

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process)

2SC2982

Storobo Flash Applications

Medium Power Amplifier Applications

- High DC current gain and excellent linearity
 : hFE (1) = 140 to 600 (VCE = 1 V, IC = 0.5 A)
 : hFE (2) = 70 (min), 140 (typ.), (VCE = 1 V, IC = 2 A)
- Low saturation voltage
 : VCE (sat) = 0.5 V (max) (IC = 2 A, IB = 50 mA)
- Small flat package
- PC = 1.0 to 2.0 W (mounted on a ceramic substrate)
- Complementary to 2SA1314

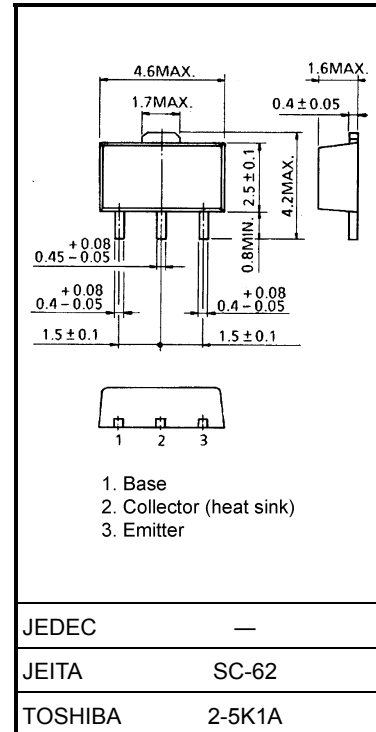
Maximum Ratings (Ta = 25°C)

Characteristics		Symbol	Rating	Unit
Collector-base voltage		V _{CBO}	30	V
Collector-emitter voltage		V _{CES}	30	V
		V _{CEO}	10	
Emitter-base voltage		V _{EBO}	6	V
Collector current	DC	I _C	2	A
	Pulse (Note 1)	I _{CP}	4	
Base current	DC	I _B	0.4	A
	Pulse (Note 1)	I _{BP}	0.8	
Collector power dissipation		P _C	500	mW
		P _C (Note 2)	1000	
Junction temperature		T _j	150	°C
Storage temperature range		T _{stg}	-55 to 150	°C

Note 1: Pulse test: Pulse width = 10 ms (max), duty cycle = 30% (max)

Note 2: 2SC2982 mounted on a ceramic substrate (250 mm² × 0.8 t)

Unit: mm



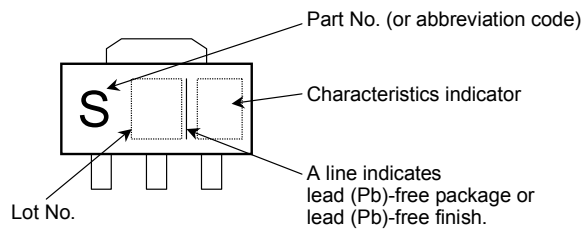
Weight: 0.05 g (typ.)

