

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process)

# 2SC2983

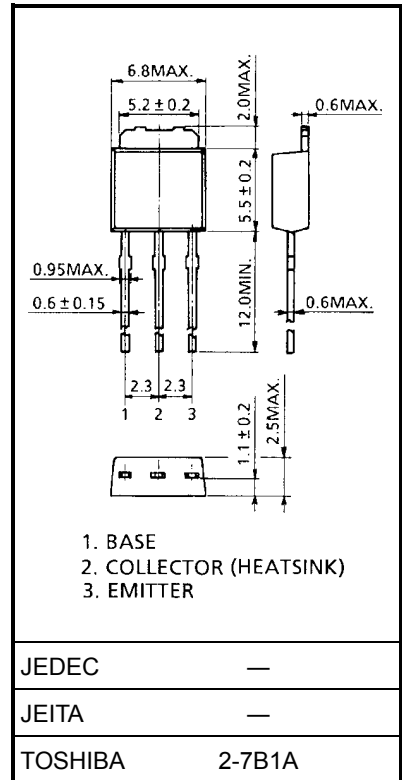
Power Amplifier Applications  
 Driver Stage Amplifier Applications

- High transition frequency:  $f_T = 100 \text{ MHz (typ.)}$
- Complementary to 2SA1225

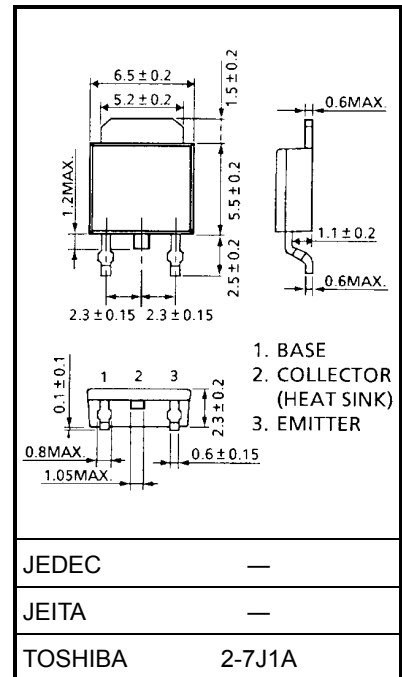
### Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Characteristics	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	160	V
Collector-emitter voltage	$V_{CEO}$	160	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	1.5	A
Base current	$I_B$	0.3	A
Collector power dissipation	$P_C$	$T_a = 25^\circ\text{C}$	1.0
		$T_c = 25^\circ\text{C}$	15
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	-55 to 150	$^\circ\text{C}$

Unit: mm



Weight: 0.36 g (typ.)



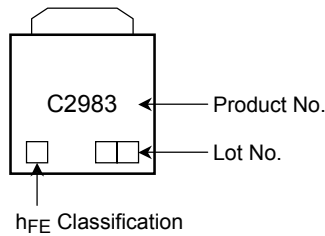
Weight: 0.36 g (typ.)

## Electrical Characteristics (Ta = 25°C)

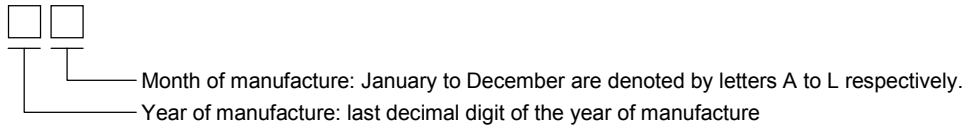
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB} = 160\text{ V}, I_E = 0$	—	—	1.0	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5\text{ V}, I_C = 0$	—	—	1.0	$\mu\text{A}$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10\text{ A}, I_B = 0$	160	—	—	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 1\text{ mA}, I_C = 0$	5	—	—	V
DC current gain	$h_{FE}$ (Note)	$V_{CE} = 5\text{ V}, I_C = 100\text{ mA}$	70	—	240	
Collector emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\text{ mA}, I_B = 50\text{ mA}$	—	—	1.5	V
Base-emitter voltage	$V_{BE}$	$V_{CE} = 5\text{ V}, I_C = 500\text{ mA}$	—	—	1.0	V
Transition frequency	$f_T$	$V_{CE} = 10\text{ V}, I_C = 100\text{ mA}$	—	100	—	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	25	—	pF

