

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process)

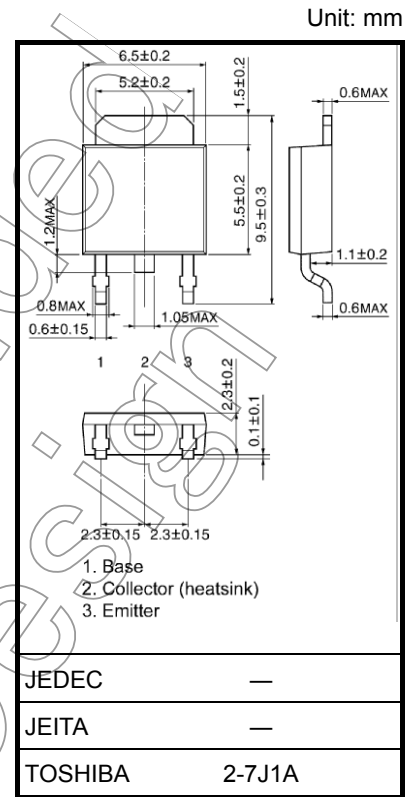
# 2SC2983

Power Amplifier Applications  
 Driver Stage Amplifier Applications

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

**Absolute Maximum Ratings (Ta = 25°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	Ta = 25°C	$P_C$	1.0	W
	Tc = 25°C		15	
Junction temperature		$T_j$	150	°C
Storage temperature range		$T_{stg}$	-55 to 150	°C



Weight: 0.36 g (typ.)

Note1: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings. Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

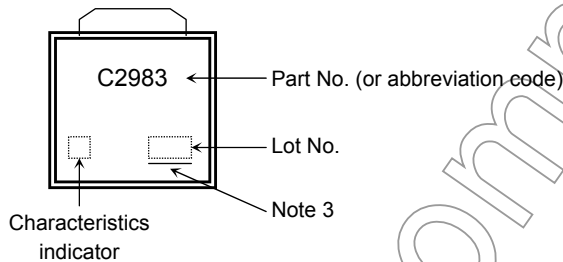
Not for New

## 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	$V_{(BR)CEO}$	$I_C = 10\text{ mA}, I_B = 0$	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 2)	$V_{CE} = 5\text{ V}, I_C = 100\text{ mA}$	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 2:  $h_{FE}$  classification O: 70 to 140, Y: 120 to 240

## Marking

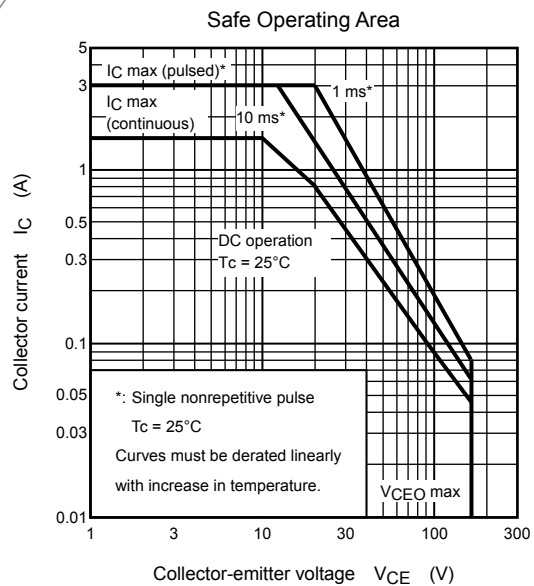
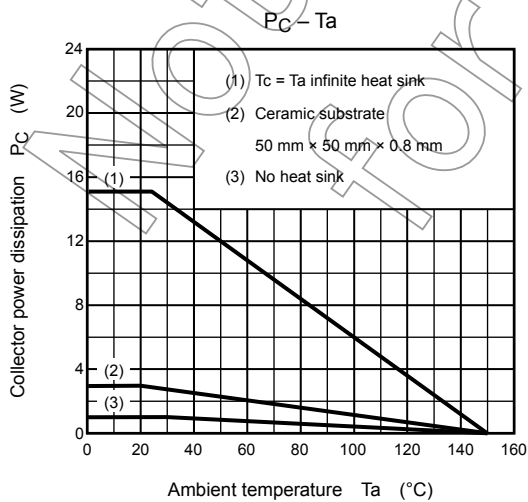
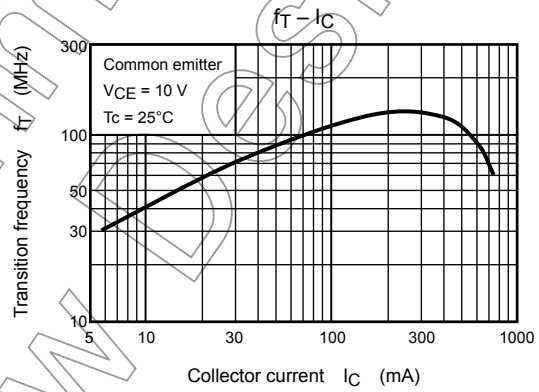
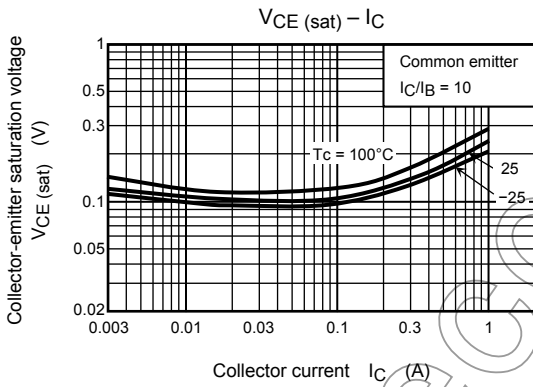
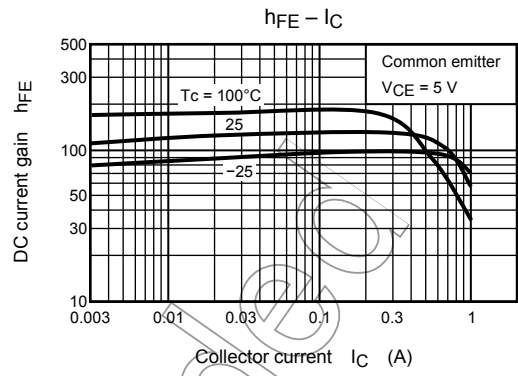
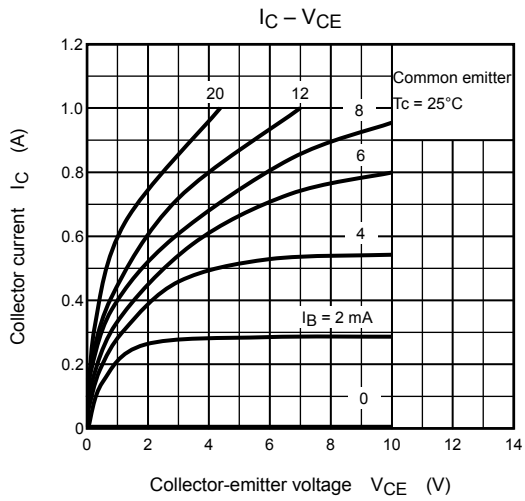


Note 3: A line under a Lot No. identifies the indication of product Labels.

Not underlined:  $[[Pb]]/INCLUDES > MCV$

Underlined:  $[[G]]/RoHS COMPATIBLE$  or  $[[G]]/RoHS [[Pb]]$

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