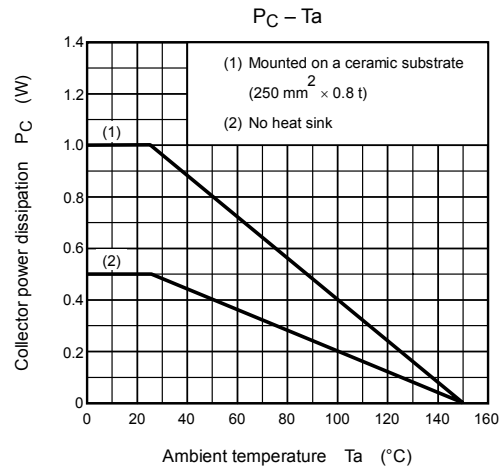
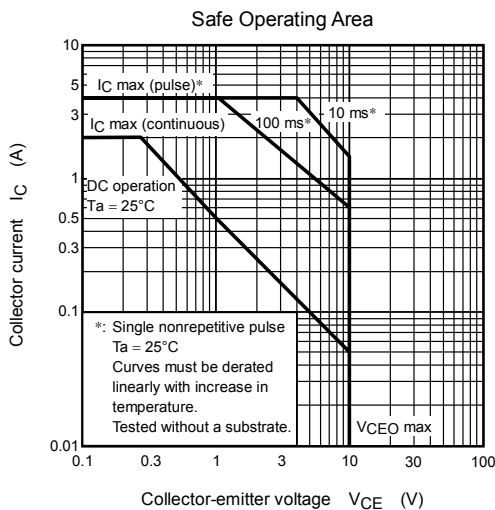
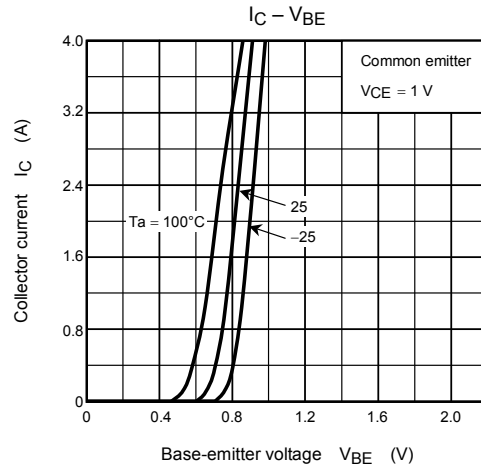
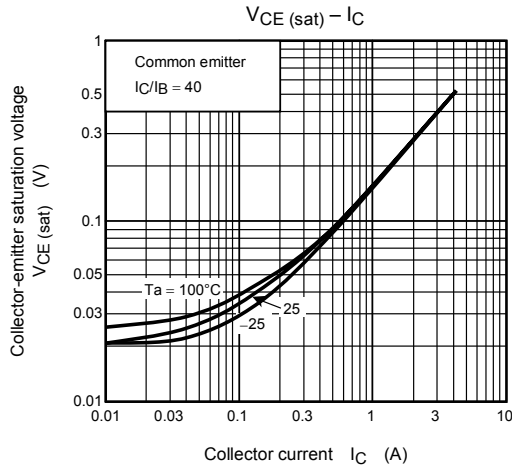
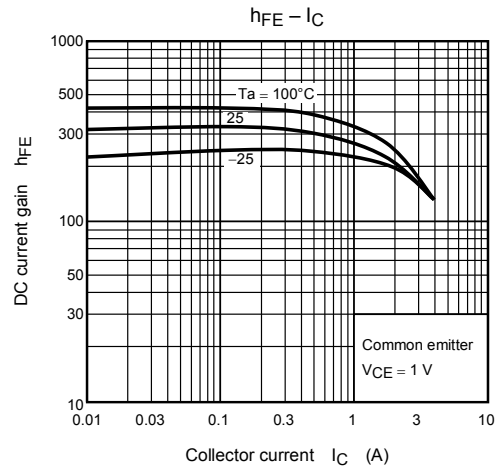
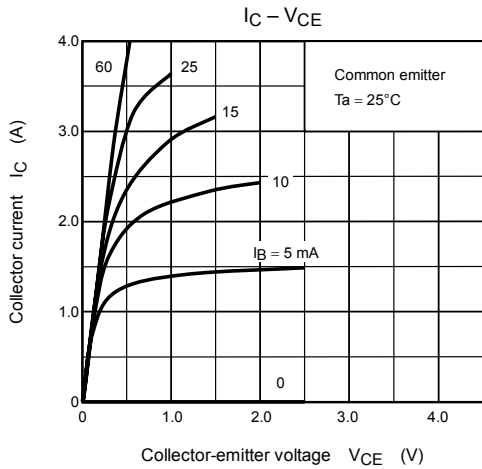
Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 30\text{ V}, I_E = 0$	—	—	0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 6\text{ V}, I_C = 0$	—	—	0.1	μA
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10\text{ mA}, I_B = 0$	10	—	—	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 1\text{ mA}, I_C = 0$	6	—	—	V
DC current gain	$h_{FE(1)}$ (Note 3)	$V_{CE} = 1\text{ V}, I_C = 0.5\text{ A}$	140	—	600	—
	$h_{FE(2)}$	$V_{CE} = 1\text{ V}, I_C = 2\text{ A}$	70	140	—	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 2\text{ A}, I_B = 50\text{ mA}$	—	0.2	0.5	V
Base-emitter voltage	V_{BE}	$V_{CE} = 1\text{ V}, I_C = 2\text{ A}$	—	0.86	1.5	V
Transition frequency	f_T	$V_{CE} = 1\text{ V}, I_C = 0.5\text{ A}$	—	150	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	27	—	pF

Note 3: $h_{FE(1)}$ classification A: 140 to 240, B: 200 to 330, C: 300 to 450, D: 420 to 600

Marking





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