

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT process)

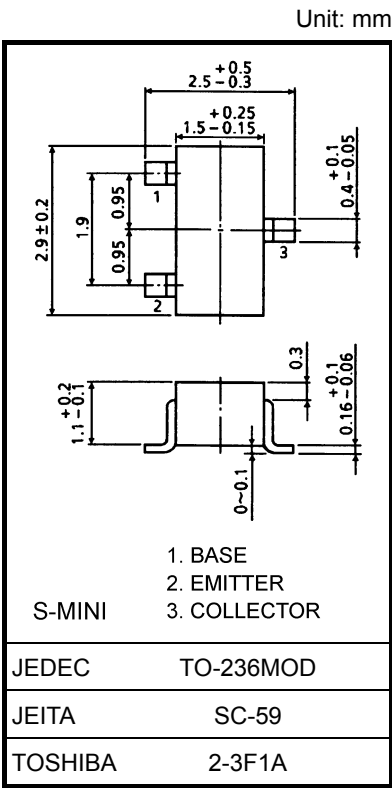
2SA1362

Low Frequency Power Amplifier Applications
Power Switching Applications

- High DC current gain: $h_{FE} = 120 \sim 400$
- Low saturation voltage: $V_{CE(sat)} = -0.2 \text{ V (max)}$
($I_C = -400 \text{ mA}$, $I_B = -8 \text{ mA}$)
- Suitable for driver stage of small motor
- Small package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

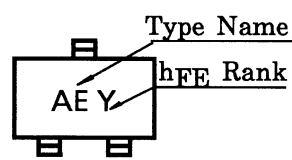
Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-15	V
Collector-emitter voltage	V_{CEO}	-15	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-800	mA
Base current	I_B	-160	mA
Collector power dissipation	P_C	200	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55~150	$^\circ\text{C}$



Weight: 0.012 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).

