

9097250 TOSHIBA (DISCRETE/OPTO)

99D 16769 DT-39-13



## SEMICONDUCTOR

## TECHNICAL DATA

TOSHIBA FIELD EFFECT TRANSISTOR

2SK794

SILICON N CHANNEL MOS TYPE

(π-MOS)

HIGH SPEED, HIGH VOLTAGE SWITCHING APPLICATIONS.  
SWITCHING REGULATOR AND MOTOR DRIVE APPLICATIONS.

## FEATURES:

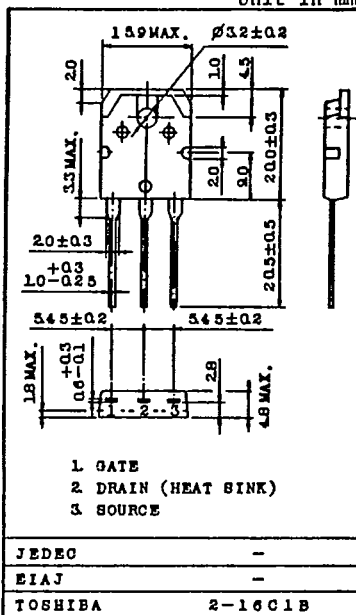
- High Breakdown Voltage :  $V_{(BR)DSS}=900V$
- High Forward Transfer Admittance :  $|Y_{fs}|=1.7S(\text{Typ.})$
- Low Leakage Current :  $I_{GSS}=\pm 100nA(\text{Max.})$  ( $V_{GS}=\pm 20V$ )  
 $I_{DSS}=300\mu A(\text{Max.})$  ( $V_{DS}=900V$ )
- Enhancement-Mode :  $V_{th}=1.5 \sim 3.5V$  ( $I_D=1mA$ )

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	$V_{DS}$	900	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Drain Current	DC	$I_D$	5
	Pulse	$I_{DP}$	10
Drain Power Dissipation ( $T_c=25^\circ C$ )	$P_D$	150	W
Channel Temperature	$T_{ch}$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	$-55 \sim 150$	$^\circ C$

## INDUSTRIAL APPLICATIONS

Unit in mm



Weight : 4.6g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Gate Leakage Current	$I_{GSS}$	$V_{GS}=\pm 20V, V_{DS}=0$	-	-	$\pm 100$	nA	
Drain Cut-off Current	$I_{DSS}$	$V_{DS}=900V, V_{GS}=0$	-	-	300	$\mu A$	
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=10mA, V_{GS}=0$	900	-	-	V	
Gate Threshold Voltage	$V_{th}$	$V_{DS}=10V, I_D=1mA$	1.5	-	3.5	V	
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS}=10V, I_D=3A$	1.0	1.7	-	S	
Drain-Source ON Resistance	$R_{DS(ON)}$	$I_D=3A, V_{GS}=10V$	-	2.1	2.5	$\Omega$	
Drain-Source ON Voltage	$V_{DS(ON)}$	$I_D=5A, V_{GS}=10V$	-	11	13	V	
Input Capacitance	$C_{iss}$	$V_{DS}=25V, V_{GS}=0, f=1MHz$	-	1400	1900	pF	
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=25V, V_{GS}=0, f=1MHz$	-	110	200	pF	
Output Capacitance	$C_{oss}$	$V_{DS}=25V, V_{GS}=0, f=1MHz$	-	190	300	pF	
Switching Time	Rise Time	$t_r$		-	110	220	ns
	Turn-on Time	$t_{on}$		-	130	260	
	Fall Time	$t_f$		-	90	260	
	Turn-off Time	$t_{off}$		-	480	900	

