

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT process)

2SA1483

High Frequency Amplifier Applications
Video Amplifier Applications
High Speed Switching Applications

- High transition frequency: $f_T = 200\text{ MHz (typ.)}$
- Low collector output capacitance: $C_{ob} = 3.5\text{ pF (typ.)}$
- Complementary to 2SC3803

Absolute Maximum Ratings (Ta = 25°C)

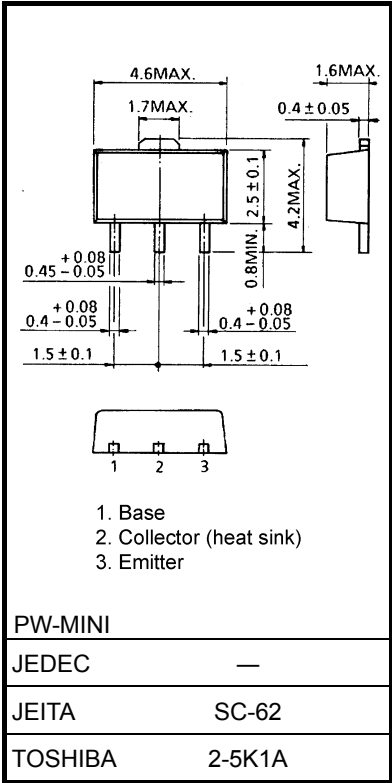
Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-60	V
Collector-emitter voltage	V_{CEO}	-45	V
Emitter-base voltage	V_{EBO}	-5	V
Continuous collector current	I_C	-200	mA
Continuous base current	I_B	-50	mA
Collector power dissipation	P_C	500	mW
	P_C (Note 1)	1000	
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55 to 150	°C

Note 1: Mounted on a ceramic substrate (250 mm² × 0.8 t)

Note 2: 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.

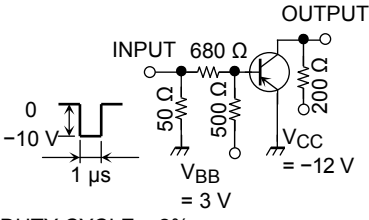
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

Unit: mm



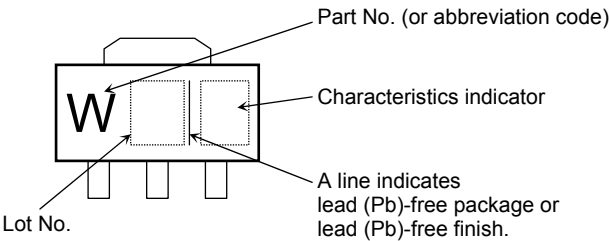
Weight: 0.05 g (typ.)

