

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

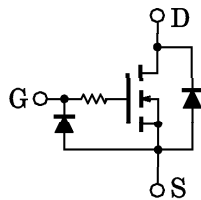
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HIGH SPEED SWITCHING APPLICATIONS

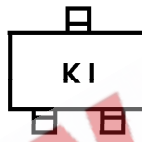
ANALOG SWITCH APPLICATIONS

- 2.5V Gate Drive
- Low Threshold Voltage : $V_{th} = 0.5 \sim 1.5V$
- High Speed
- Enhancement-Mode
- Small Package

EQUIVALENT CIRCUIT



MARKING

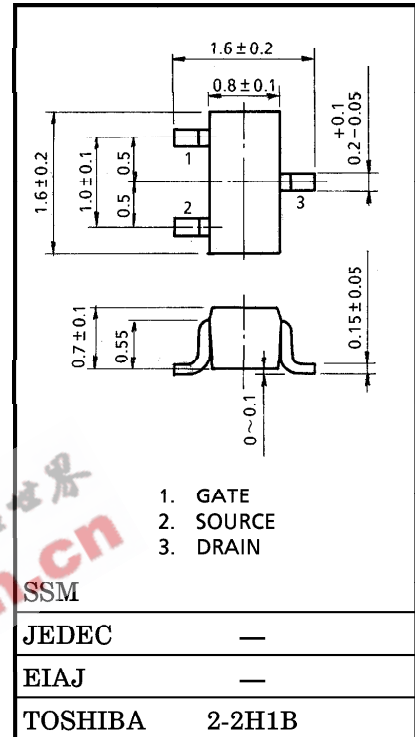


This transistor is electrostatic sensitive device.
Please handle with caution.

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GSS}	10	V
DC Drain Current	I_D	50	mA
Drain Power Dissipation	P_D	100	mW
Channel Temperature	T_{ch}	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$

Unit in mm



Weight : 2.4mg (Typ.)

