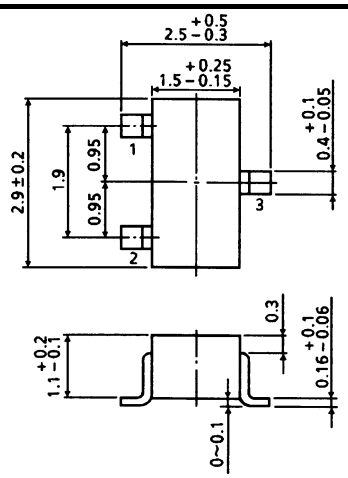
TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process)

2SC2532

Audio Frequency Amplifier Applications
Driver Stage for LED Lamp Applications
Temperature Compensation Applications

- High h_{FE}: h_{FE} (1) = 5000 (min) (IC = 10 mA)
  h_{FE} (2) = 10000 (min) (IC = 100 mA)

Unit: mm



S-MINI

JEDEC	TO-236MOD
JEITA	SC-59
TOSHIBA	2-3F1A

Weight: 0.012 g (typ.)

Absolute Maximum Ratings (Ta = 25°C)

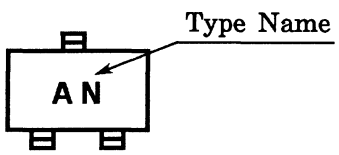
Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	40	V
Collector-emitter voltage	V_{CEO}	40	V
Emitter-base voltage	V_{EBO}	10	V
Collector current	I_C	300	mA
Base current	I_B	60	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	−55~125	°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).

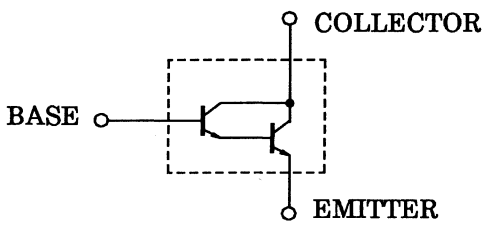
Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	V_{CB} = 40 V, I_E = 0	—	—	0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB} = 8 V, I_C = 0	—	—	0.1	μA
DC current gain	h_{FE} (1)	V_{CE} = 5 V, I_C = 10 mA	5000	—	—	
	h_{FE} (2)	V_{CE} = 2 V, I_C = 100 mA	10000	—	—	
Collector-emitter saturation voltage	$V_{CE\ (sat)}$	I_C = 300 mA, I_B = 0.3 mA	—	0.9	1.3	V
Base-emitter voltage	V_{BE}	V_{CB} = 2 V, I_C = 100 mA	—	1.25	1.6	V

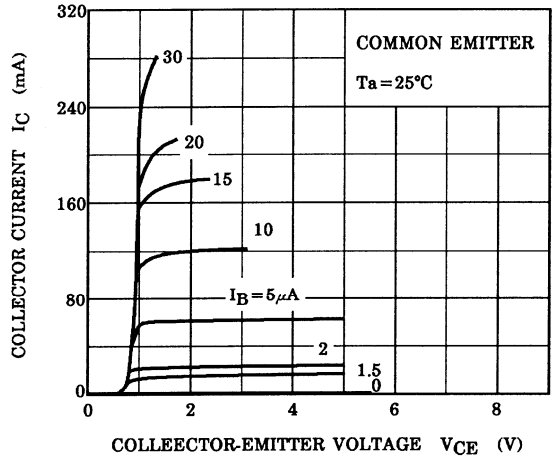
Marking



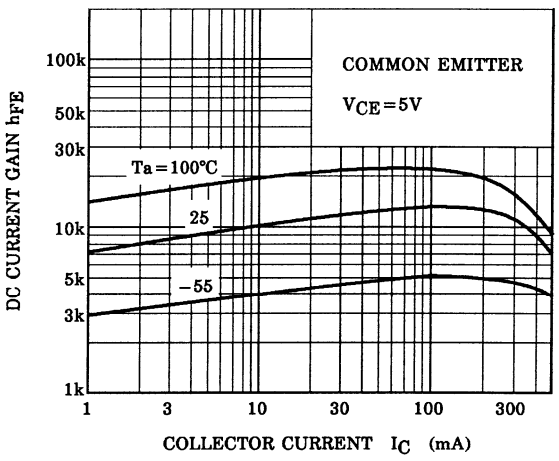
Equivalent Circuit



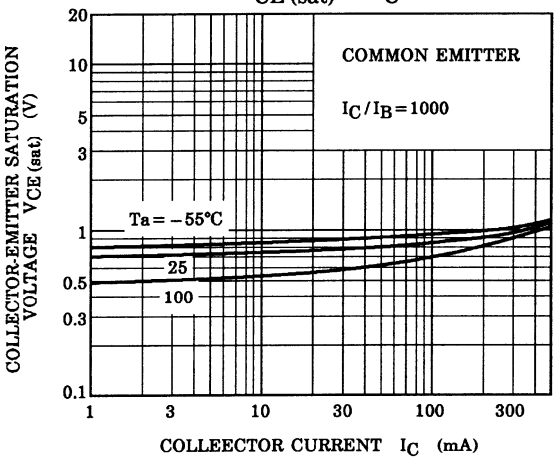
$I_C - V_{CE}$



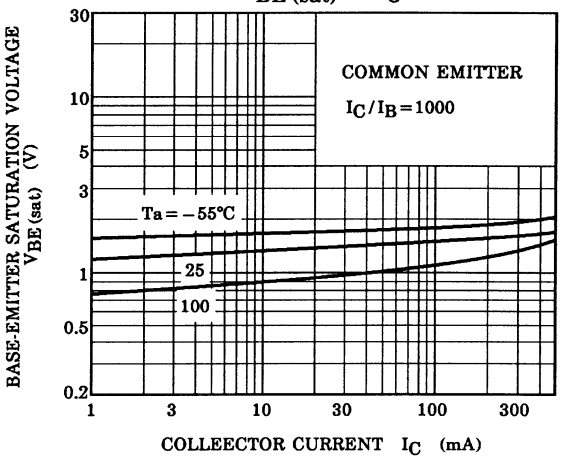
$h_{FE} - I_C$



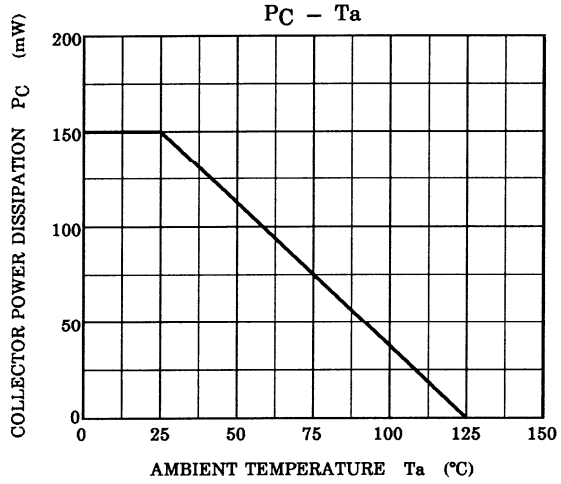
$V_{CE\,(sat)} - I_C$



$V_{BE\,(sat)} - I_C$



$P_C - Ta$



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