TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT process)

2SA817

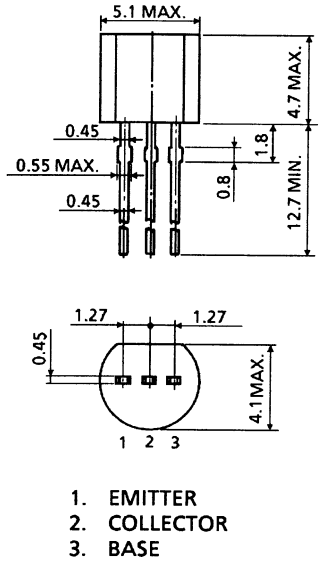
Audio Frequency Amplifier Applications

- Complementary to 2SC1627.
- Suitable for driver of 20~25 watts audio amplifiers.

Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	−80	V
Collector-emitter voltage	V_{CEO}	−80	V
Emitter-base voltage	V_{EBO}	−5	V
Collector current	I_C	−300	mA
Base current	I_B	−60	mA
Collector power dissipation	P_C	600	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	−55~150	°C

Unit: mm



JEDEC	TO-92
JEITA	SC-43
TOSHIBA	2-5F1B

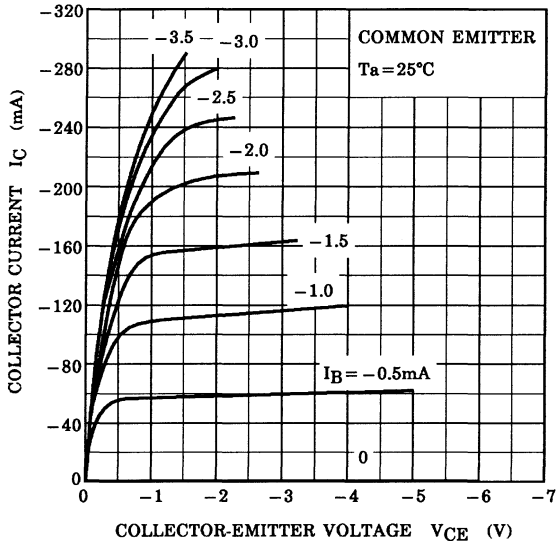
Weight: 0.21 g (typ.)

Electrical Characteristics (Ta = 25°C)

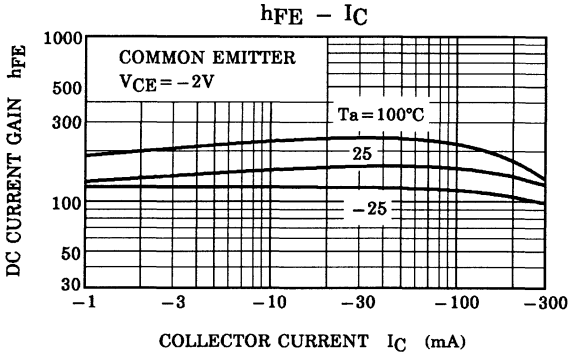
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	V_{CB} = −50 V, I_E = 0	—	—	−0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB} = −5 V, I_C = 0	—	—	−0.1	μA
Collector-emitter breakdown voltage	$V_{(BR)\ CEO}$	I_C = −5 mA, I_B = 0	−80	—	—	V
DC current gain	$h_{FE\ (1)}$ (Note)	V_{CE} = −2 V, I_C = −50 mA	70	—	240	
	$h_{FE\ (2)}$	V_{CE} = −2 V, I_C = −200 mA	40	—	—	
Collector-emitter saturation voltage	$V_{CE\ (sat)}$	I_C = −200 mA, I_B = −20 mA	—	—	−0.4	V
Base-emitter voltage	V_{BE}	V_{CE} = −2 V, I_C = −5 mA	−0.55	—	−0.8	V
Transition frequency	f_T	V_{CE} = −10 V, I_C = −10 mA	70	100	—	MHz
Collector output capacitance	C_{ob}	V_{CB} = −10 V, I_E = 0, f = 1 MHz	—	14	—	pF

