

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL (PCT PROCESS)

# 2SA1298

LOW FREQUENCY POWER AMPLIFIER APPLICATION

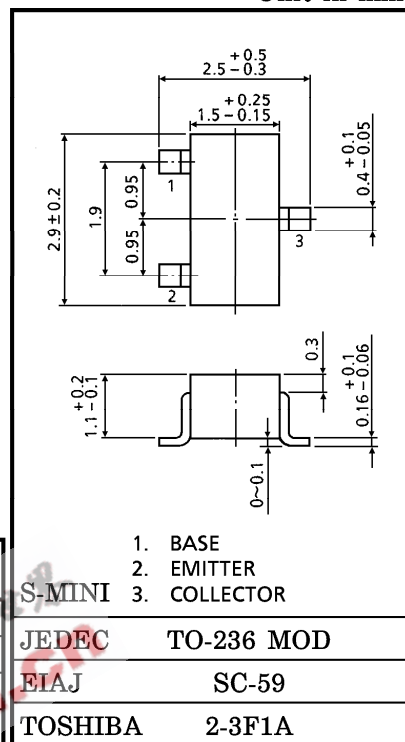
POWER SWITCHING APPLICATIONS

- High DC Current Gain :  $h_{FE} = 100 \sim 320$
- Low Saturation Voltage :  $V_{CE(sat)} = -0.4 \text{ V (Max.)}$   
( $I_C = -500 \text{ mA}$ ,  $I_B = -20 \text{ mA}$ )
- Suitable for Driver Stage of Small Motor
- Complementary to 2SC3265
- Small Package

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

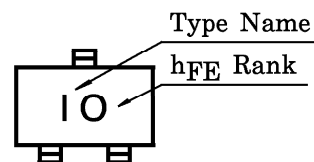
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	-30	V
Collector-Emitter Voltage	$V_{CEO}$	-25	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current	$I_C$	-800	mA
Base Current	$I_B$	-160	mA
Collector Power Dissipation	$P_C$	200	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ\text{C}$

Unit in mm



Weight : 0.012 g

Marking



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## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = -30\text{ V}, I_E = 0$	—	—	-0.1	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = -50\text{ V}, I_C = 0$	—	—	-0.1	$\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -10\text{ mA}, I_B = 0$	-25	—	—	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -0.1\text{ mA}, I_C = 0$	-5	—	—	V
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE} = -1\text{ V}, I_C = -100\text{ mA}$	100	—	320	
	$h_{FE(2)}$	$V_{CE} = -1\text{ V}, I_C = -800\text{ mA}$	40	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -500\text{ mA}, I_B = -20\text{ mA}$	—	—	-0.4	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE} = -1\text{ V}, I_C = -10\text{ mA}$	-0.5	—	-0.8	V
Transition Frequency	$f_T$	$V_{CE} = -5\text{ V}, I_C = -10\text{ mA}$	—	120	—	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = -10\text{ V}, I_E = 0,$ $f = 1\text{ MHz}$	—	13	—	pF

Note :  $h_{FE(1)}$  Classification    O : 100~200,    Y : 160~320

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