

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

# 2SA1869

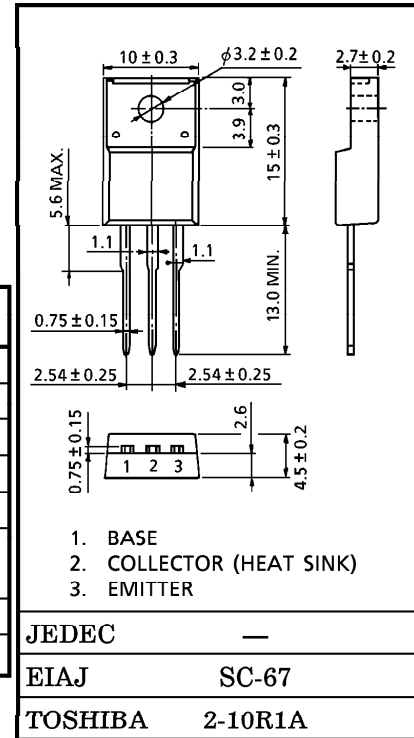
POWER AMPLIFIER APPLICATIONS

Unit in mm

- Good Linearity of  $h_{FE}$
- Complementary to 2SC4935

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CB0}$	-50	V
Collector-Emitter Voltage	$V_{CE0}$	-50	V
Emitter-Base Voltage	$V_{EB0}$	-5	V
Collector Current	$I_C$	-3	A
Base Current	$I_B$	-0.3	A
Collector Power Dissipation ( $T_c = 25^\circ\text{C}$ )	$P_C$	10	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ\text{C}$



Weight : 1.7g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = -50\text{V}, I_E = 0$	—	—	-1.0	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = -5\text{V}, I_C = 0$	—	—	-1.0	$\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CE0}$	$I_C = -10\text{mA}, I_B = 0$	-50	—	—	V
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE} = -2\text{V}, I_C = -0.5\text{A}$	70	—	240	
	$h_{FE(2)}$	$V_{CE} = -2\text{V}, I_C = -2.5\text{A}$	30	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -2\text{A}, I_B = -0.2\text{A}$	—	-0.3	-0.6	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE} = -2\text{V}, I_C = -0.5\text{A}$	—	-0.8	-1.0	V
Transition Frequency	$f_T$	$V_{CE} = -2\text{V}, I_C = -0.5\text{A}$	—	100	—	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$	—	35	—	pF

Note :  $h_{FE(1)}$  Classification O : 70~140, Y : 120~240

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