Marking

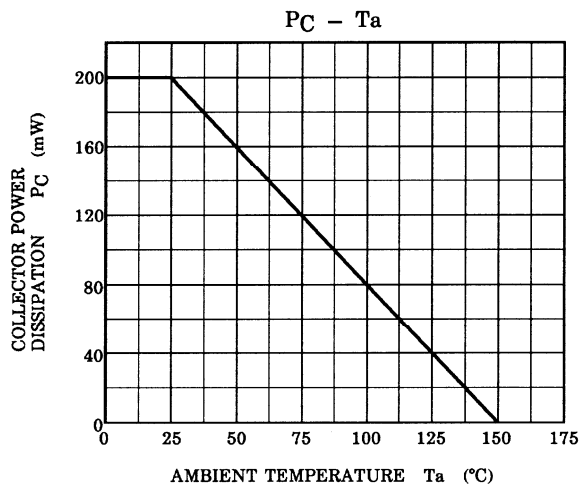
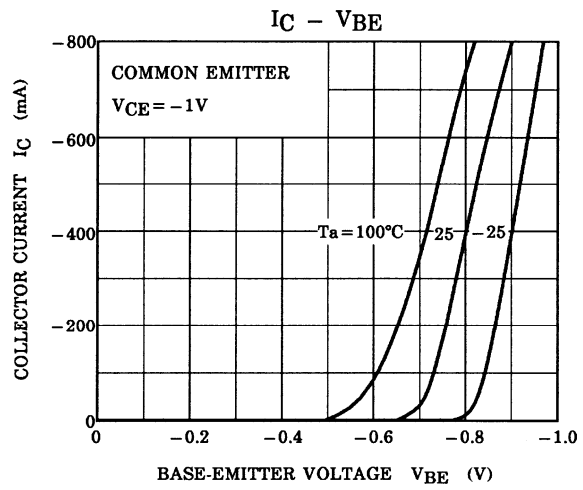
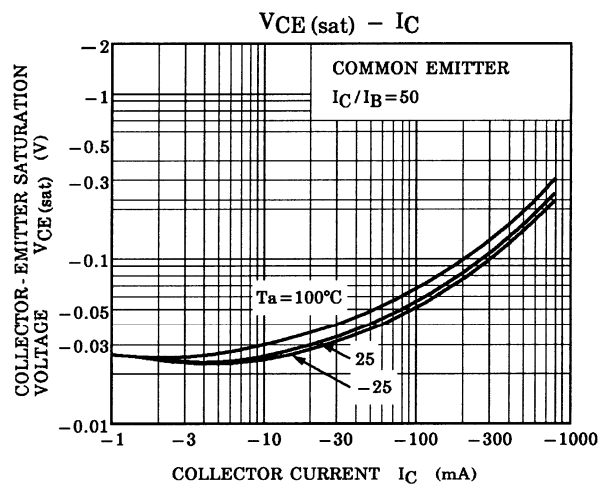
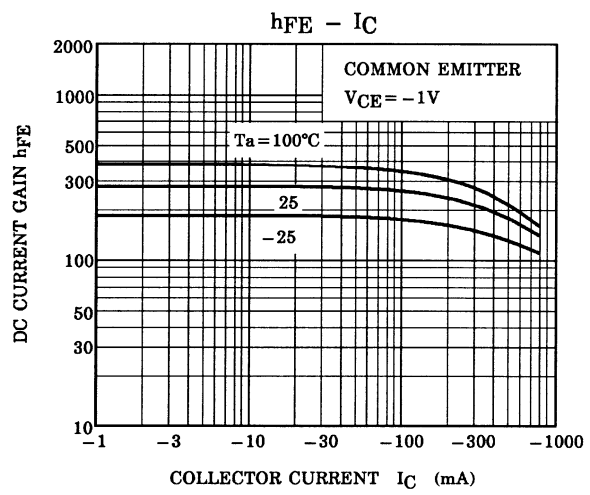
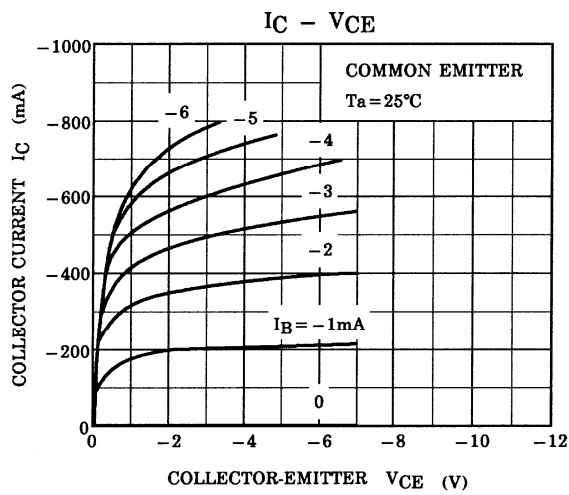


Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = -15\text{ V}, I_E = 0$	—	—	-100	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{ V}, I_C = 0$	—	—	-100	nA
Collector-emitter breakdown voltage	$V_{(BR) CEO}$	$I_C = -10\text{ mA}, I_B = 0$	-15	—	—	V
DC current gain	$h_{FE (1)}$ (Note)	$V_{CE} = -1\text{ V}, I_C = -100\text{ mA}$	120	—	400	
	$h_{FE (2)}$	$V_{CE} = -1\text{ V}, I_C = -800\text{ mA}$	40	—	—	
Collector-emitter saturation voltage	$V_{CE (sat)}$	$I_C = -400\text{ mA}, I_B = -8\text{ mA}$	—	—	-0.2	V
Base-emitter voltage	V_{BE}	$V_{CE} = -1\text{ V}, I_C = -10\text{ mA}$	-0.5	—	-0.8	V
Transition frequency	f_T	$V_{CE} = -5\text{ V}, I_C = -10\text{ mA}$	—	120	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	13	—	pF

Note: $h_{FE (1)}$ classification Y (Y): 120~240, GR (G): 200~400

() marking symbol



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