

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT process)

2SA817

Audio Frequency Amplifier Applications

Unit: mm

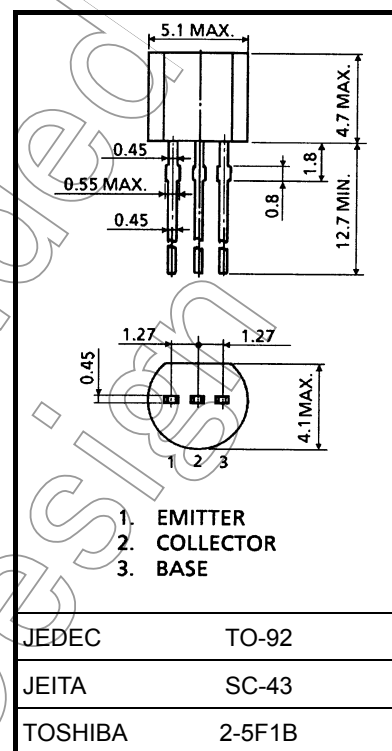
- Complementary to 2SC1627.
- Suitable for driver of 20~25 watts audio amplifiers.

Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	-80	V
Collector-emitter voltage	V_{CE0}	-80	V
Emitter-base voltage	V_{EB0}	-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

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).



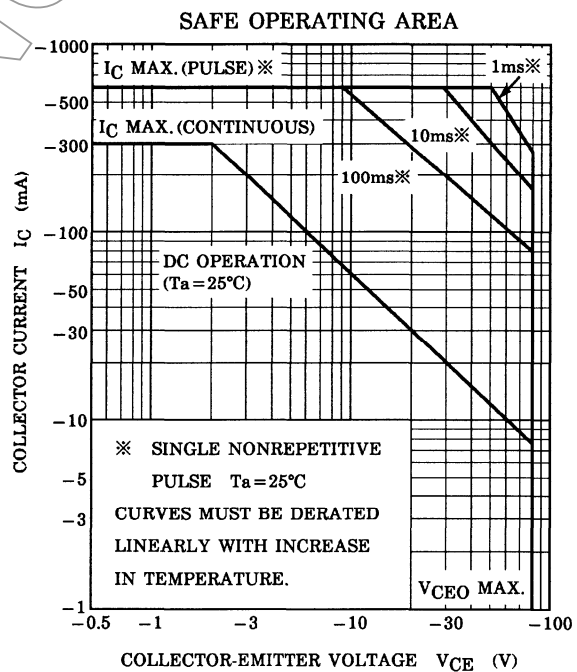
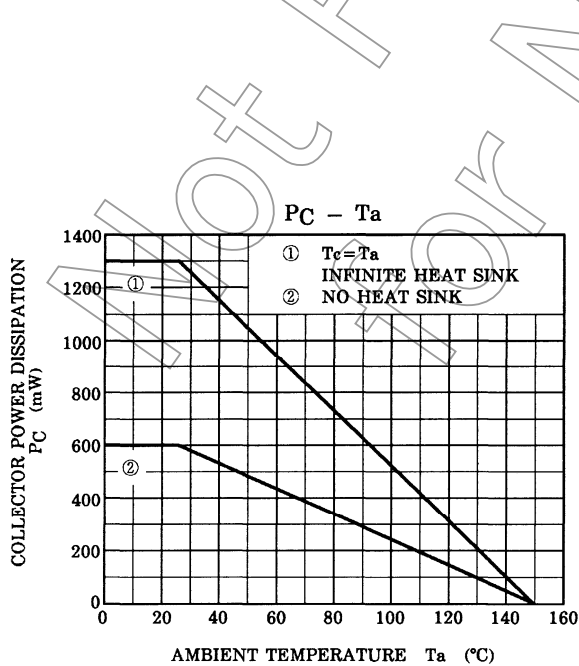
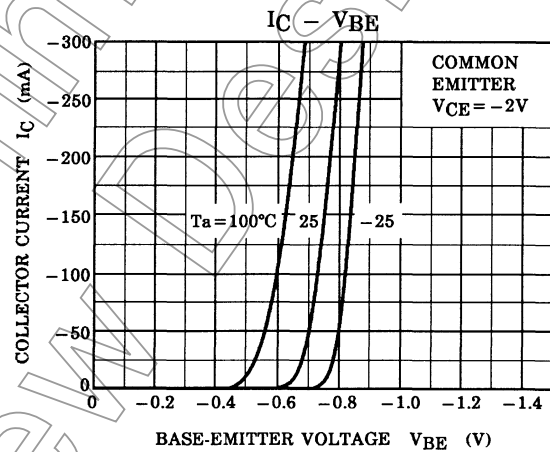
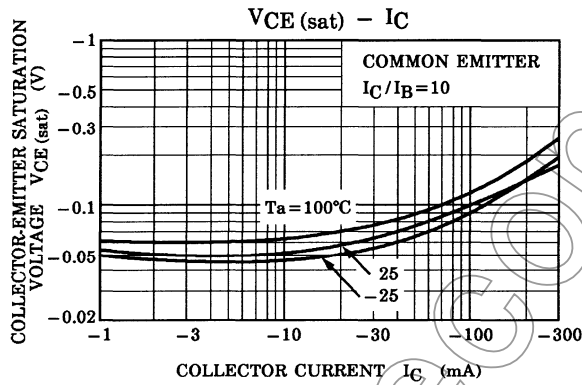
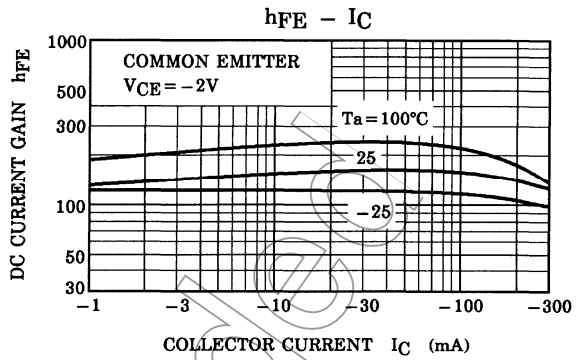
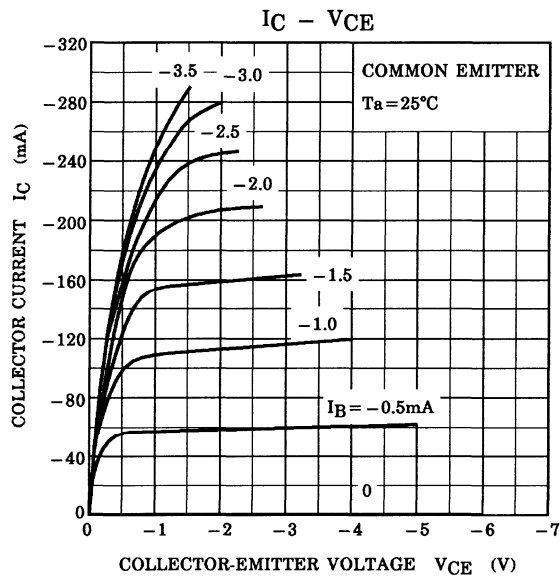
JEDEC	TO-92
JEITA	SC-43
TOSHIBA	2-5F1B

Weight: 0.21 g (typ.)

Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} \geq -50$ V, $I_E = 0$	—	—	-0.1	μ A
Emitter cut-off current	I_{EBO}	$V_{EB} = -5$ V, $I_C = 0$	—	—	-0.1	μ A
Collector-emitter breakdown voltage	$V_{(BR)CE0}$	$I_C = -5$ 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



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