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

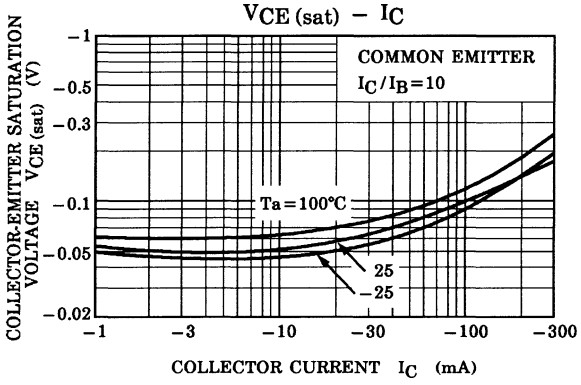
$I_C - V_{CE}$



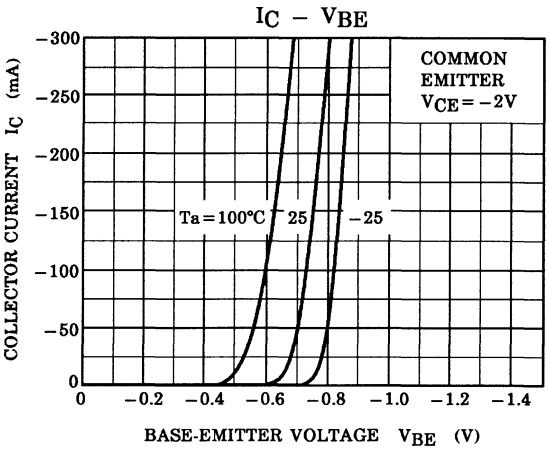
$h_{FE} - I_C$



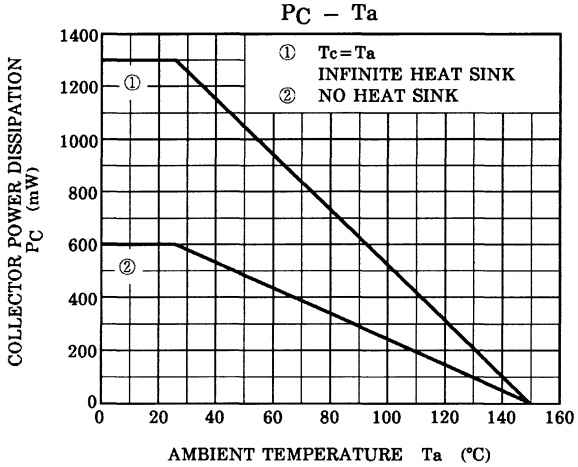
$V_{CE\,(sat)} - I_C$



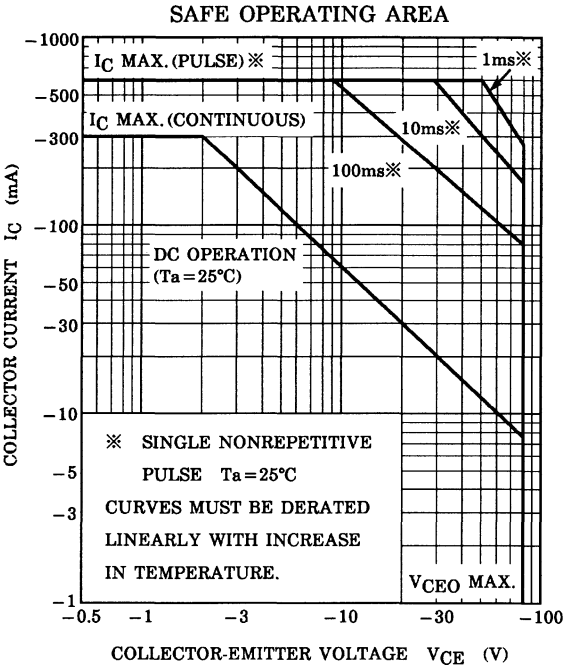
$I_C - V_{BE}$



$P_C - Ta$



SAFE OPERATING AREA



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