

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT Process)

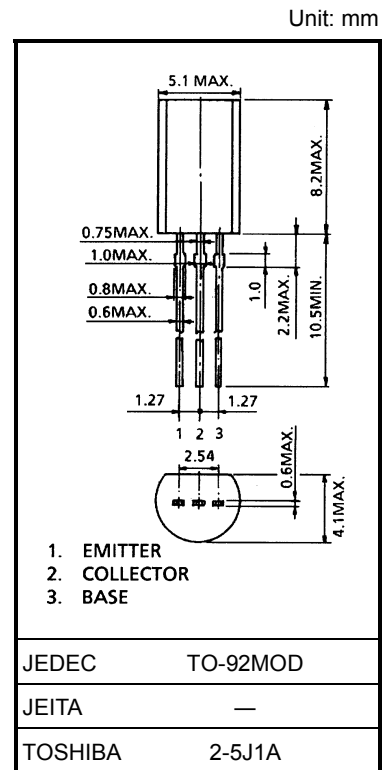
2SA965

Power Amplifier Applications
 Driver-Stage Amplifier Applications

- Complementary to 2SC2235.

Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-120	V
Collector-emitter voltage	V_{CEO}	-120	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-800	mA
Emitter current	I_E	800	mA
Collector power dissipation	P_C	900	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55 to 150	°C



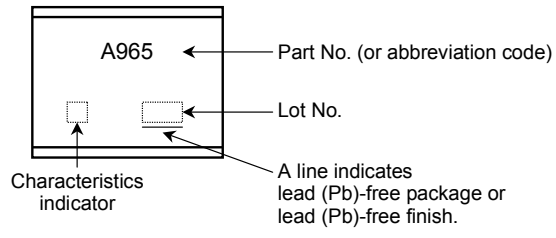
Electrical Characteristics (Ta = 25°C)

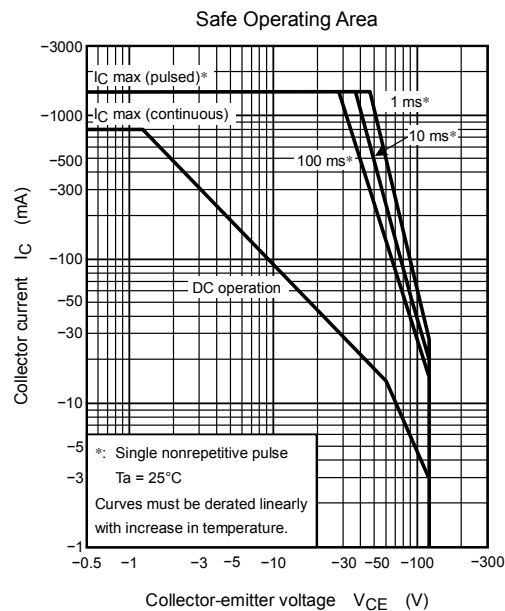
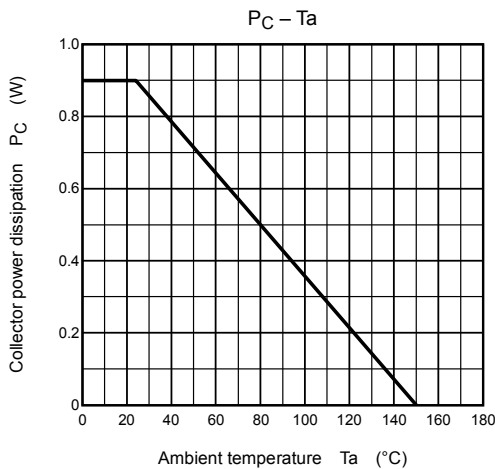
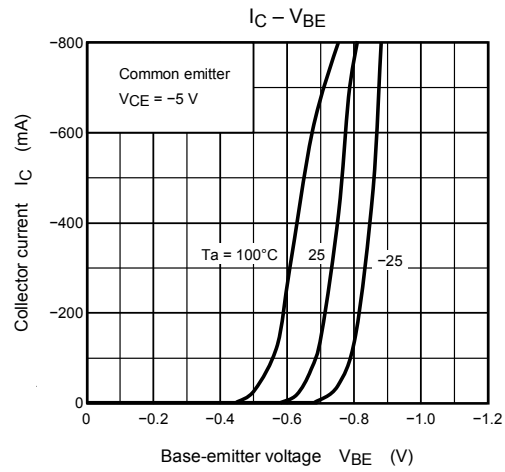
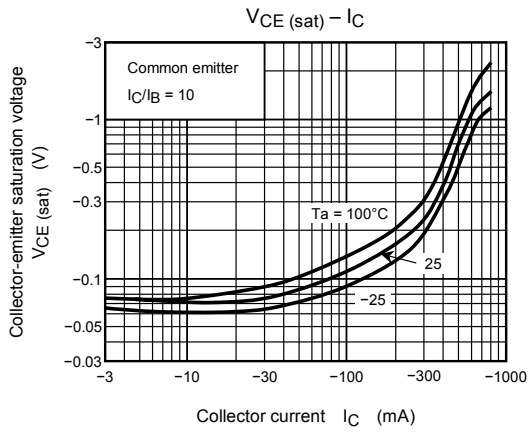
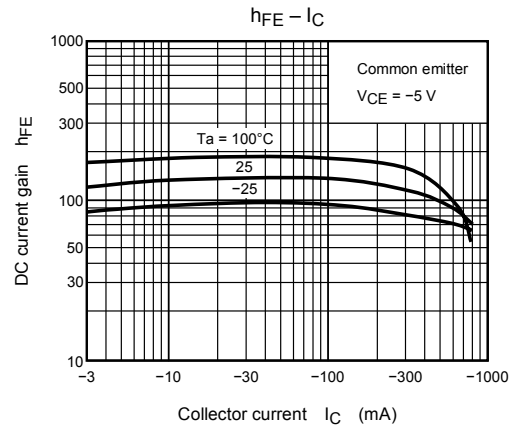
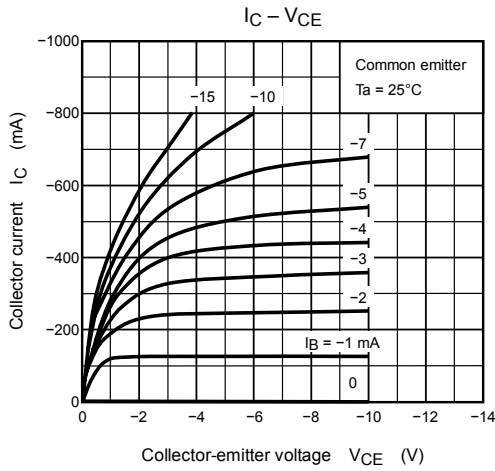
Weight: 0.36 g (typ.)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = -120\text{ V}, I_E = 0$	—	—	-100	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{ V}, I_C = 0$	—	—	-100	nA
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10\text{ mA}, I_B = 0$	-120	—	—	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -1\text{ mA}, I_C = 0$	-5	—	—	V
DC current gain	h_{FE} (Note)	$V_{CE} = -5\text{ V}, I_C = -100\text{ mA}$	80	—	240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500\text{ mA}, I_B = -50\text{ mA}$	—	—	-1.0	V
Base-emitter voltage	V_{BE}	$V_{CE} = -5\text{ V}, I_C = -500\text{ mA}$	—	—	-1.0	V
Transition frequency	f_T	$V_{CE} = -5\text{ V}, I_C = -100\text{ mA}$	—	120	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	—	40	pF

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

Marking





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