TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process)

2SC4207

Audio Frequency General Purpose Amplifier Applications

Unit: mm

- Small package (dual type)
- High voltage and high current: $V_{\rm CEO}$ = 50 V, $I_{\rm C}$ = 150 mA (max)
- High hFE: hFE = $120 \sim 700$
- Excellent hFE linearity: hFE (IC = 0.1 mA)/hFE (IC = 2 mA) = 0.95 (typ.)
- Complementary to 2SA1618

Absolute Maximum Ratings (Ta = 25°C) (Q1, Q2 common)

Characteristics	Symbol	Rating	Unit	
Collector-base voltage	V_{CBO}	60	V	
Collector-emitter voltage	V _{CEO}	50	V	
Emitter-base voltage	V _{EBO}	5	V	
Collector current	Ic	150	mA	
Base current	ΙΒ	30	mA	
Collector power dissipation	P _C (Note 1)	300	mW	
Junction temperature	Tj	125	°C	
Storage temperature range	T _{stg}	-55~125	°C	

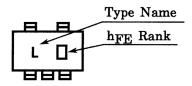
Weight: 0.014 g (typ.)

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in

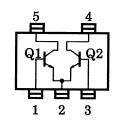
temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings. Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability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

Note 1: Total rating

Marking



Equivalent Circuit (top view)



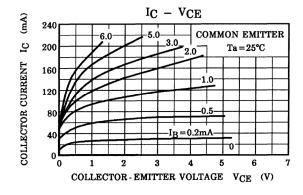
Electrical Characteristics (Ta = 25°C) (Q1, Q2 common)

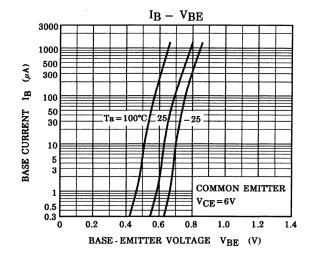
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I _{CBO}	V _{CB} = 60 V, I _E = 0	_	_	0.1	μА
Emitter cut-off current	I _{EBO}	V _{EB} = 5 V, I _C = 0	_	_	0.1	μΑ
DC current gain	h _{FE} (Note 2)	$V_{CE} = 6 \text{ V}, I_C = 2 \text{ mA}$	120	_	700	
Collector-emitter saturation voltage	V _{CE} (sat)	I _C = 100 mA, I _B = 10 mA	_	0.1	0.25	V
Transition frequency	f _T	V _{CE} = 10 V, I _C = 1 mA	80	_	_	MHz
Collector output capacitance	C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 MHz	_	2	3.5	pF

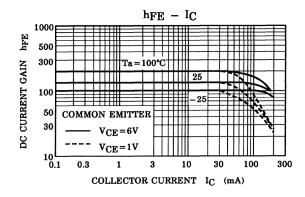
Note 2: h_{FE} classification Y (Y): 120~240, GR (G): 200~400, BL (L): 350~700

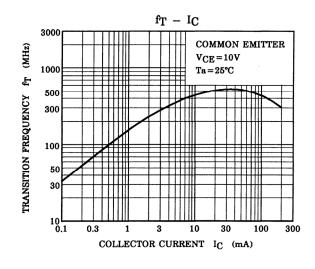
() marking symbol

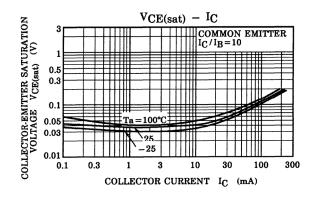
(Q1, Q2 common)

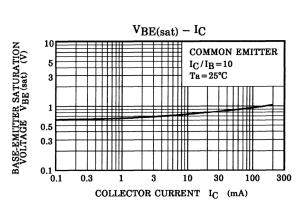


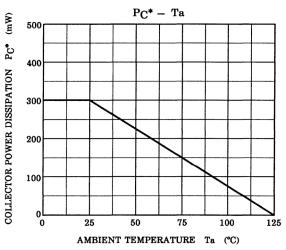












*: Total rating

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20070701-EN GENERAL

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