

TOSHIBA Transistor Silicon NPN Triple Diffused Type (PCT Process)

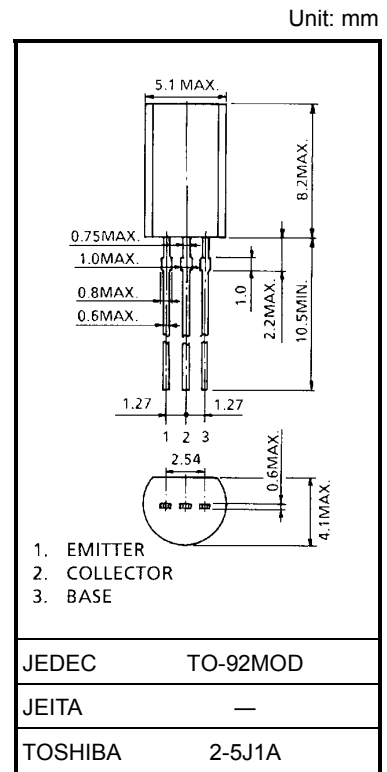
2SC2229

Black and White TV Video Output Applications
 High-Voltage Switching Applications
 Driver Stage Audio Amplifier Applications

- High breakdown voltage: $V_{CEO} = 150 \text{ V (min)}$
- Low output capacitance: $C_{ob} = 5.0 \text{ pF (max)}$
- High transition frequency: $f_T = 120 \text{ MHz (typ.)}$

Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	200	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	20	mA
Collector power dissipation	P_C	800	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55 to 150	°C



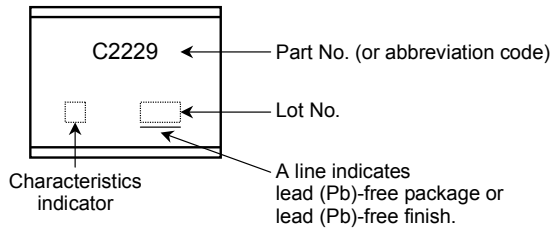
Weight: 0.36 g (typ.)

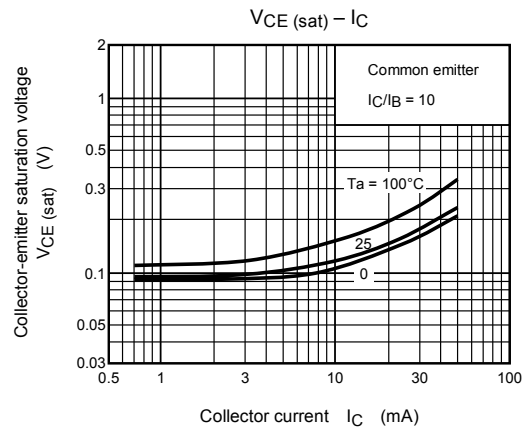
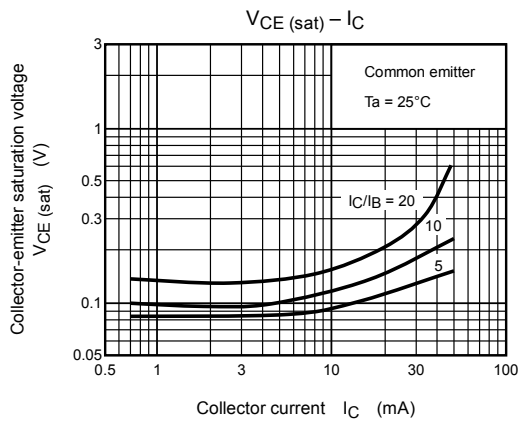
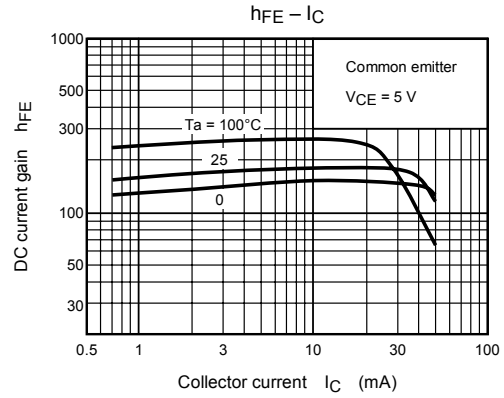
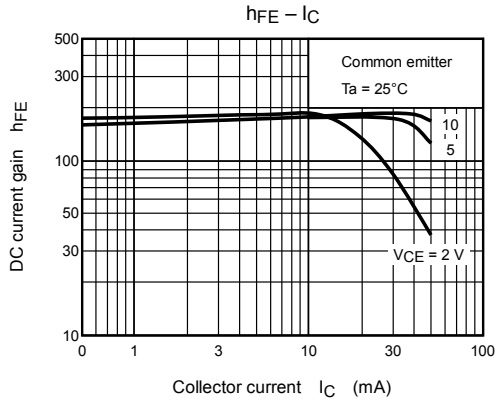
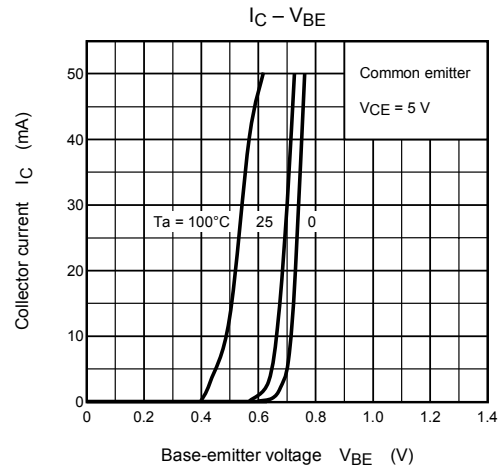
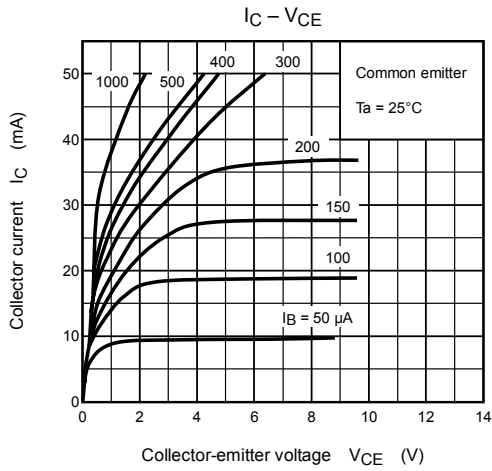
Electrical Characteristics (Ta = 25°C)

