

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT Process)

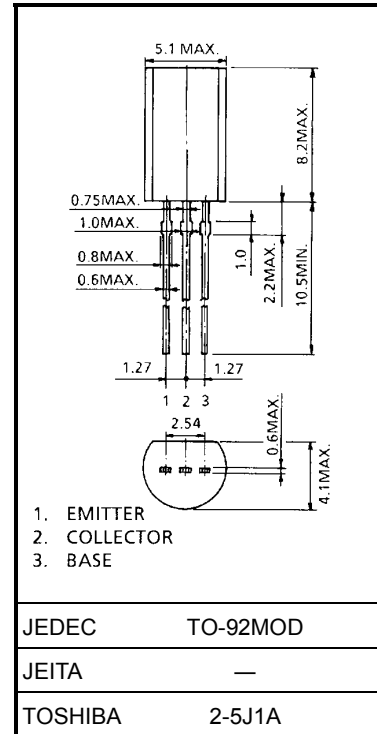
2SC2705

Audio Frequency Amplifier Applications

- Small collector output capacitance: $C_{ob} = 1.8 \text{ pF (typ.)}$
- High transition frequency: $f_T = 200 \text{ MHz (typ.)}$
- Complementary to 2SA1145.

Maximum Ratings ($T_a = 25^\circ\text{C}$)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	150	V
Collector-emitter voltage	V_{CEO}	150	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	50	mA
Base current	I_B	5	mA
Collector power dissipation	P_C	800	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to 150	$^\circ\text{C}$



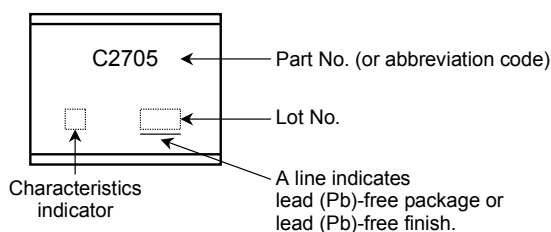
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

