

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

2SA1869

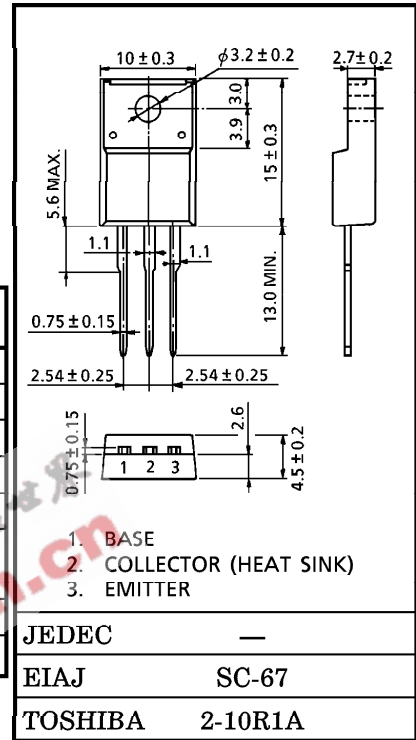
POWER AMPLIFIER APPLICATIONS

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_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-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	$^\circ\text{C}$



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	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$	—	—	-1.0	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -10\text{mA}, I_B = 0$	-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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