

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process)

# 2SC3265

Low Frequency Power Amplifier Applications  
Power Switching Applications

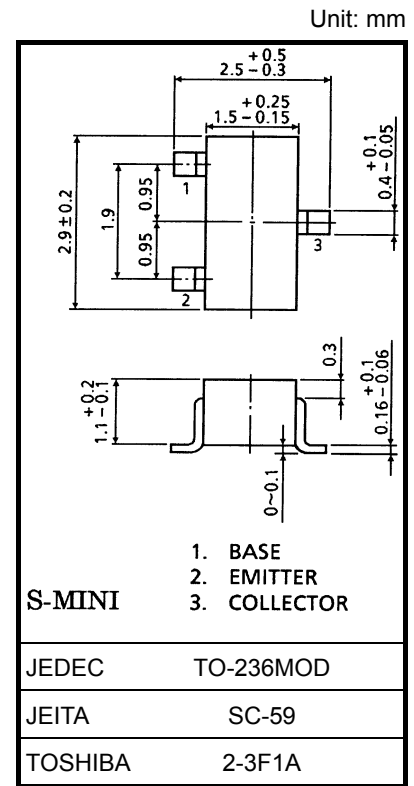
- High DC current gain:  $h_{FE(1)} = 100$  to 320
- Low saturation voltage:  $V_{CE(sat)} = 0.4$  V (max)  
( $I_C = 500$  mA,  $I_B = 20$  mA)
- Complementary to 2SA1298

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

Characteristics	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	30	V
Collector-emitter voltage	$V_{CEO}$	25	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 to 150	$^\circ\text{C}$

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).



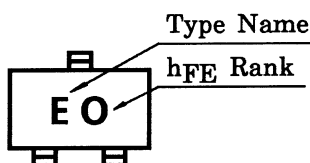
Weight: 0.012 g (typ.)

## Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

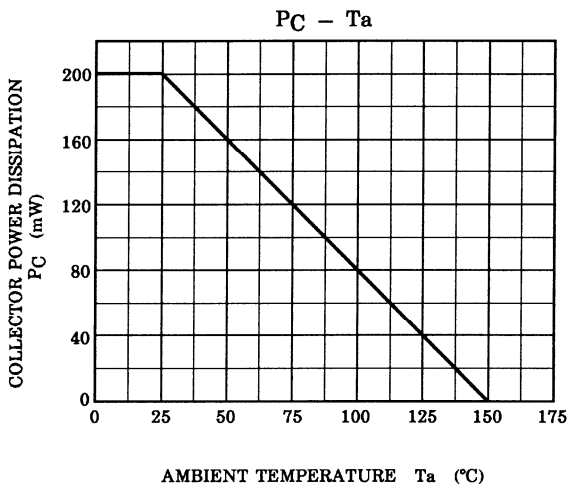
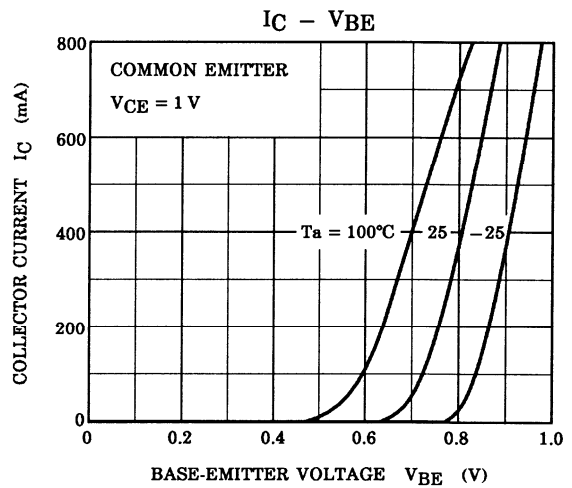
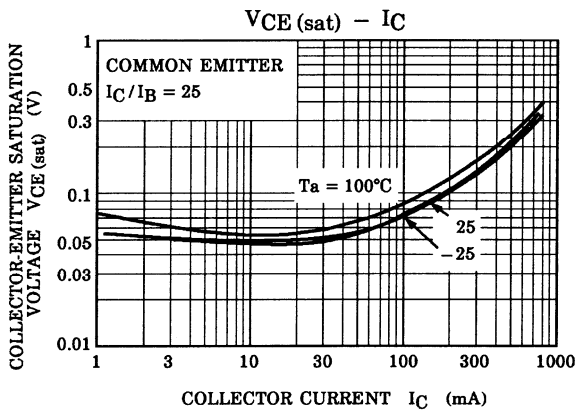
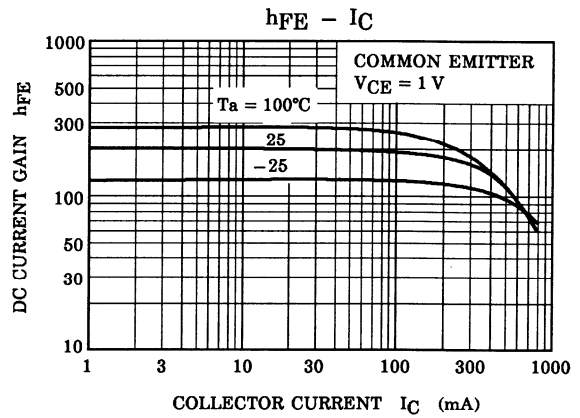
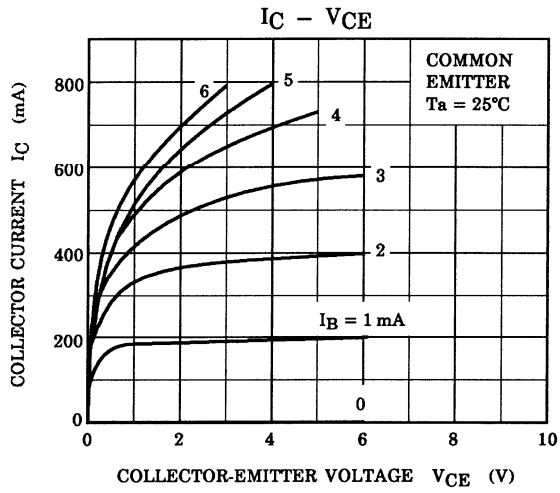
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB} = 30$ V, $I_E = 0$	—	—	0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5$ V, $I_C = 0$	—	—	0.1	$\mu\text{A}$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10$ mA, $I_B = 0$	25	—	—	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 0.1$ mA, $I_C = 0$	5	—	—	V
DC current gain	$h_{FE(1)}$ (Note)	$V_{CE} = 1$ V, $I_C = 100$ mA	100	—	320	
	$h_{FE(2)}$	$V_{CE} = 1$ V, $I_C = 800$ mA	40	—	—	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500$ mA, $I_B = 20$ mA	—	—	0.4	V
Base-emitter voltage	$V_{BE}$	$V_{CE} = 1$ V, $I_C = 10$ mA	0.5	—	0.8	V
Transition frequency	$f_T$	$V_{CE} = 5$ V, $I_C = 10$ mA	—	120	—	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10$ V, $I_E = 0$ , $f = 1$ MHz	—	13	—	pF

Note:  $h_{FE(1)}$  classification O: 100 to 200, Y: 160 to 320

## Marking



Start of commercial production  
1982-10



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