

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process)

2SC4209

Driver Stage Amplifier Applications

Voltage Amplifier Applications

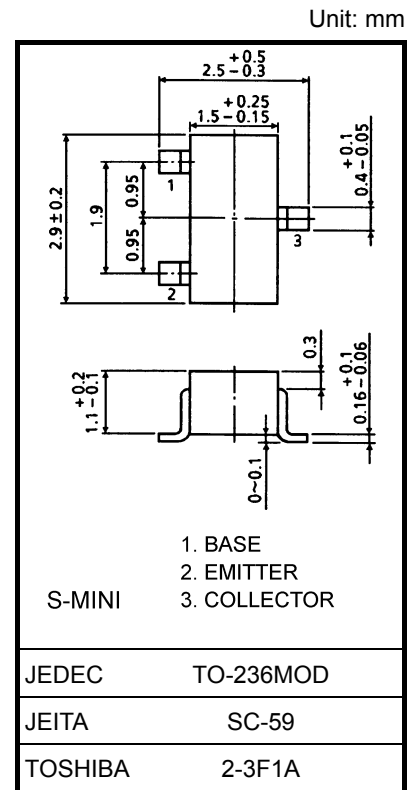
- Complementary to 2SA1620

Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V _{CB0}	80	V
Collector-emitter voltage	V _{CEO}	80	V
Emitter-base voltage	V _{EBO}	5	V
Collector current	I _C	300	mA
Base current	I _B	60	mA
Collector power dissipation	P _C	200	mW
Junction temperature	T _j	150	°C
Storage temperature range	T _{stg}	-55~150	°C

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).



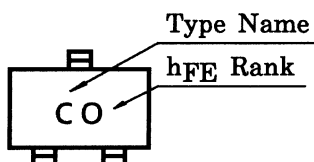
Weight: 0.012 g (typ.)

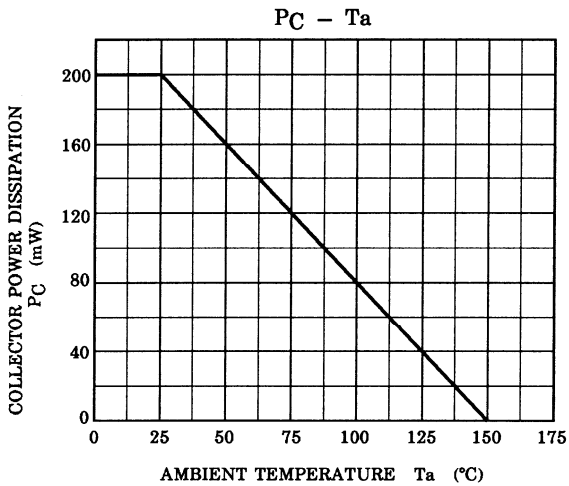
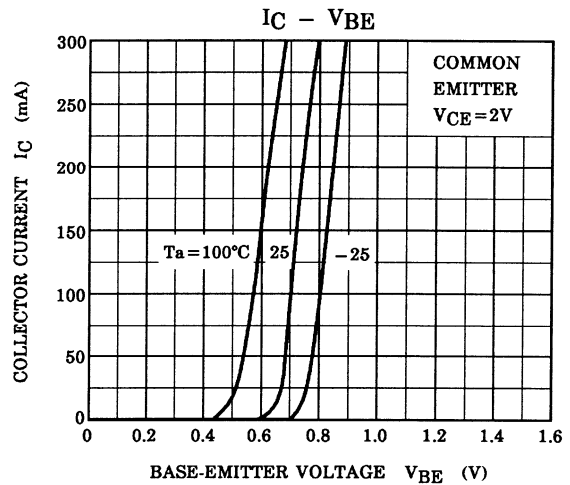
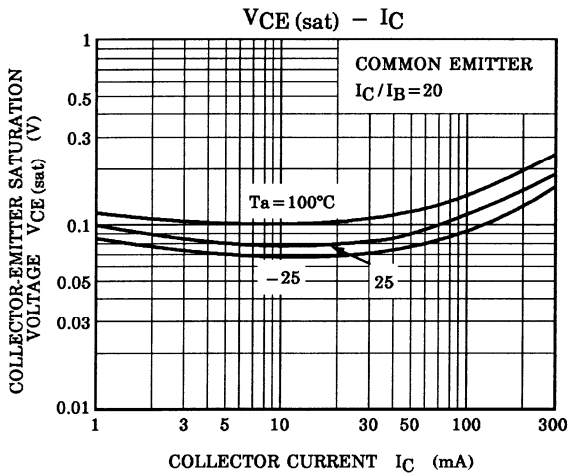
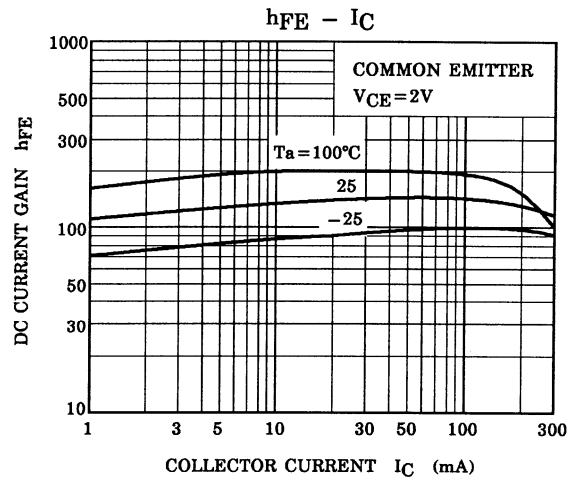
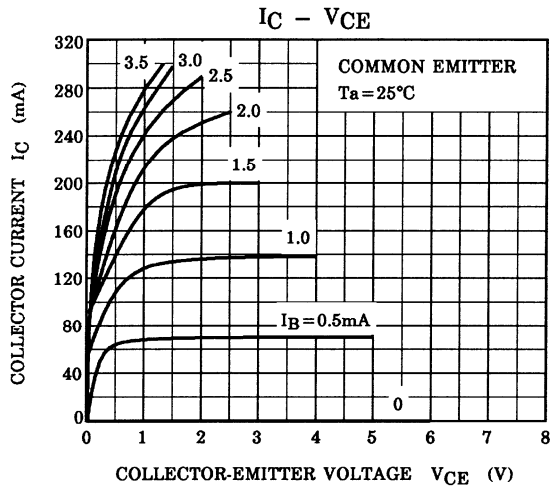
Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I _{CBO}	V _{CB} = 50 V, I _E = 0	—	—	0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} = 5 V, I _C = 0	—	—	0.1	μA
Collector-emitter breakdown voltage	V _{(BR) CEO}	I _C = 5 mA, I _B = 0	80	—	—	V
DC current gain	h _{FE} (1) (Note)	V _{CE} = 2 V, I _C = 50 mA	70	—	240	
	h _{FE} (2)	V _{CE} = 2 V, I _C = 200 mA	40	—	—	
Collector-emitter saturation voltage	V _{CE (sat)}	I _C = 200 mA, I _B = 10 mA	—	—	0.5	V
Base-emitter voltage	V _{BE}	V _{CE} = 2 V, I _C = 5 mA	0.55	—	0.8	V
Transition frequency	f _T	V _{CE} = 10 V, I _C = 10 mA	—	100	—	MHz
Collector output capacitance	C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 MHz	—	10	—	pF

Note: h_{FE} (1) classification O: 70~140, Y: 120~240

Marking





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