

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT process)

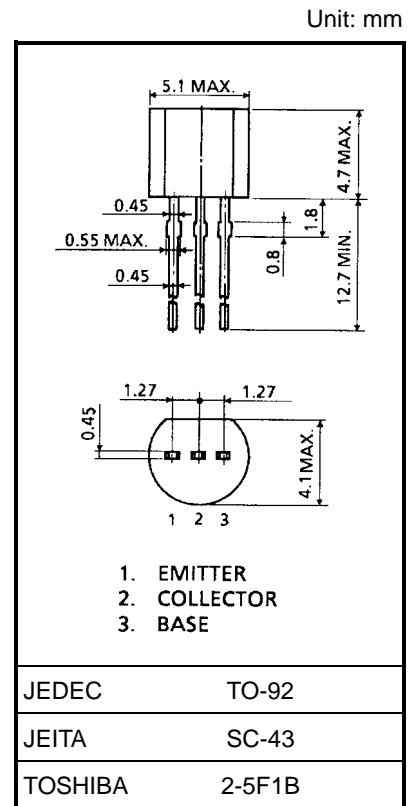
2SC1959

Audio Frequency Low Power Amplifier Applications
 Driver Stage Amplifier Applications
 Switching Applications

- Excellent h_{FE} linearity: $h_{FE(2)} = 25$ (min): $V_{CE} = 6$ V, $I_C = 400$ mA
- 1 watt amplifier applications.
- Complementary to 2SA562TM.

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

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	35	V
Collector-emitter voltage	V_{CEO}	30	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	500	mA
Base current	I_B	100	mA
Collector power dissipation	P_C	500	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55~150	$^\circ\text{C}$



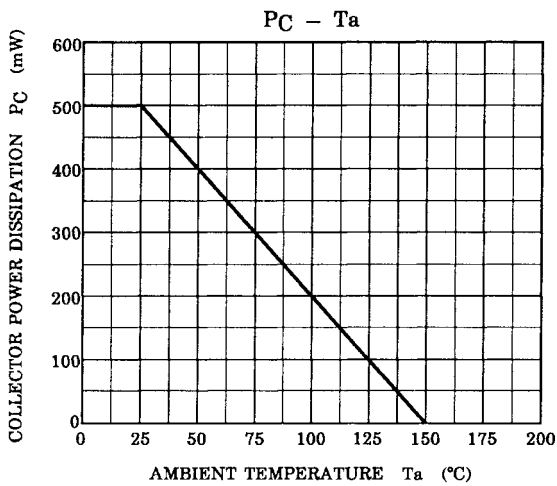
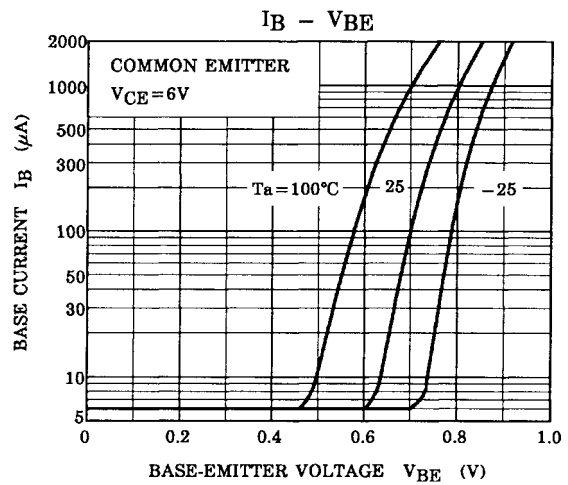
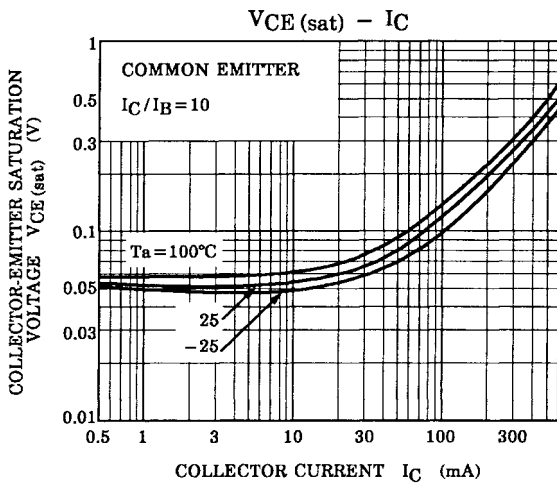
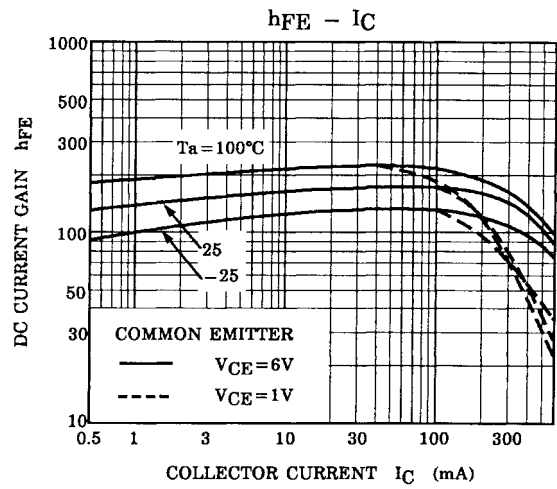
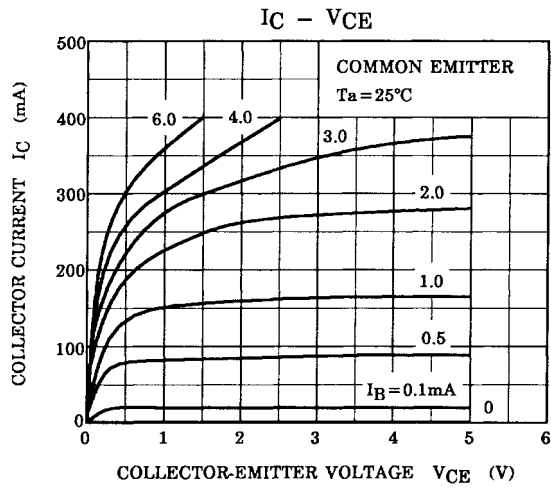
Weight: 0.21 g (typ.)

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

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 35$ V, $I_E = 0$	—	—	0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5$ V, $I_C = 0$	—	—	0.1	μA
DC current gain	$h_{FE(1)}$ (Note)	$V_{CE} = 1$ V, $I_C = 100$ mA	70	—	400	
	$h_{FE(2)}$ (Note)	$V_{CE} = 6$ V, $I_C = 400$ mA	25	—	—	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100$ mA, $I_B = 10$ mA	—	0.1	0.25	V
Base-emitter voltage	V_{BE}	$V_{CE} = 1$ V, $I_C = 100$ mA	—	0.8	1.0	V
Transition frequency	f_T	$V_{CE} = 6$ V, $I_C = 20$ mA	—	300	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 6$ V, $I_E = 0$, $f = 1$ MHz	—	7	—	pF

Note: $h_{FE(1)}$ classification O: 70~140, Y: 120~240, GR: 200~400

$h_{FE(2)}$ classification O: 25 (min), Y: 40 (min)



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