

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

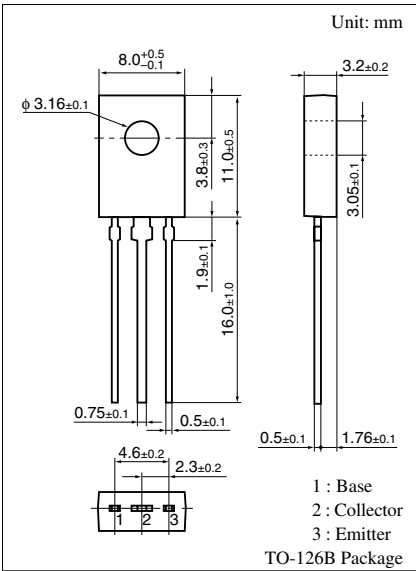
■ Absolute Maximum Ratings $T_C = 25^\circ\text{C}$

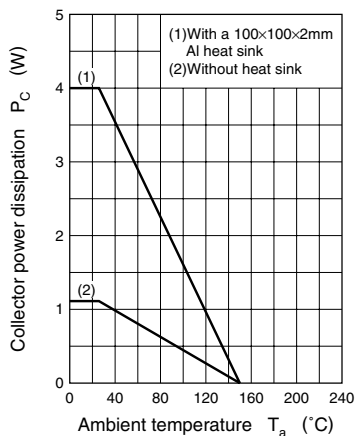
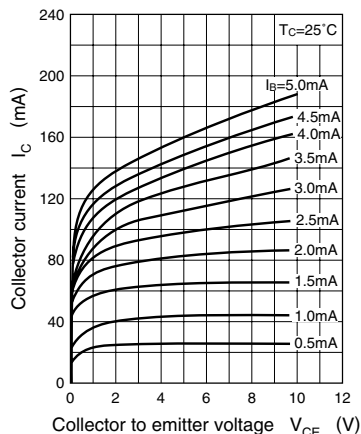
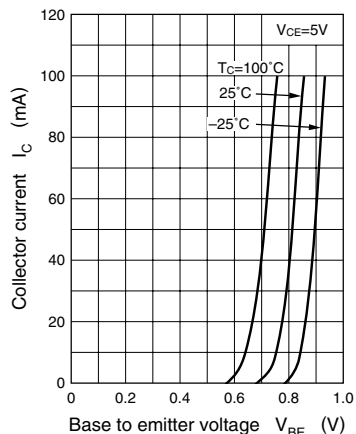
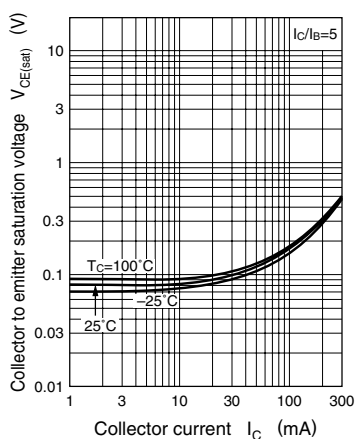
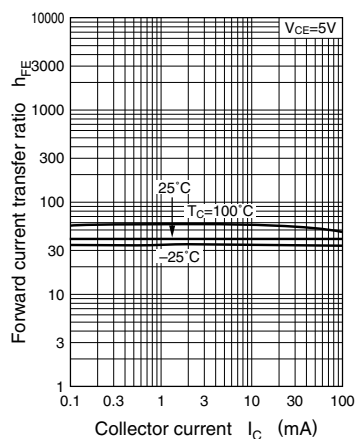
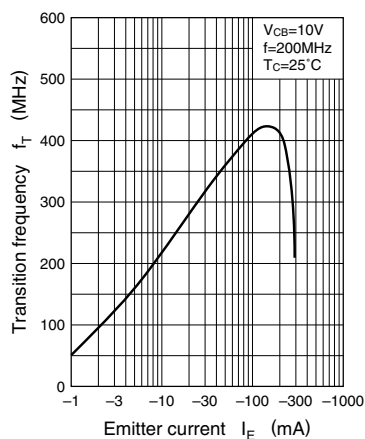
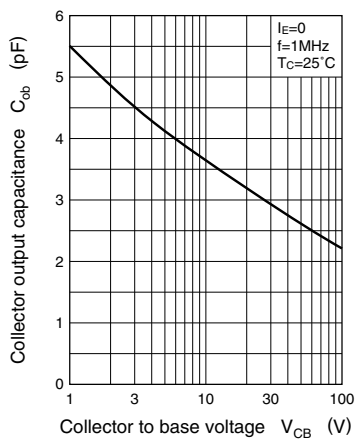
Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	110	V
Collector to emitter voltage	V_{CER}	100	V
	V_{CEO}	50	V
Emitter to base voltage	V_{EBO}	3.5	V
Peak collector current	I_{CP}	300	mA
Collector current	I_C	150	mA
Collector power dissipation	$T_C = 25^\circ\text{C}$ $T_a = 25^\circ\text{C}$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

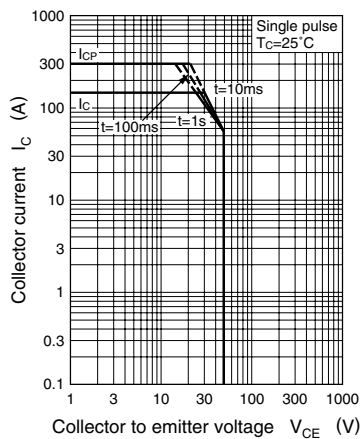
■ Electrical Characteristics $T_C = 25^\circ\text{C}$

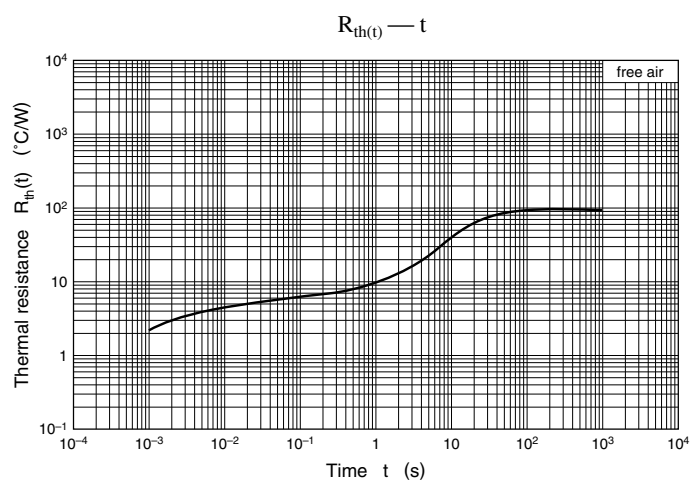
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CEO}	$V_{CE} = 35 \text{ V}, I_B = 0$			10	μA
Collector to base voltage	V_{CBO}	$I_C = 100 \mu\text{A}, I_E = 0$	110			V
Collector to emitter voltage	V_{CER}	$I_C = 500 \mu\text{A}, R_{BE} = 470 \Omega$	100			V
	V_{CEO}	$I_C = 1 \text{ mA}, I_B = 0$	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



$P_C - T_a$  $I_C - V_{CE}$  $I_C - V_{BE}$  $V_{CE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_E$  $C_{ob} - V_{CB}$ 

Area of safe operation (ASO)





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