

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process)

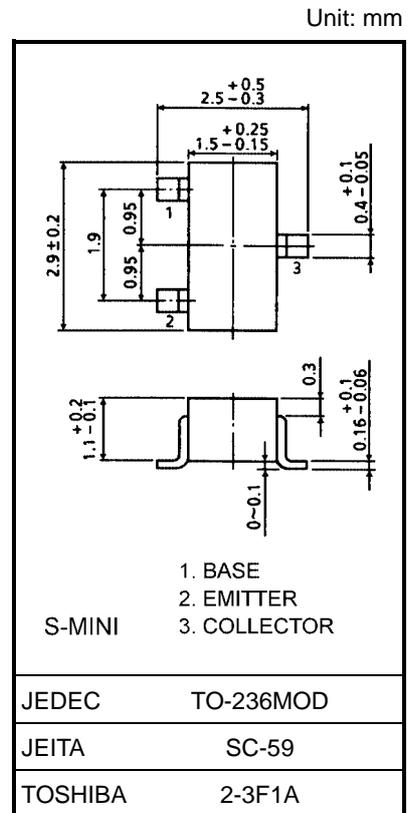
2SC4209

Driver Stage Amplifier Applications
Voltage Amplifier Applications

- Complementary to 2SA1620

Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	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



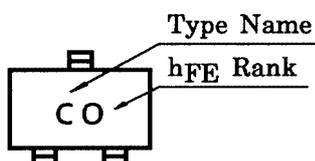
Electrical Characteristics (Ta = 25°C)

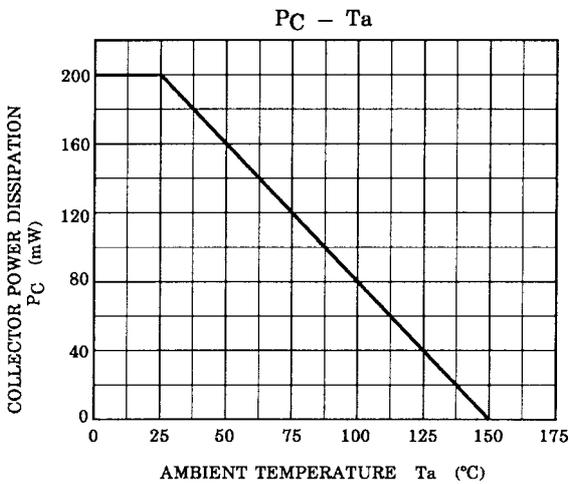
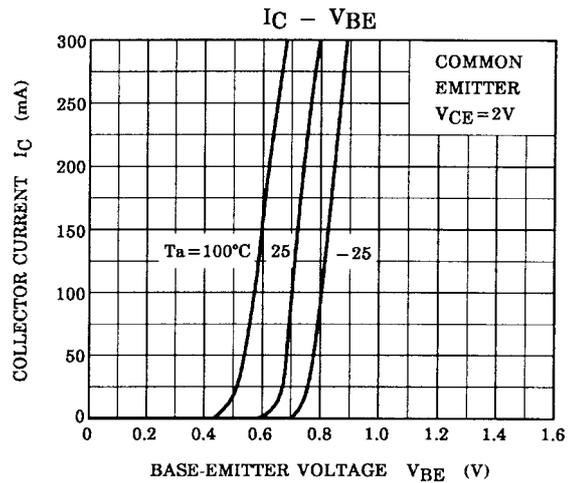
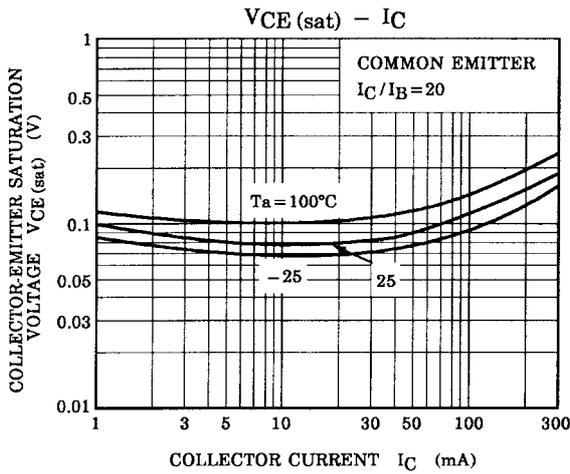
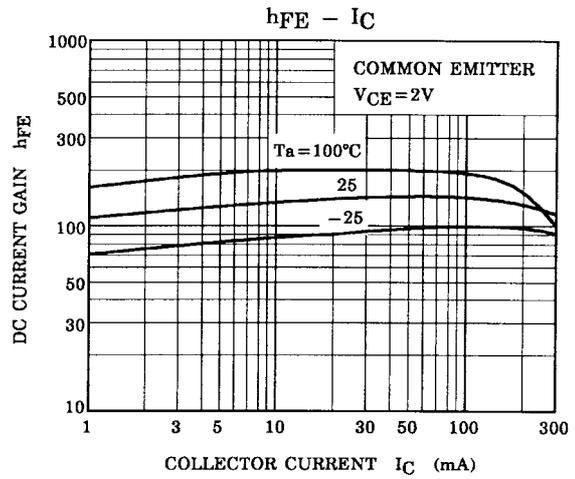
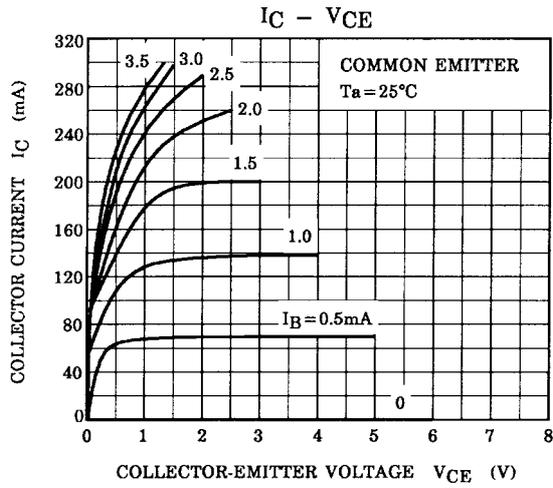
Weight: 0.012 g (typ.)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 50\text{ V}, I_E = 0$	—	—	0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{ V}, I_C = 0$	—	—	0.1	μA
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 5\text{ mA}, I_B = 0$	80	—	—	V
DC current gain	$h_{FE(1)}$ (Note)	$V_{CE} = 2\text{ V}, I_C = 50\text{ mA}$	70	—	240	
	$h_{FE(2)}$	$V_{CE} = 2\text{ V}, I_C = 200\text{ mA}$	40	—	—	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 200\text{ mA}, I_B = 10\text{ mA}$	—	—	0.5	V
Base-emitter voltage	V_{BE}	$V_{CE} = 2\text{ V}, I_C = 5\text{ mA}$	0.55	—	0.8	V
Transition frequency	f_T	$V_{CE} = 10\text{ V}, I_C = 10\text{ mA}$	—	100	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	10	—	pF

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

Marking





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