TOSHIBA CORPORATION

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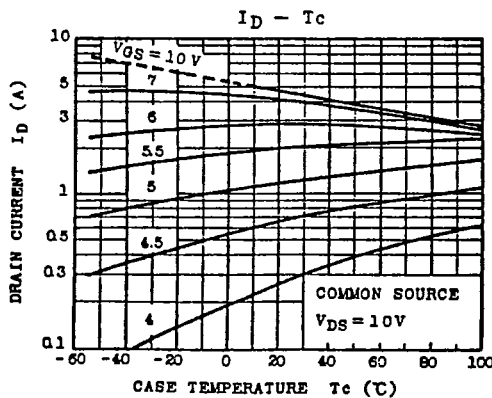
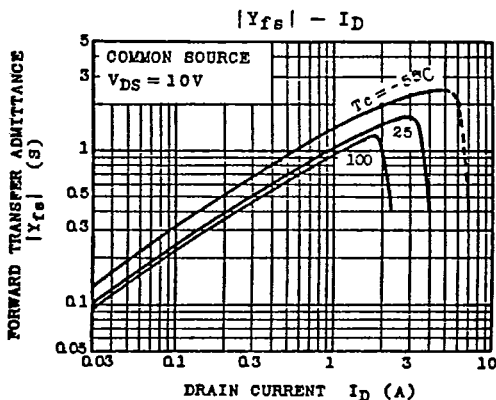
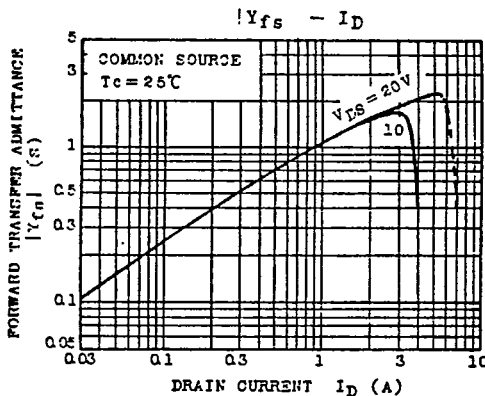
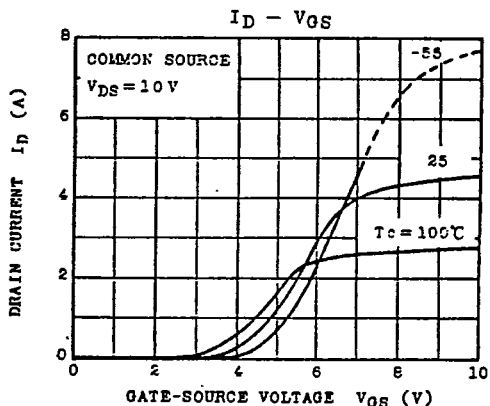
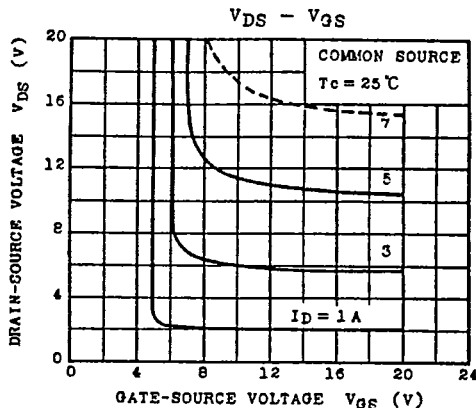
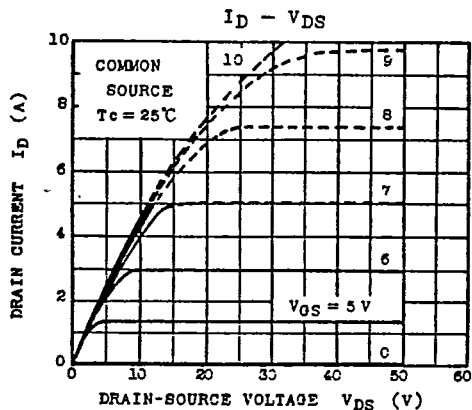