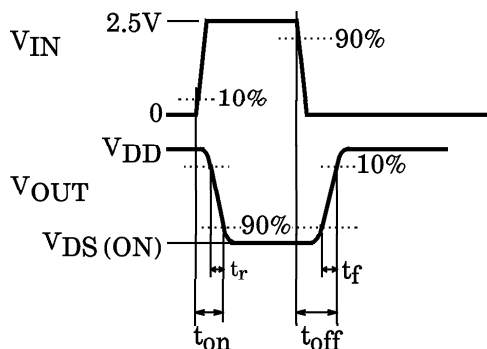
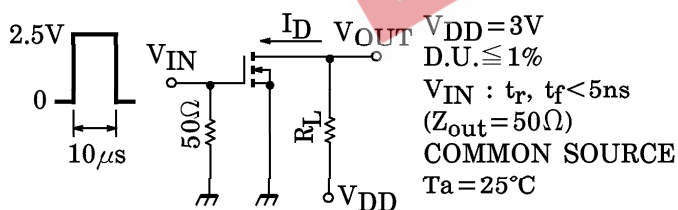
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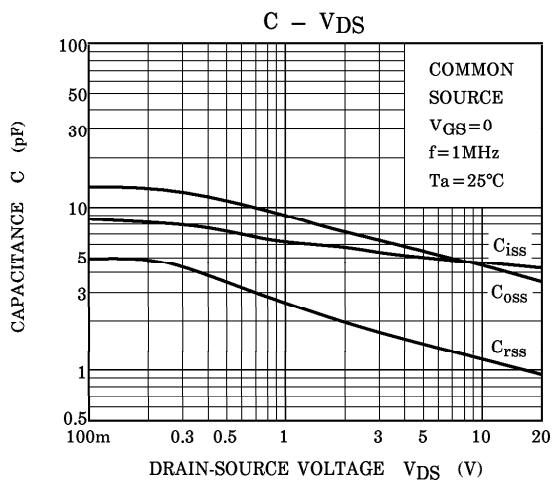
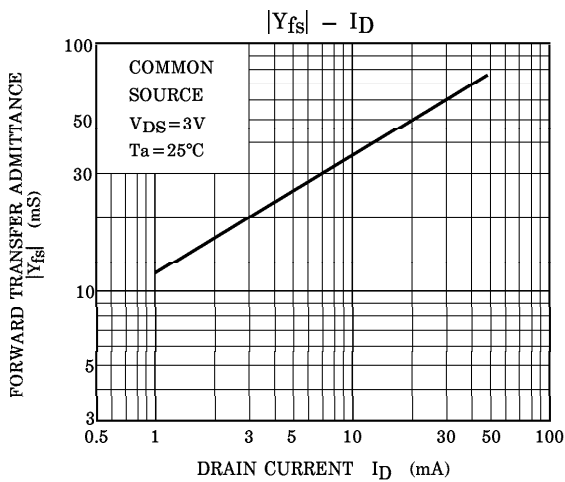
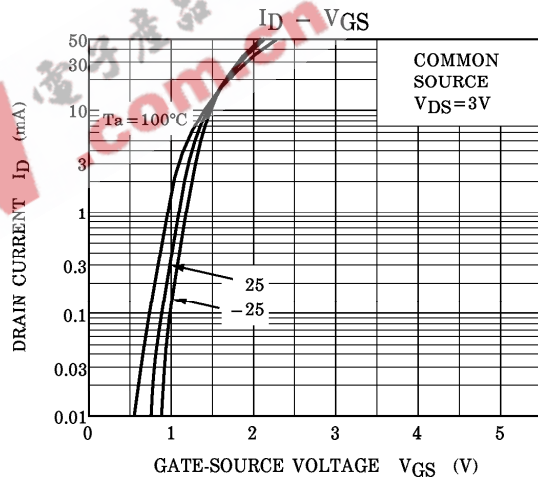
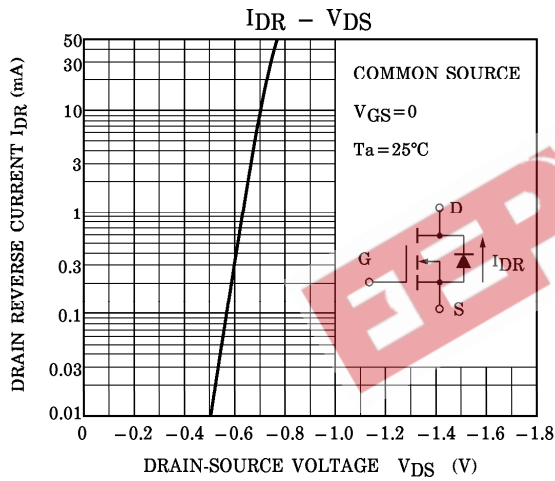
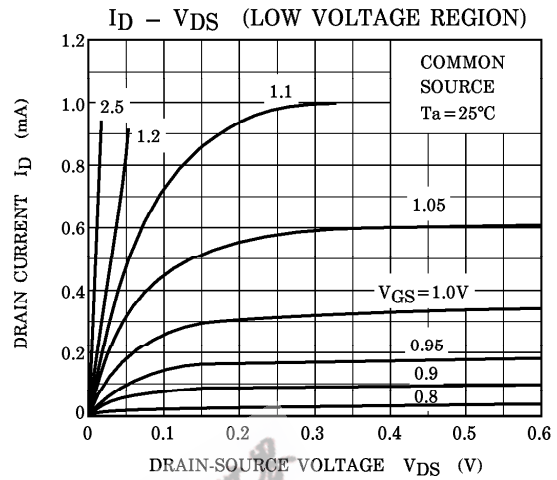
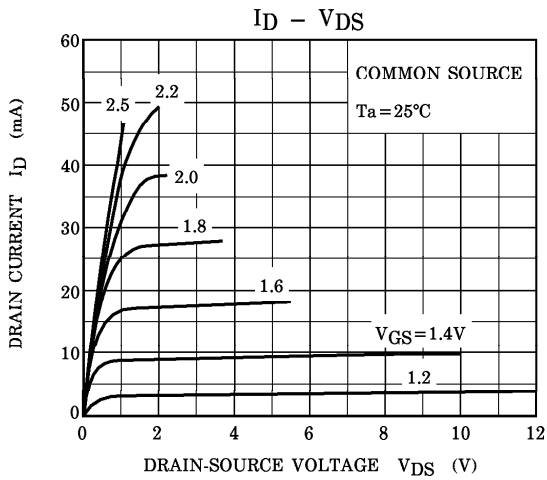
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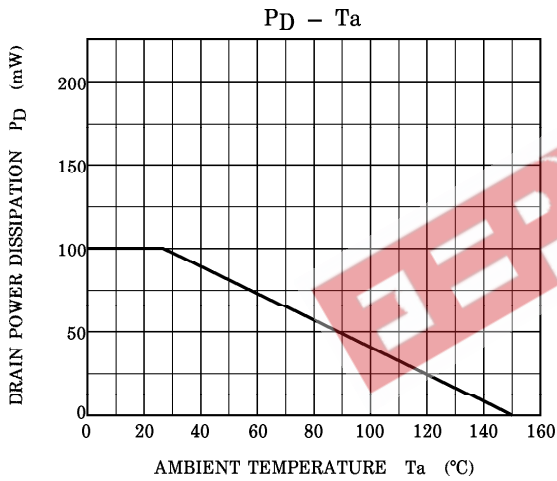
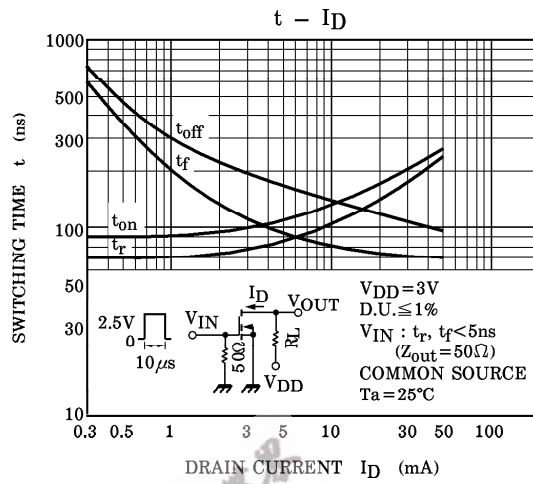
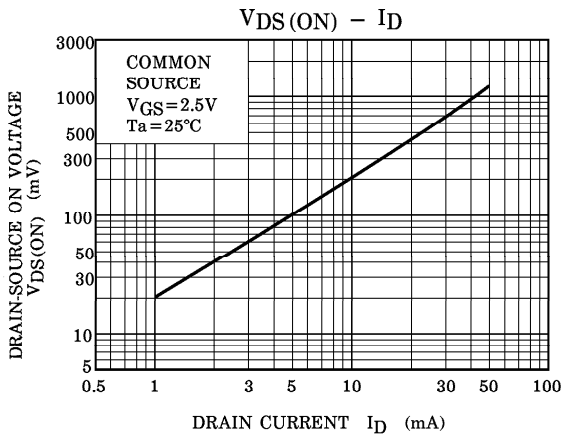
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Gate Leakage Current	IGSS	VGS = 10V, VDS = 0	—	—	1	μA	
Drain-Source Breakdown Voltage	V (BR) DSS	ID = 100μA, VGS = 0	20	—	—	V	
Drain Cut-off Current	IDSS	VDS = 20V, VGS = 0	—	—	1	μA	
Gate Threshold Voltage	Vth	VDS = 3V, ID = 0.1mA	0.5	—	1.5	V	
Forward Transfer Admittance	Yfs	VDS = 3V, ID = 10mA	20	—	—	mS	
Drain-Source ON Resistance	RDS (ON)	ID = 10mA, VGS = 2.5V	—	20	40	Ω	
Input Capacitance	Ciss	VDS = 3V, VGS = 0, f = 1MHz	—	5.5	—	pF	
Reverse Transfer Capacitance	Crss	VDS = 3V, VGS = 0, f = 1MHz	—	1.6	—	pF	
Output Capacitance	Coss	VDS = 3V, VGS = 0, f = 1MHz	—	6.5	—	pF	
Switching Time	Turn-on Time	ton	VDD = 3V, ID = 10mA, VGS = 0~2.5V	—	0.14	—	μs
	Turn-off Time	toff	VDD = 3V, ID = 10mA, VGS = 0~2.5V	—	0.14	—	μs

SWITCHING TIME TEST CIRCUIT







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