

TOSHIBA Transistor Silicon NPN Triple Diffused Type (PCT Process)

2SC3963

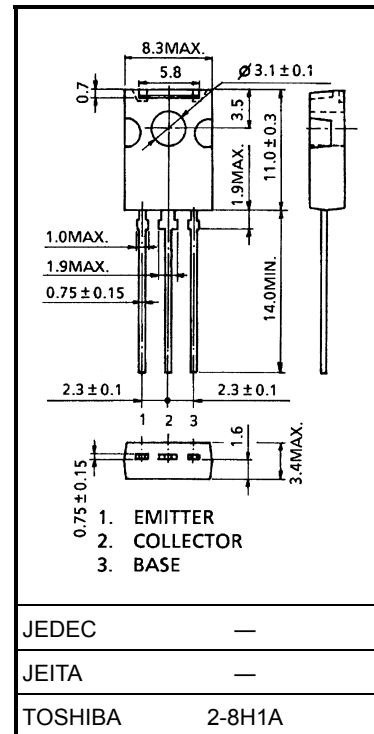
High-Voltage General Amplifier Applications
Color TV Class B Sound Output Applications

Unit: mm

- High voltage: $V_{CE0} = 160 \text{ V}$

Maximum Ratings (Tc = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	200	V
Collector-emitter voltage	V_{CEO}	160	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	200	mA
Base current	I_B	100	mA
Collector power dissipation	P_C	1.5	W
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55 to 150	°C



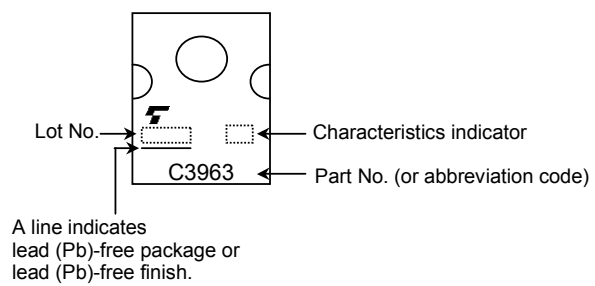
Weight: 0.82 g (typ.)

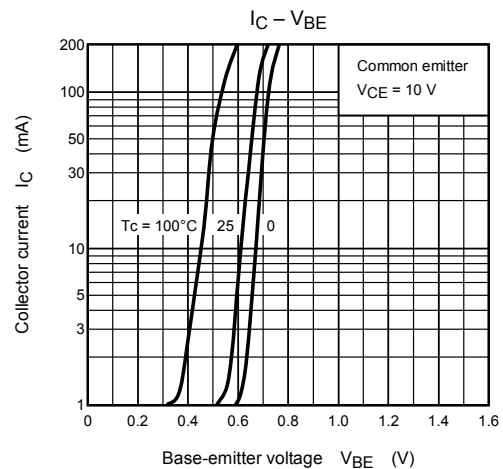
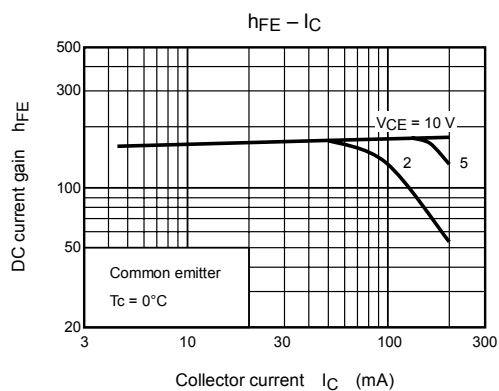
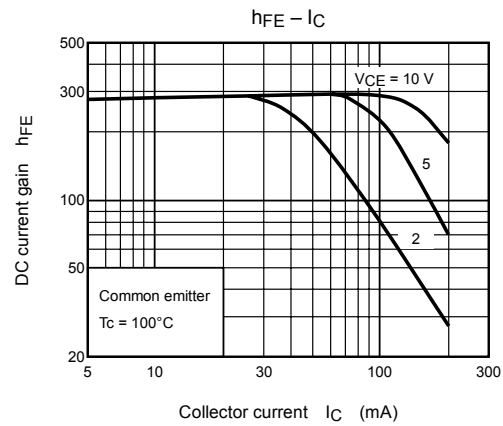
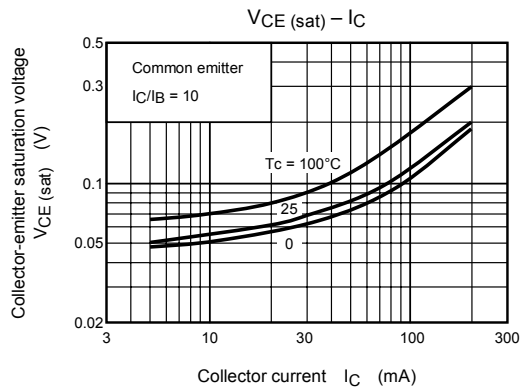
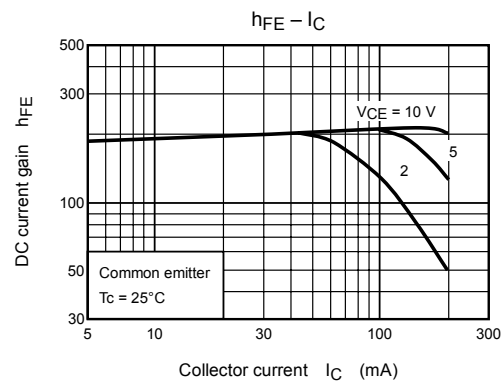
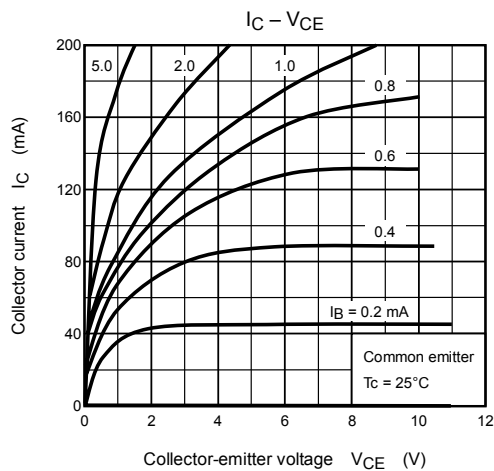
Electrical Characteristics (Tc = 25°C)