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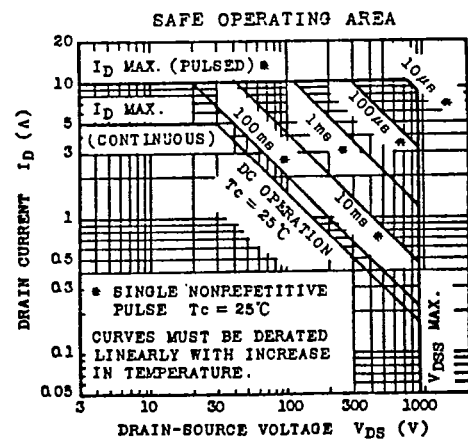
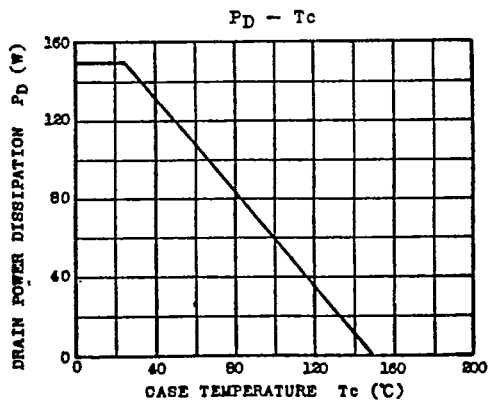
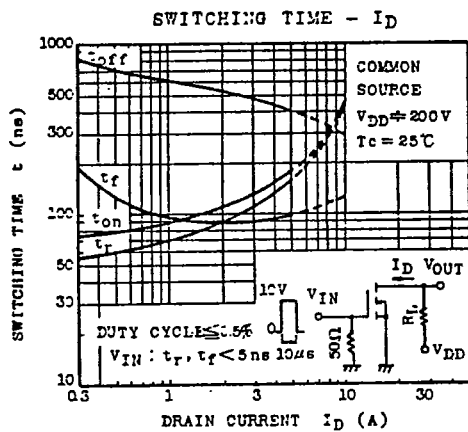
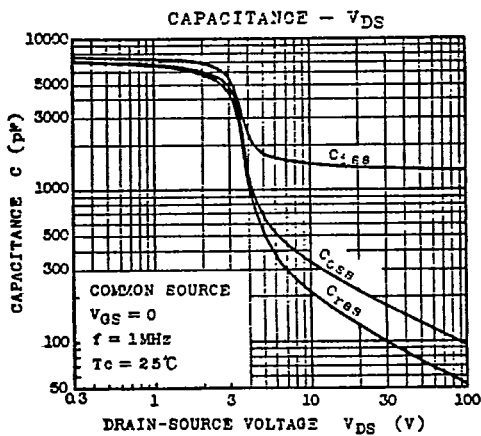
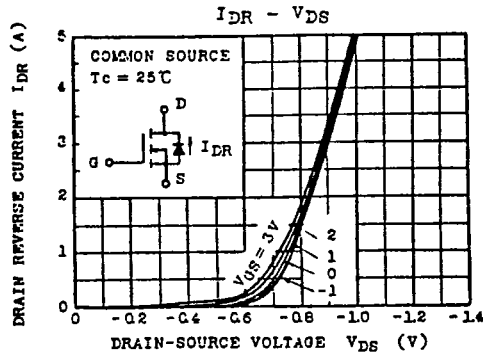
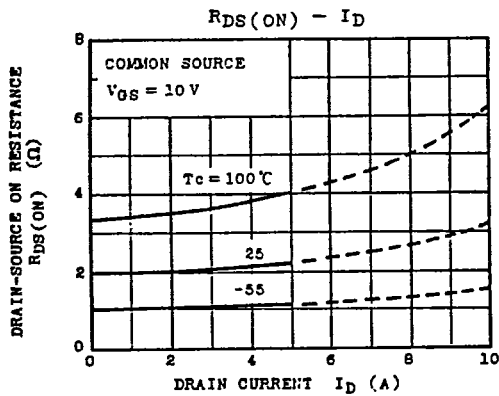
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