)_{DSS}$	$I_D=10\text{mA}, V_{GS}=0$	60	-	-	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} $	$V_{DS}=10\text{V}, I_D=0.5\text{A}$	80	220	-	nS		
Drain-Source ON Resistance	$R_{DS(ON)}$	$I_D=0.5\text{A}, V_{GS}=10\text{V}$	-	1.4	2.8	$\Omega$		
Drain-Source ON Voltage	$V_{DS(ON)}$	$I_D=1\text{A}, V_{GS}=10\text{V}$	-	2	4	V		
Input Capacitance	$C_{iss}$	$V_{DS}=10\text{V}, V_{GS}=0, f=1\text{MHz}$	-	45	70	pF		
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=10\text{V}, V_{GS}=0, f=1\text{MHz}$	-	20	35	pF		
Output Capacitance	$C_{oss}$	$V_{DS}=10\text{V}, V_{GS}=0, f=1\text{MHz}$	-	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.

TOSHIBA CORPORATION

GT1A2

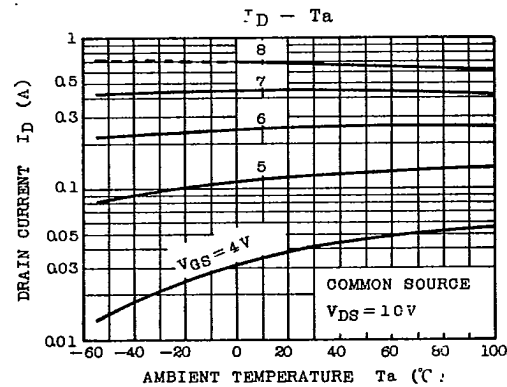
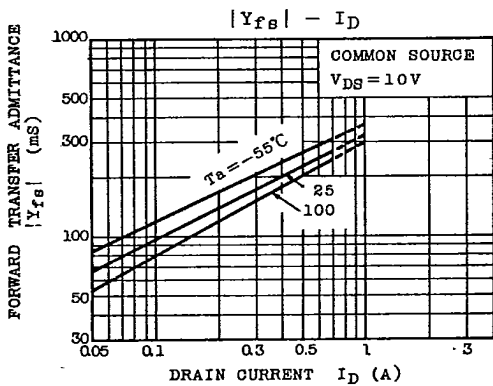
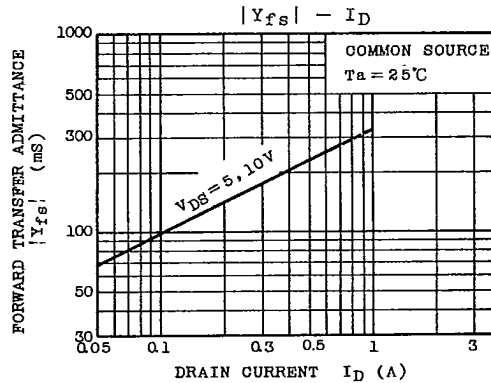
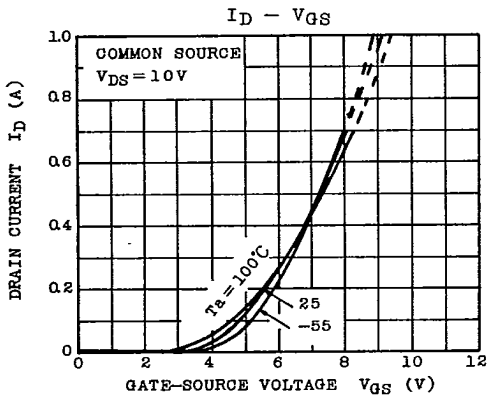
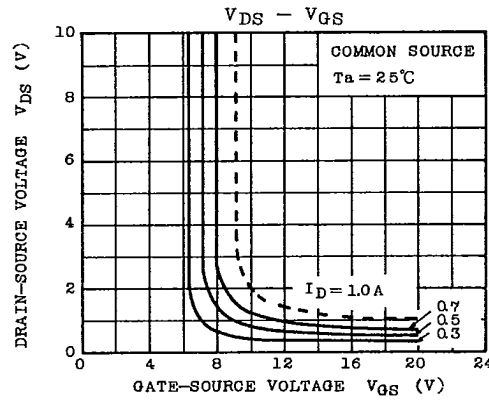
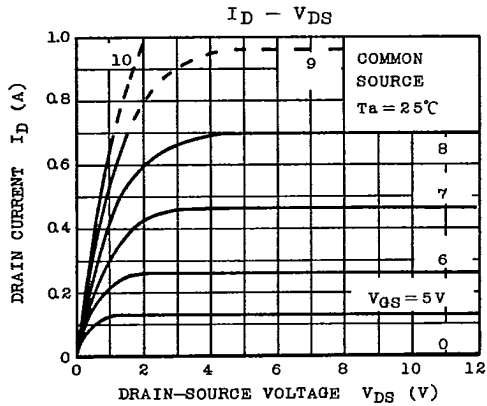
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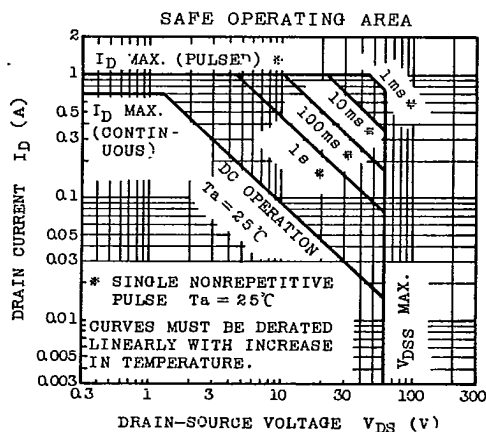
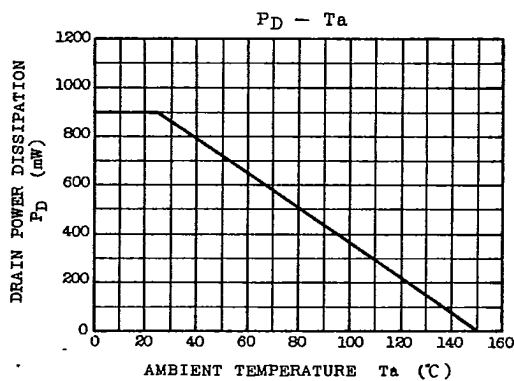
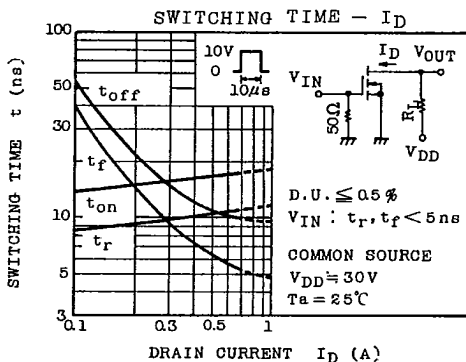
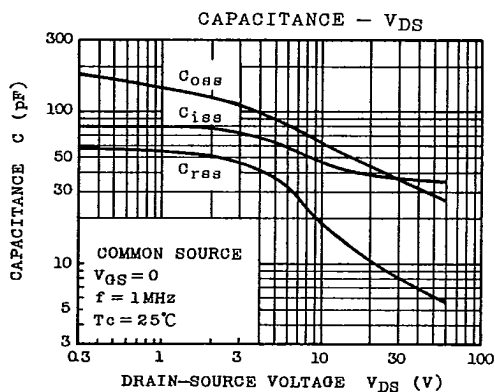
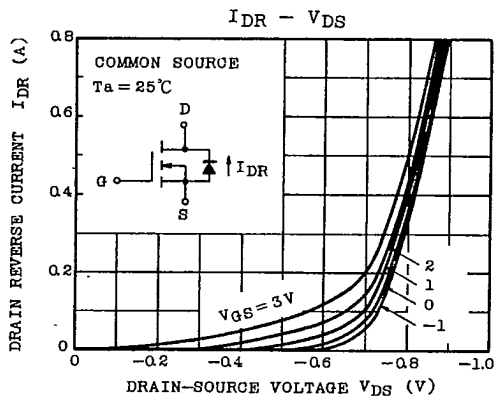
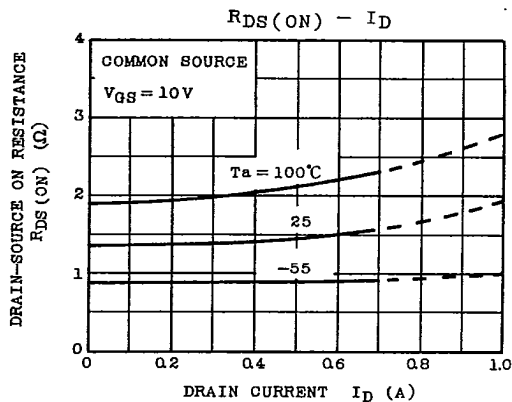
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