

# 2SC3611

## Silicon NPN epitaxial planar type

For video amplifier

### ■ Features

- High transition frequency  $f_T$
- Small collector output capacitance  $C_{ob}$
- Wide current range
- TO-126B package which requires no insulation plate for installation to the heat sink

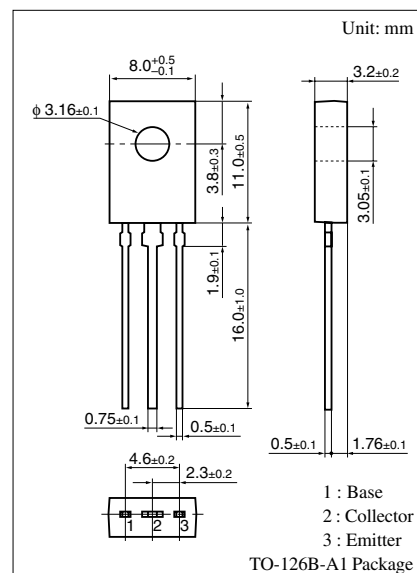
### ■ Absolute Maximum Ratings $T_C = 25^\circ\text{C}$

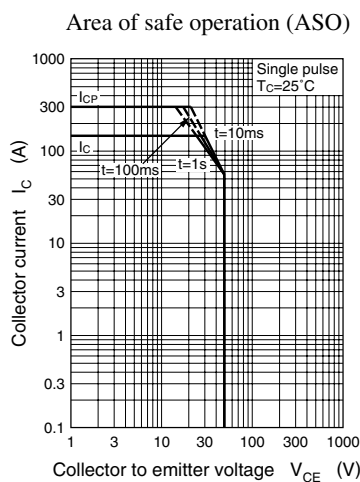
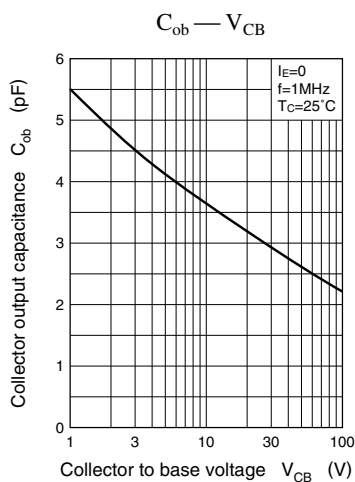
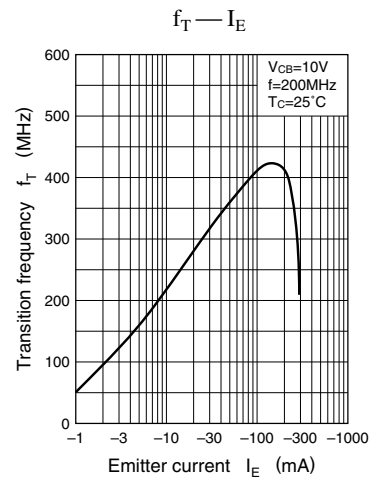
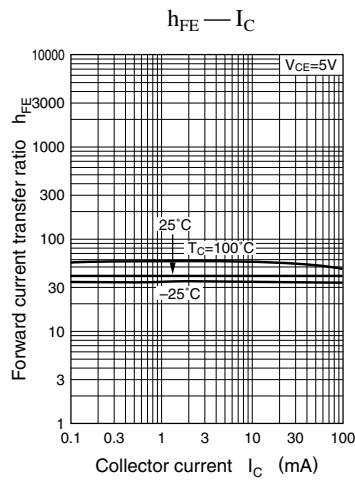
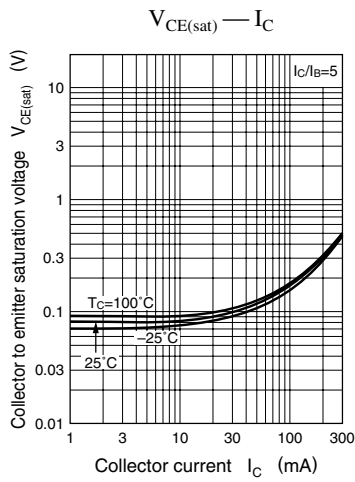
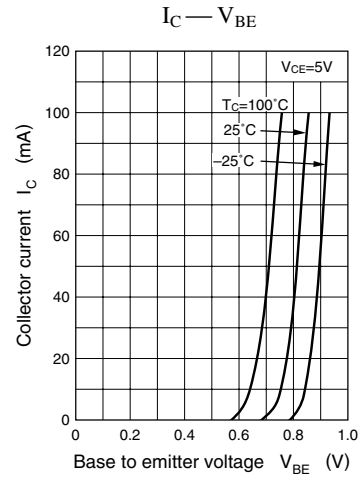
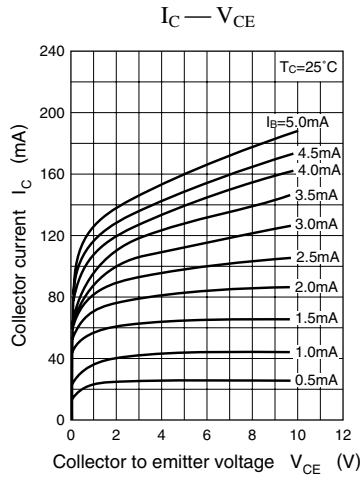
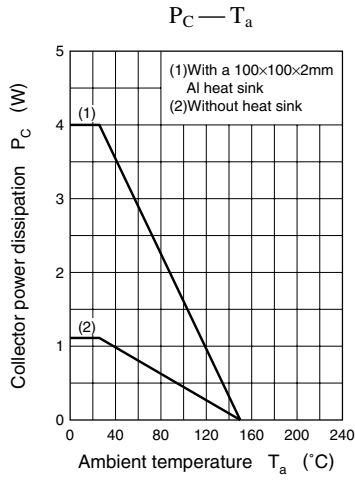
Parameter	Symbol	Rating	Unit	
Collector to base voltage	$V_{CBO}$	110	V	
Collector to emitter voltage	$V_{CER}$	100	V	
	$V_{CEO}$	50	V	
Emitter to base voltage	$V_{EBO}$	3.5	V	
Peak collector current	$I_{CP}$	300	mA	
Collector current	$I_C$	150	mA	
Collector power dissipation	$T_C = 25^\circ\text{C}$	$P_C$	1.2	W
	$T_a = 25^\circ\text{C}$		4.0 *	
Junction temperature	$T_j$	150	$^\circ\text{C}$	
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$	

