

TOSHIBA FIELD EFFECT TRANSISTOR SILICON P CHANNEL MOS TYPE

# 2SJ347

HIGH SPEED SWITCHING APPLICATIONS

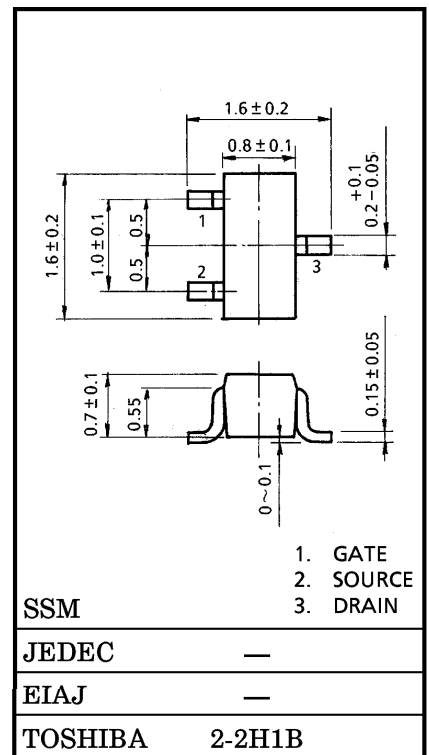
ANAROG SWITCH APPLICATIONS

- Low Threshold Voltage :  $V_{th} = -0.5 \sim -1.5V$
- High Speed
- Small Package
- Complementary to 2SK1830

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	$V_{DS}$	-20	V
Gate-Source Voltage	$V_{GSS}$	-7	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



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

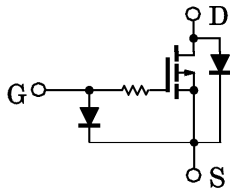
Weight : 2.4mg

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	$V_{(BR)DSS}$	$I_D = -100\mu A, V_{GS} = 0$	-20	—	—	V	
Drain Cut-off Current	$I_{DSS}$	$V_{DS} = -20V, V_{GS} = 0$	—	—	-1	$\mu A$	
Gate Threshold Voltage	$V_{th}$	$V_{DS} = -3V, I_D = -0.1mA$	-0.5	—	-1.5	V	
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = -3V, I_D = -10mA$	15	—	—	mS	
Drain-Source ON Resistance	$R_{DS(ON)}$	$I_D = -10mA, V_{GS} = -2.5V$	—	20	40	$\Omega$	
Input Capacitance	$C_{iss}$	$V_{DS} = -3V, V_{GS} = 0, f = 1MHz$	—	10.4	—	pF	
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = -3V, V_{GS} = 0, f = 1MHz$	—	2.8	—	pF	
Output Capacitance	$C_{oss}$	$V_{DS} = -3V, V_{GS} = 0, f = 1MHz$	—	8.4	—	pF	
Switching Time	Turn-on Time	$t_{on}$	$V_{DD} = -3V, I_D = -10mA, V_{GS} = 0 \sim -2.5V$	—	0.15	—	$\mu s$
	Turn-off Time	$t_{off}$	$V_{DD} = -3V, I_D = -10mA, V_{GS} = 0 \sim -2.5V$	—	0.13	—	$\mu s$

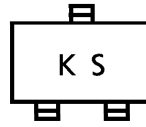
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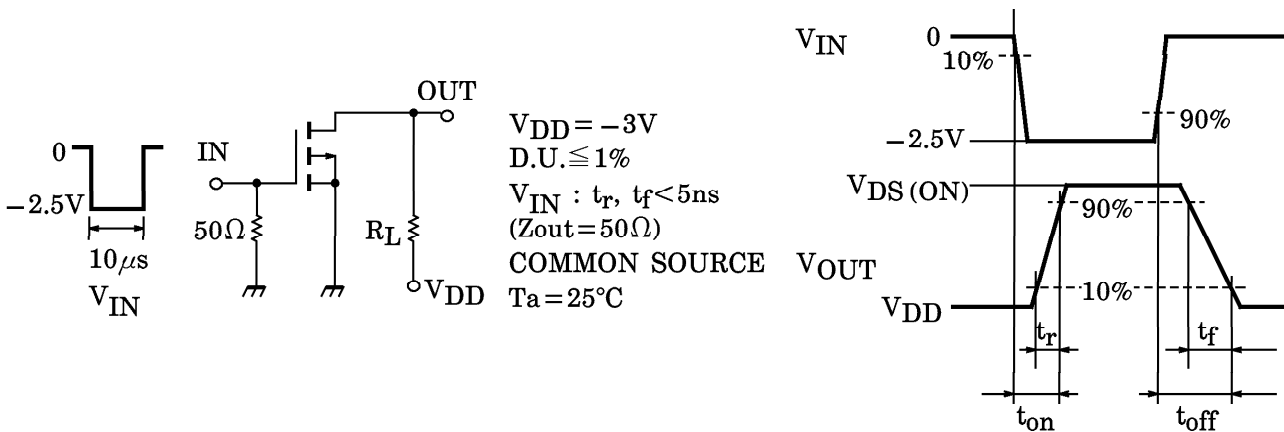
EQUIVALENT CIRCUIT



MARKING



SWITCHING TIME TEST CIRCUIT



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