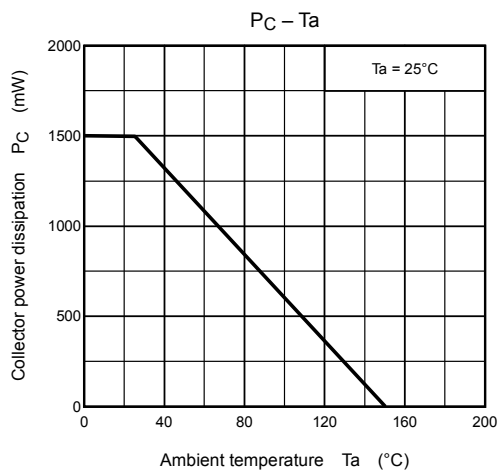
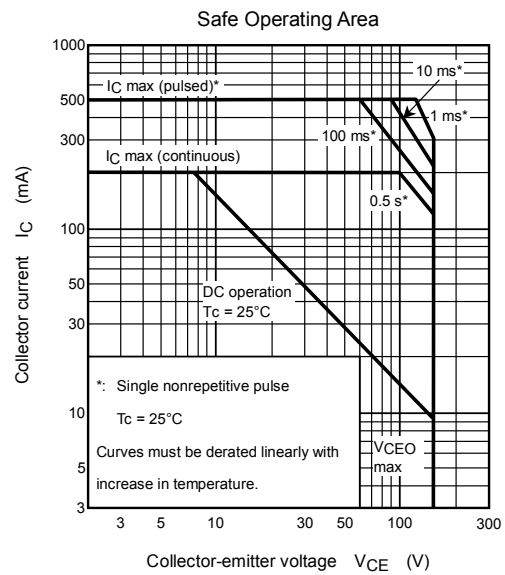
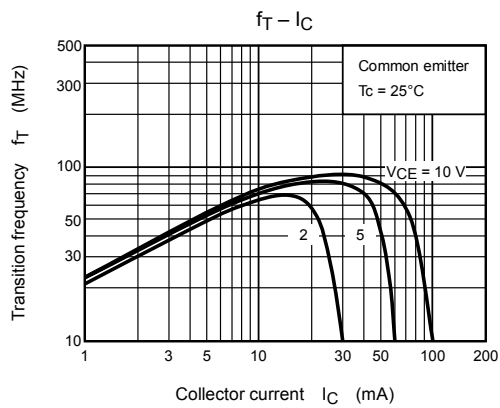
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 200\text{ V}, I_E = 0$	—	—	0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{ V}, I_C = 0$	—	—	0.1	μA
DC current gain	$h_{FE}^{(1)}$ (Note)	$V_{CE} = 10\text{ V}, I_C = 50\text{ mA}$	100	—	320	
	$h_{FE}^{(2)}$	$V_{CE} = 10\text{ V}, I_C = 150\text{ mA}$	80	—	—	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 200\text{ mA}, I_B = 20\text{ mA}$	—	—	1.0	V
Base-emitter voltage	V_{BE}	$V_{CE} = 10\text{ V}, I_C = 5\text{ mA}$	0.55	0.65	0.75	V
Transition frequency	f_T	$V_{CE} = 10\text{ V}, I_C = 50\text{ mA}$	50	—	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	—	10	pF

Note: hFE (1) classification O: 100 to 200, Y: 160 to 320

Marking







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