

TOSHIBA FIELD EFFECT TRANSISTOR SILICON P CHANNEL MOS TYPE

# 2SJ342

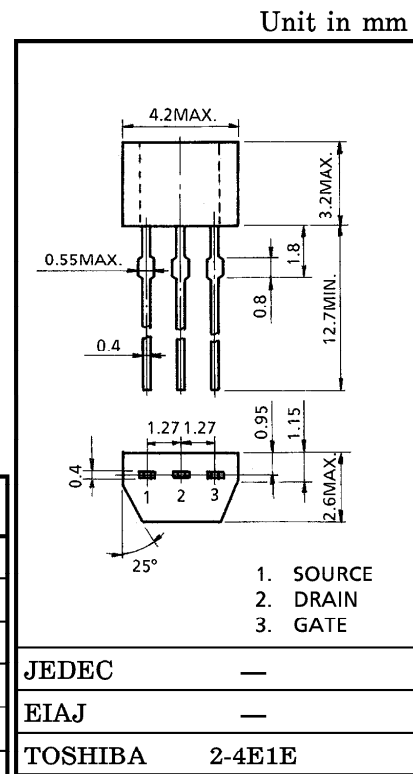
HIGH SPEED SWITCHING APPLICATIONS

ANAROG SWITCH APPLICATIONS

- Low Threshold Voltage :  $V_{th} = -0.8 \sim -2.5V$
- High Speed
- Enhancement-Mode
- Small Package
- Complementary to 2SK1825

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	$V_{DS}$	-50	V
Gate-Source Voltage	$V_{GSS}$	-7	V
DC Drain Current	$I_D$	-50	mA
Drain Power Dissipation	$P_D$	300	mW
Channel Temperature	$T_{ch}$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ C$



Weight : 0.13g

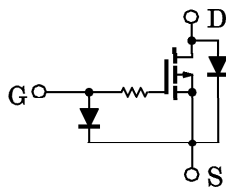
ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	$I_{GSS}$	$V_{GS} = -7V, V_{DS} = 0$	—	—	-1	$\mu A$
Drain-Source Breakdown Voltage	$V_{(BR) DSS}$	$I_D = -100\mu A, V_{GS} = 0$	-50	—	—	V
Drain Cut-off Current	$I_{DSS}$	$V_{DS} = -50V, V_{GS} = 0$	—	—	-1	$\mu A$
Gate Threshold Voltage	$V_{th}$	$V_{DS} = -5V, I_D = -0.1mA$	-0.8	—	-2.5	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = -5V, I_D = -10mA$	15	—	—	mS
Drain-Source ON Resistance	$R_{DS(ON)}$	$I_D = -10mA, V_{GS} = -4V$	—	20	50	$\Omega$
Input Capacitance	$C_{iss}$	$V_{DS} = -5V, V_{GS} = 0, f = 1MHz$	—	10.5	—	pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = -5V, V_{GS} = 0, f = 1MHz$	—	1.9	—	pF
Output Capacitance	$C_{oss}$	$V_{DS} = -5V, V_{GS} = 0, f = 1MHz$	—	7.2	—	pF
Switching Time	Turn-on Time	$t_{on}$	—	0.15	—	$\mu s$
	Turn-off Time	$t_{off}$	—	0.13	—	

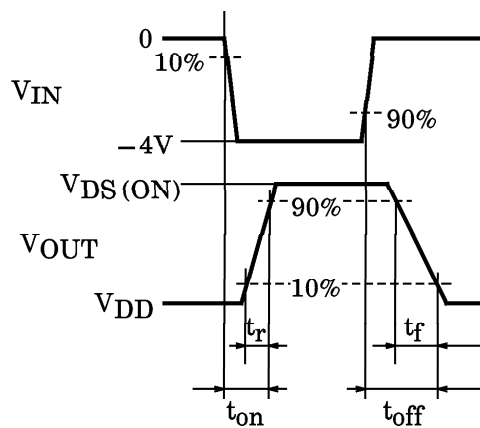
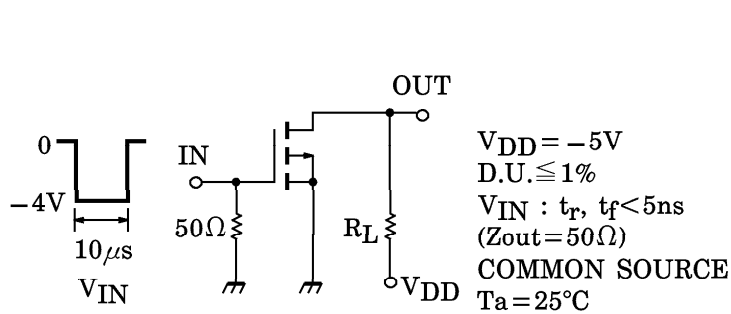
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EQUIVALENT CIRCUIT



SWITCHING TIME TEST CIRCUIT



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