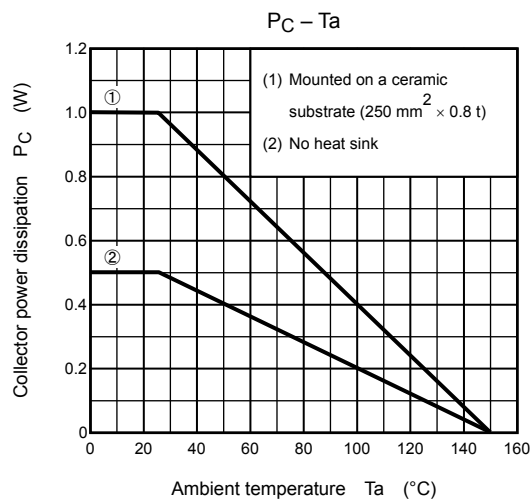
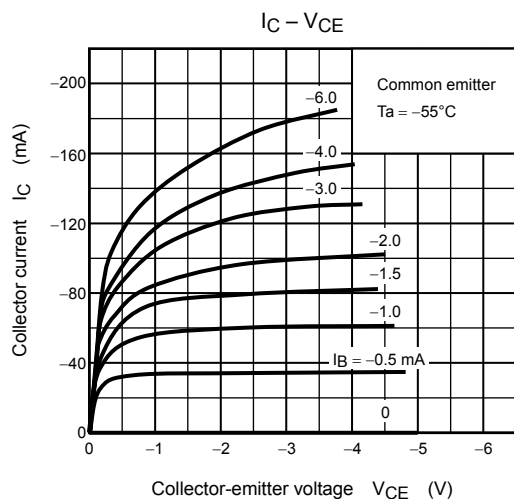
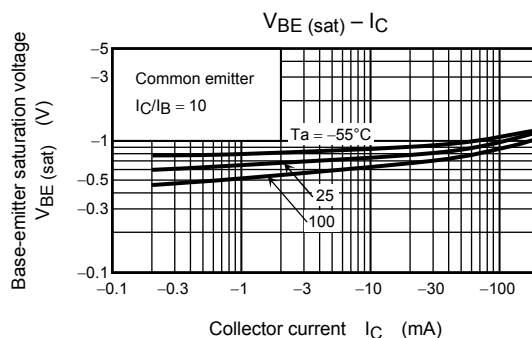
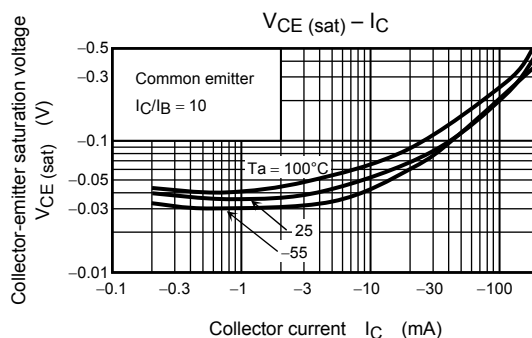
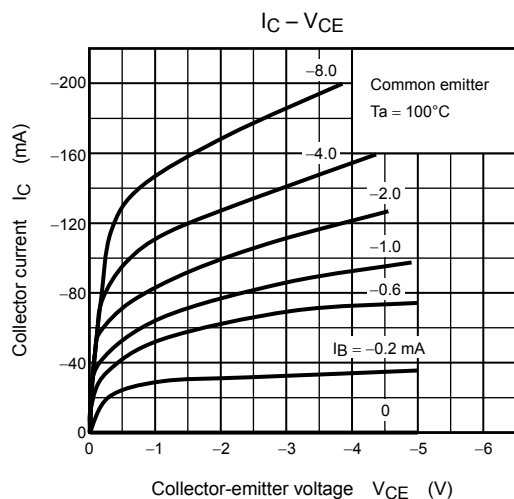
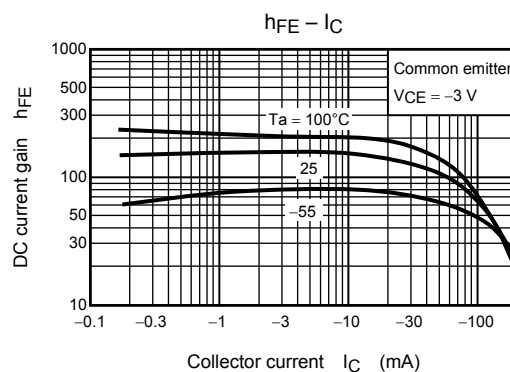
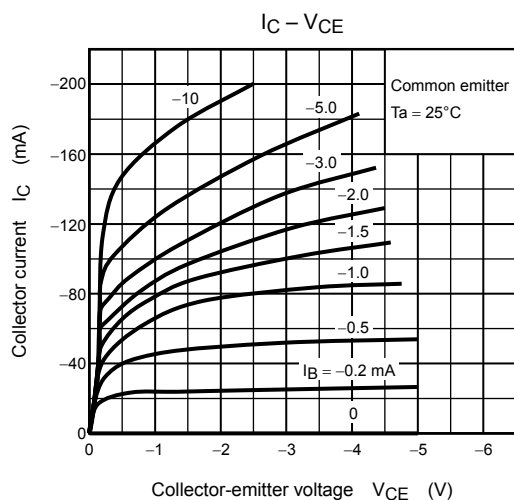
Electrical Characteristics (Ta = 25°C)

Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		ICBO	V _{CB} = -45 V, I _E = 0	—	—	-0.1	μA
Emitter cut-off current		IEBO	V _{EB} = -5 V, I _C = 0	—	—	-0.1	μA
DC current gain	h _{FE} (1) (Note 3)		V _{CE} = -1 V, I _C = -10 mA	40	—	240	
	h _{FE} (2)		V _{CE} = -3 V, I _C = -200 mA	20	—	—	
Collector-emitter saturation voltage		V _{CE} (sat)	I _C = -100 mA, I _B = -10 mA	—	—	-0.3	V
Base-emitter saturation voltage		V _{BE} (sat)	I _C = -100 mA, I _B = -10 mA	—	—	-1.0	V
Transition frequency		f _T	V _{CE} = -10 V, I _C = -10 mA	100	200	—	MHz
Input impedance (real part)		Re (h _{ie})	V _{CE} = -10 V, I _E = 10 mA, f = 200 MHz	—	—	120	Ω
Collector output capacitance		C _{ob}	V _{CB} = -10 V, I _E = 0, f = 1 MHz	—	3.5	5	pF
Switching time	Turn-on time	t _{on}	 DUTY CYCLE ≤ 2%	—	40	—	ns
	Storage time	t _{stg}		—	250	—	
	Fall time	t _f		—	30	—	

Note 3: h_{FE} (1) classification R: 40 to 80, O: 70 to 140, Y: 120 to 240

Marking





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20070701-EN

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