TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT process)

2SA1049

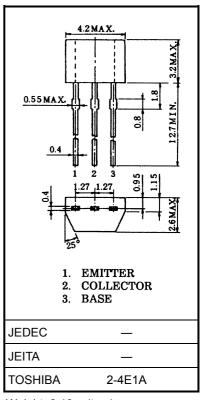
Audio Frequency Amplifier Applications

Unit: mm

- Small package.
- High breakdown voltage: $V_{\rm CEO} = -120 \text{ V}$
- High hFE: hFE = $200 \sim 700$
- Excellent hFE linearity: hFE ($I_C = -0.1 \text{ mA}$)/hFE ($I_C = -2 \text{ mA}$) = 0.95 (typ.)
- Low noise: NF = 1dB (typ.), 10dB (max)
- Complementary to 2SC2459.

Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-120	V
Collector-emitter voltage	V _{CEO}	-120	V
Emitter-base voltage	V _{EBO}	-5	V
Collector current	Ic	-100	mA
Base current	ΙΒ	-20	mA
Collector power dissipation	PC	200	mW
Junction temperature	Tj	125	°C
Storage temperature range	T _{stg}	-55~125	°C



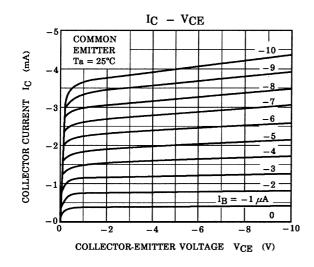
Weight: 0.13 g (typ.)

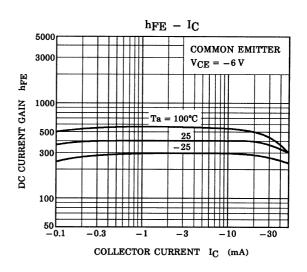
Electrical Characteristics (Ta = 25°C)

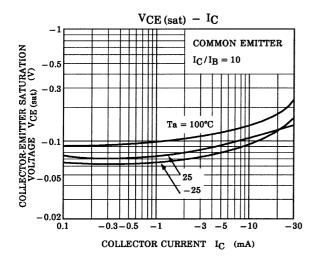
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I _{CBO}	$V_{CB} = -120 \text{ V}, I_E = 0$	_	_	-0.1	μΑ
Emitter cut-off current	I _{EBO}	$V_{EB} = -5 \text{ V}, I_C = 0$	_	_	-0.1	μА
DC current gain	h _{FE} (Note)	V _{CE} = -6 V, I _C = -2 mA	200	_	700	
Collector-emitter saturation voltage	V _{CE (sat)}	$I_C = -10 \text{ mA}, I_B = -1 \text{ mA}$	_	_	-0.3	V
Transition frequency	f _T	$V_{CE} = -6 \text{ V}, I_{C} = -1 \text{ mA}$	_	100	_	MHz
Collector output capacitance	C _{ob}	$V_{CB} = -10 \text{ V}, I_{E} = 0, f = 1 \text{ MHz}$	_	4	_	pF
Noise figure	NF	$V_{CE} = -6 \text{ V}, I_C = -0.1 \text{ mA}$ $f = 1 \text{ kHz}, R_G = 10 \text{ k}\Omega$		1.0	10	dB

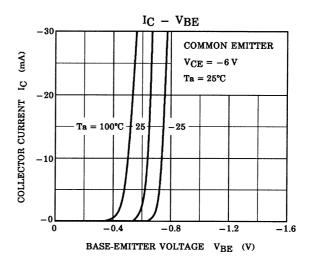
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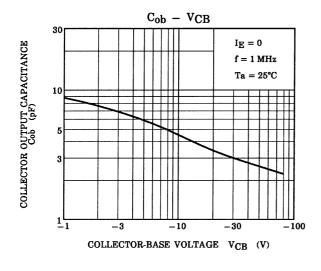
Note: hFE classification GR: 200~400, BL: 350~700

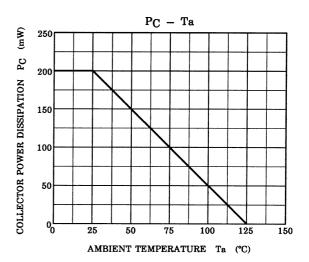












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