

TOSHIBA FIELD EFFECT TRANSISTOR SILICON P CHANNEL MOS TYPE

# 2SJ305

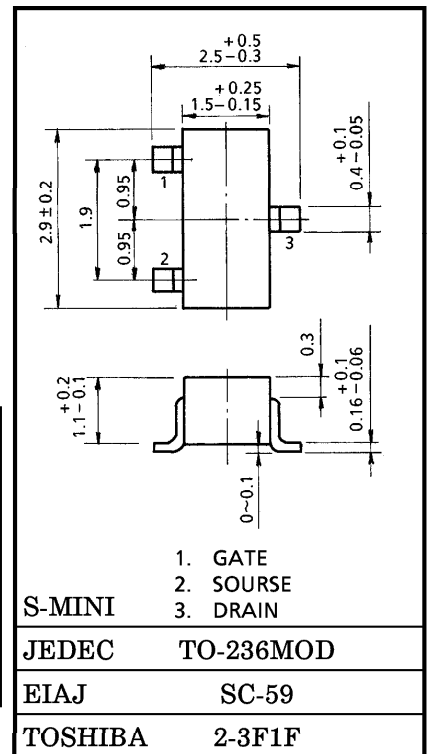
HIGH SPEED SWITCHING APPLICATIONS  
ANALOG APPLICATIONS

- High Input Impedance
- Low Gate Threshold Voltage. :  $V_{th} = -0.5 \sim -1.5V$
- Excellent Switching Times. :  $t_{on} = 0.06\mu s$  (Typ.)  
 $t_{off} = 0.15\mu s$  (Typ.)
- Low Drain-Source ON Resistance. :  $R_{DS(ON)} = 2.4\Omega$  (Typ.)
- Small Package.
- Complementary to 2SK2009.

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

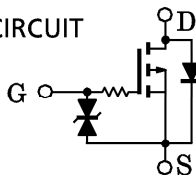
CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	$V_{DS}$	-30	V
Gate-Source Voltage	$V_{GSS}$	$\pm 20$	V
DC Drain Current	$I_D$	-200	mA
Drain Power Dissipation	$P_D$	200	mW
Channel Temperature	$T_{ch}$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ C$

Unit in mm

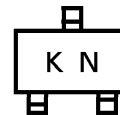


Weight : 0.012g

EQUIVALENT CIRCUIT



MARKING



THIS TRANSISTOR IS ELECTROSTATIC SENSITIVE DEVICE.  
PLEASE HANDLE WITH CAUTION.

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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	—	—	±0.1	μA	
Drain-Source Breakdown Voltage	V(BR)DSS	ID = -1mA, VGS = 0	-30	—	—	V	
Drain Cut-off Current	IDSS	VDS = -30V, VGS = 0	—	—	-10	μA	
Gate Threshold Voltage	Vth	VDS = -3V, ID = -0.1mA	-0.5	—	-1.5	V	
Forward Transfer Admittance	Yfs	VDS = -3V, ID = -50mA	100	—	—	mS	
Drain-Source ON Resistance	RDS(ON)	ID = -50mA, VGS = -2.5V	—	2.4	4	Ω	
Input Capacitance	Ciss	VDS = -3V, VGS = 0, f = 1MHz	—	92	—	pF	
Reverse Transfer Capacitance	Crss	VDS = -3V, VGS = 0, f = 1MHz	—	36	—	pF	
Output Capacitance	Coss	VDS = -3V, VGS = 0, f = 1MHz	—	80	—	pF	
Switching Time	Turn-on Time	t <sub>on</sub>	VDD = -3V, ID = -10mA VGS = 0 ~ -2.5V	—	0.06	—	μs
	Turn-off Time	t <sub>off</sub>	VDD = -3V, ID = -10mA VGS = 0 ~ -2.5V	—	0.15	—	