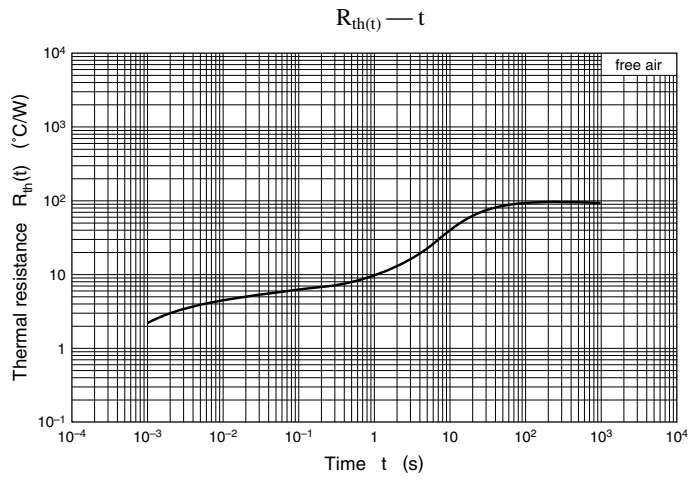
Note) \*: With a  $100 \times 100 \times 2$  mm Al heat sink

### ■ Electrical Characteristics $T_C = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	$I_{CEO}$	$V_{CE} = 35 \text{ V}, I_B = 0$			10	$\mu\text{A}$
Collector to base voltage	$V_{CBO}$	$I_C = 100 \mu\text{A}, I_E = 0$	110			V
Collector to emitter voltage	$V_{CER}$	$I_C = 500 \mu\text{A}, R_{BE} = 470 \Omega$	100			V
	$V_{CEO}$	$I_C = 1 \text{ mA}, I_B = 0$	50			V
Emitter to base voltage	$V_{EBO}$	$I_E = 100 \mu\text{A}, I_C = 0$	3.5			V
Forward current transfer ratio	$h_{FE}$	$V_{CE} = 5 \text{ V}, I_C = 100 \text{ mA}$	20			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 150 \text{ mA}, I_B = 15 \text{ mA}$			0.5	V
Transition frequency	$f_{T1}$	$V_{CB} = 10 \text{ V}, I_E = -10 \text{ mA}, f = 200 \text{ MHz}$		300		MHz
	$f_{T2}$	$V_{CB} = 10 \text{ V}, I_E = -110 \text{ mA}, f = 200 \text{ MHz}$		350		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 30 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		3		pF







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