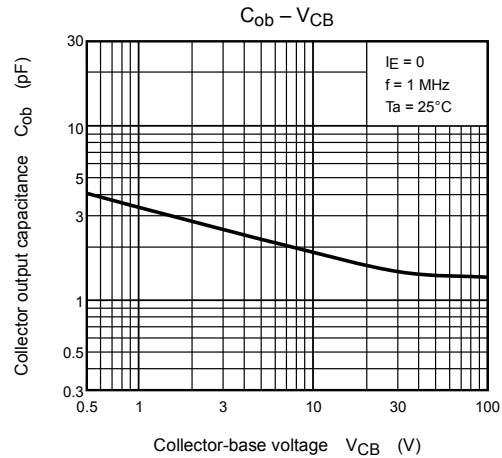
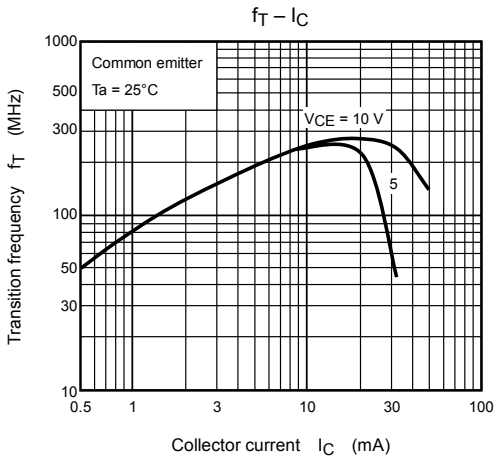
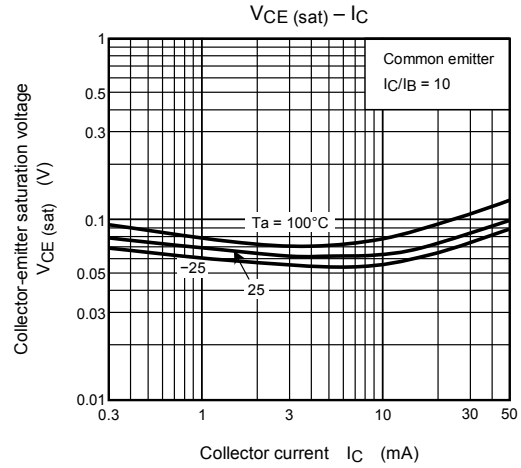
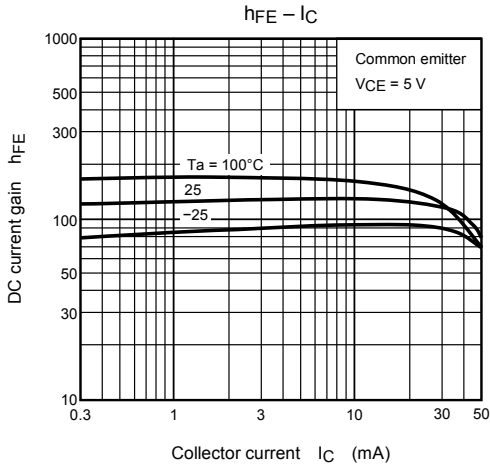
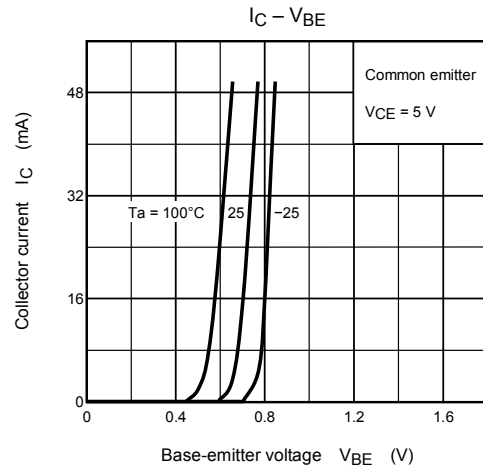
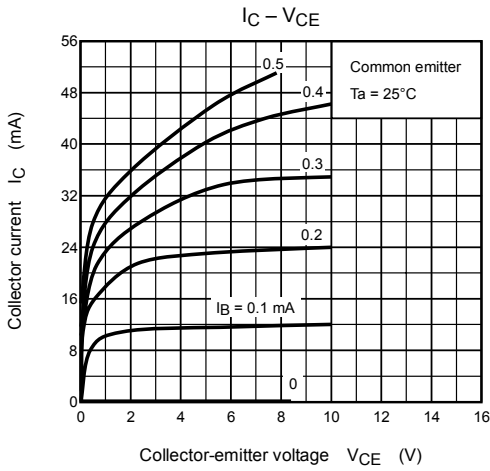
Weight: 0.36 g (typ.)

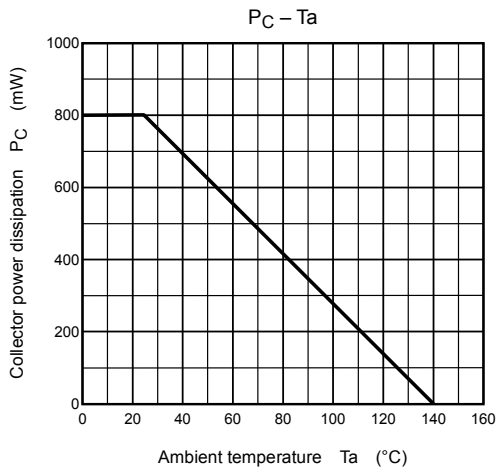
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 150 \text{ V}, I_E = 0$	—	—	0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5 \text{ V}, I_C = 0$	—	—	0.1	μA
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1 \text{ mA}, I_B = 0$	150	—	—	V
DC current gain	h_{FE} (Note)	$V_{CE} = 5 \text{ V}, I_C = 10 \text{ mA}$	80	—	240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10 \text{ mA}, I_B = 1 \text{ mA}$	—	—	1.0	V
Base-emitter voltage	$V_{BE(sat)}$	$V_{CE} = 5 \text{ V}, I_C = 10 \text{ mA}$	—	—	0.8	V
Transition frequency	f_T	$V_{CE} = 5 \text{ V}, I_C = 10 \text{ mA}$	—	200	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$	—	1.8	—	pF

Note: h_{FE} classification O: 80 to 160, Y: 120 to 240

Marking







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