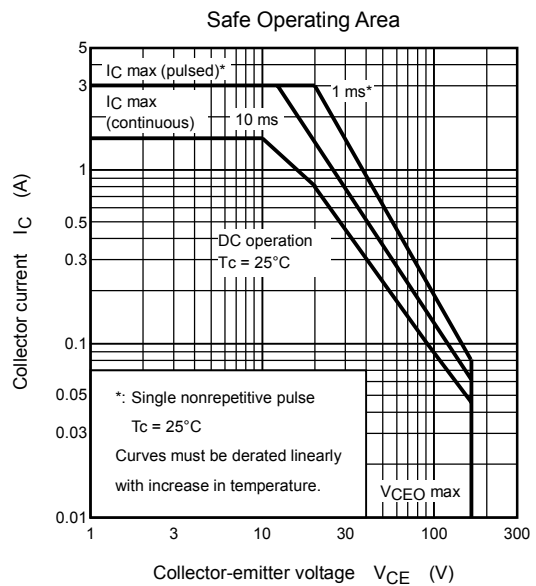
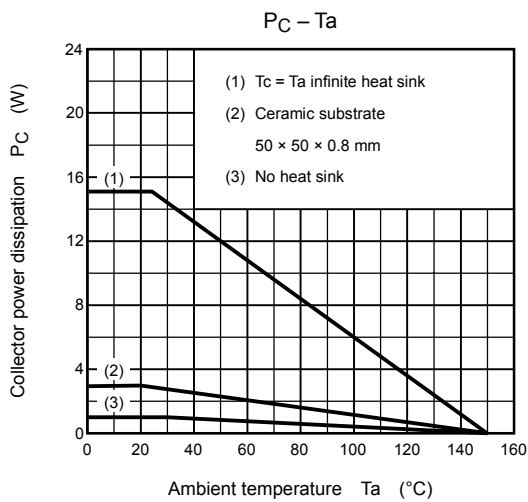
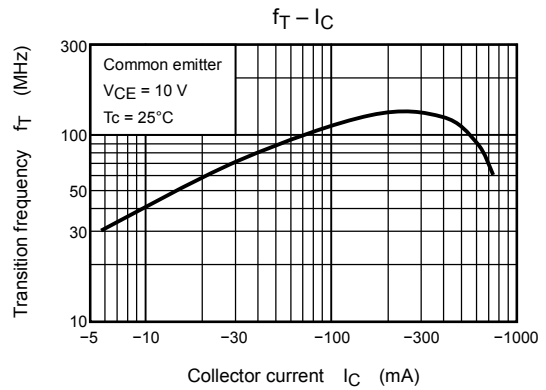
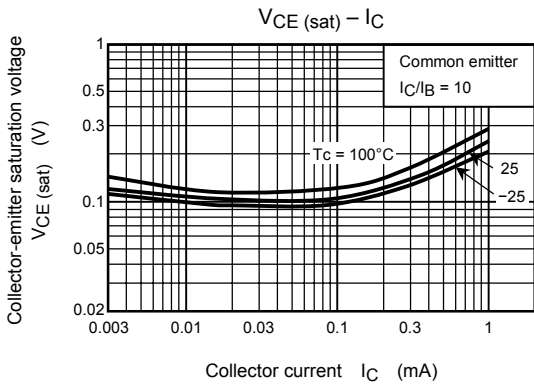
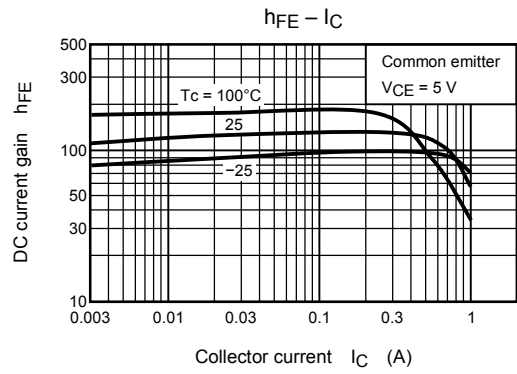
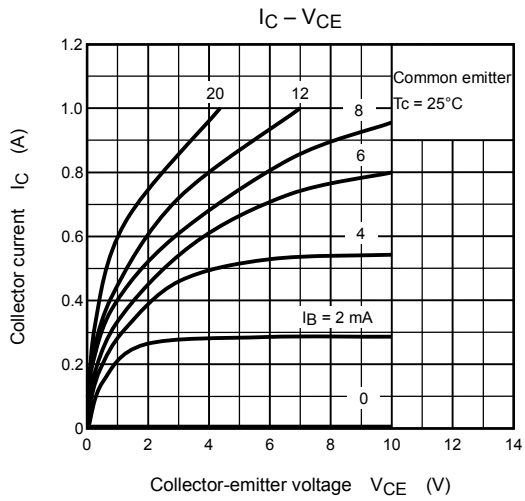
Note:  $h_{FE}$  classification O: 70 to 140, Y: 120 to 240

## Marking



## Explanation of Lot No.





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