

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT process)

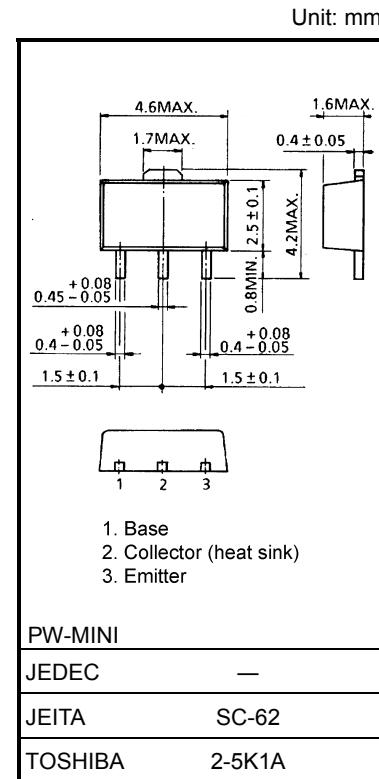
2SA1204

Audio Frequency Amplifier Applications

- High DC current gain: $hFE = 100$ to 320
- Suitable for output stage of 1 watts amplifier
- Small flat package
- $PC = 1.0$ to 2.0 W (mounted on a ceramic substrate)
- Complementary to 2SC2884

Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-35	V
Collector-emitter voltage	V_{CEO}	-30	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	500	mW
	P_C (Note 1)	1000	
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55 to 150	°C

Note 1: Mounted on a ceramic substrate (250 mm² × 0.8 t)

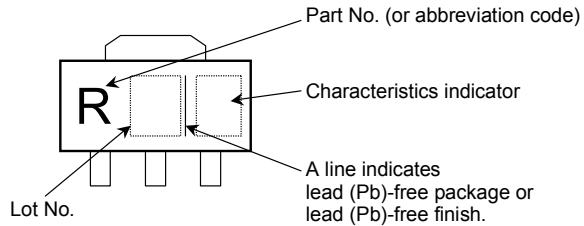
Weight: 0.05 g (typ.)

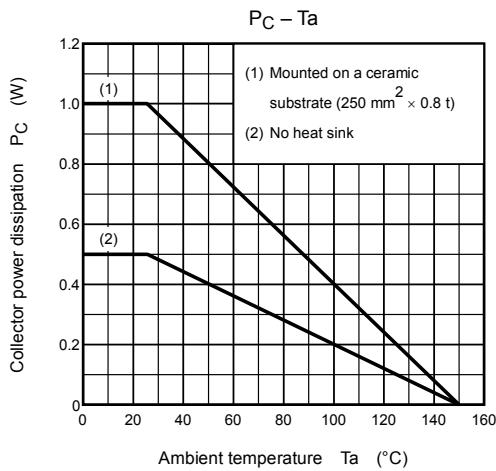
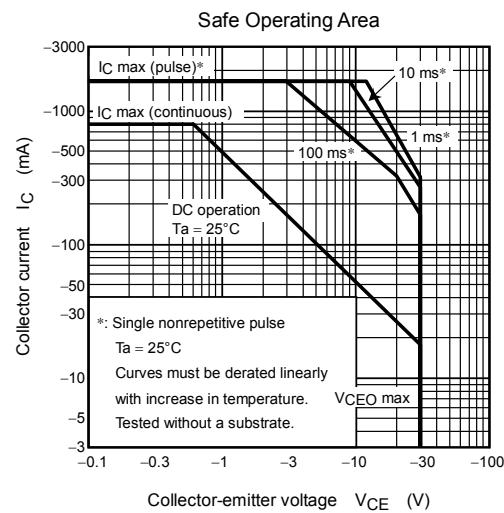
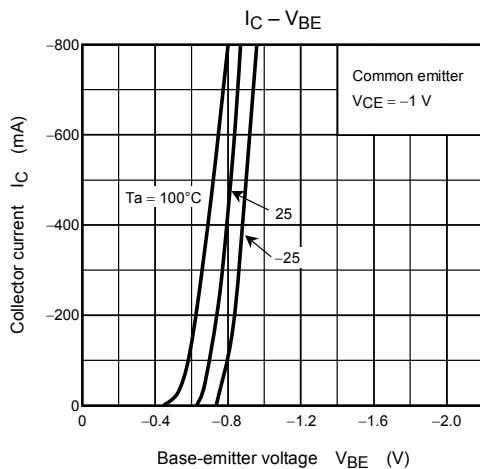
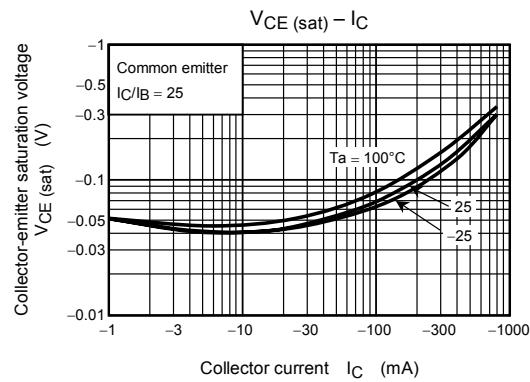
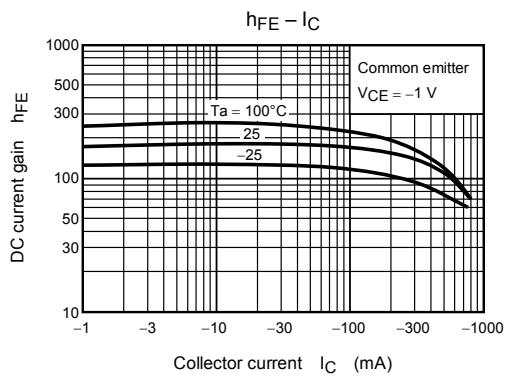
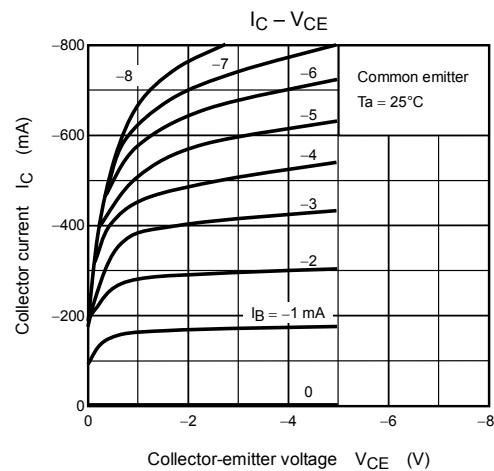
Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = -35\text{ V}$, $I_E = 0$	—	—	-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{ V}$, $I_C = 0$	—	—	-0.1	μA
Collector-emitter breakdown voltage	$V_{(BR)\text{CEO}}$	$I_C = -10\text{ mA}$, $I_B = 0$	-30	—	—	V
DC current gain	h_{FE} (1) (Note 2)	$V_{CE} = -1\text{ V}$, $I_C = -100\text{ mA}$	100	—	320	
	h_{FE} (2)	$V_{CE} = -1\text{ V}$, $I_C = -700\text{ mA}$	35	—	—	
Collector-emitter saturation voltage	$V_{CE(\text{sat})}$	$I_C = -500\text{ mA}$, $I_B = -20\text{ mA}$	—	—	-0.7	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}	$V_{CB} = -10\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$	—	19	—	pF

Note 2: h_{FE} (1) classification O: 100 to 200, Y: 160 to 320

Marking





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