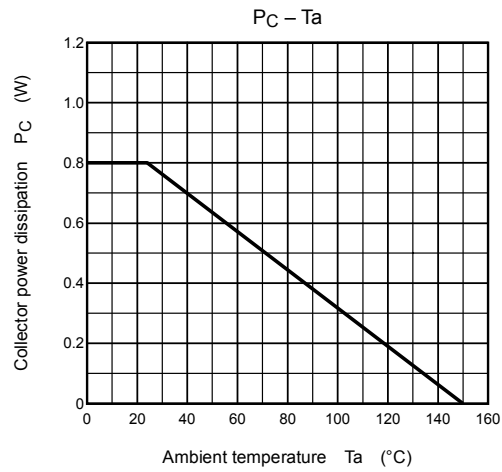
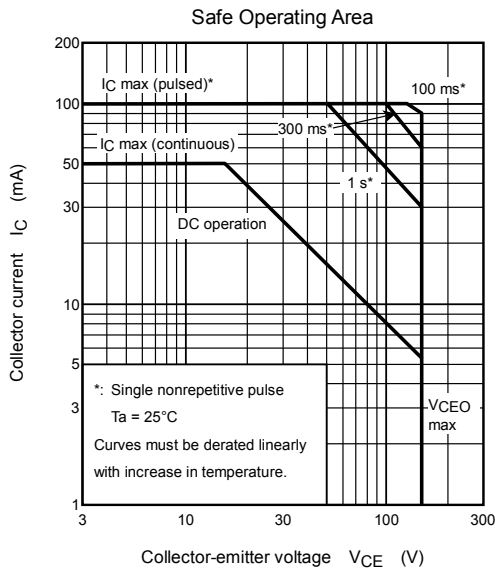
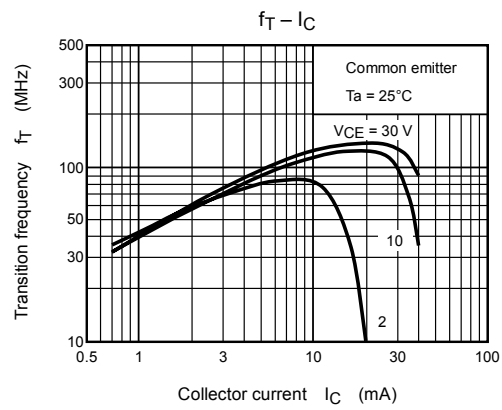
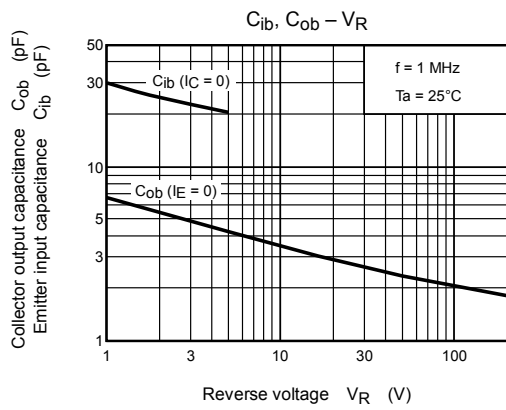
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 200 \text{ V}, I_E = 0$	—	—	0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5 \text{ V}, I_C = 0$	—	—	0.1	μA
DC current gain	h_{FE} (Note)	$V_{CE} = 5 \text{ V}, I_C = 10 \text{ mA}$	70	—	240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10 \text{ mA}, I_B = 1 \text{ mA}$	—	—	0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 10 \text{ mA}, I_B = 1 \text{ mA}$	—	—	1	V
Transition frequency	f_T	$V_{CE} = 30 \text{ V}, I_C = 10 \text{ mA}$	—	120	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$	—	3.5	5	pF

Note: h_{FE} classification O: 70 to 140, Y: 120 to 240

Marking







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