

2SC3311, 2SC3311A

Silicon NPN Epitaxial Planar Type

For low-frequency amplification

Complementary pair with 2SA1309 and 2SA1309A

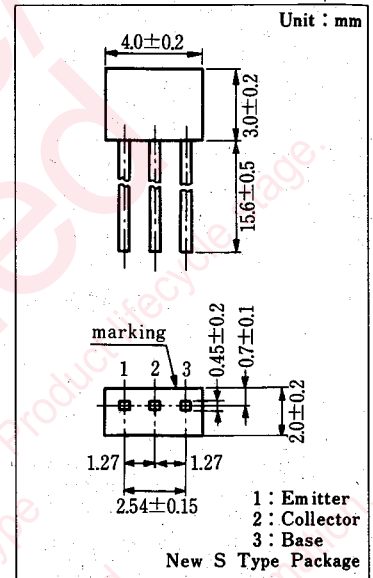
■ Features

- Ideal for high-density mounting
- Automatic insertion by radial taping possible

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

Item	Symbol	Value	Unit
Collector-Base Voltage	2SC3311	30	V
	2SC3311A	60	
Collector-Emitter Voltage	2SC3311	25	V
	2SC3311A	50	
Emitter-Base Voltage	V_{EBO}	7	V
Peak Collector Voltage	I_{CP}	200	mA
Collector Current	I_C	100	mA
Collector Power Dissipation	P_C	300	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

■ Package Dimensions

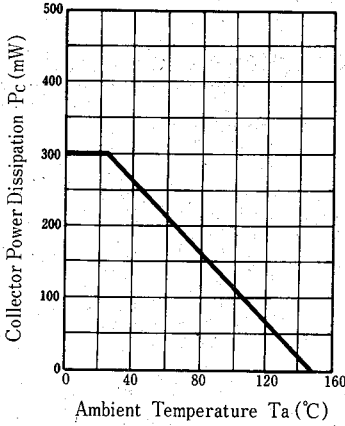
■ Electrical Characteristics ($T_a=25^\circ\text{C}$)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=10\text{ V}, I_E=0$			0.1	μA
	I_{CEO}	$V_{CE}=10\text{ V}, I_B=0$			1	μA
Collector-Base Voltage	V_{CBO}	$I_C=10\ \mu\text{A}, I_E=0$	30			V
			60			
Collector-Emitter Voltage	V_{CEO}	$I_C=2\text{ mA}, I_B=0$	25			V
			50			
Emitter-Base Voltage	V_{EBO}	$I_E=10\ \mu\text{A}, I_C=0$	7			V
DC Current Gain	h_{FE}^*	$V_{CE}=10\text{ V}, I_C=2\text{ mA}$	160		460	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=50\text{ mA}, I_B=5\text{ mA}$			0.3	V
Transition Frequency	f_T	$V_{CB}=10\text{ V}, I_E=-1\text{ mA}, f=200\text{ MHz}$		150		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10\text{ V}, I_E=0, f=1\text{ MHz}$		3.5		pF

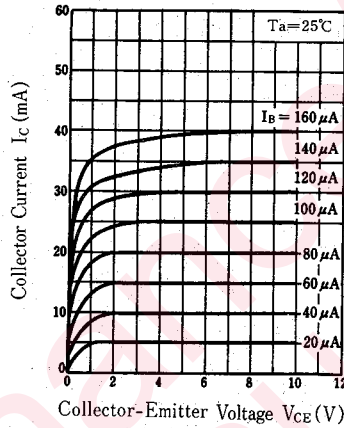
* h_{FE} Ranking

Rank	Q	R	S
h_{FE}	160 ~ 260	210 ~ 340	290 ~ 460

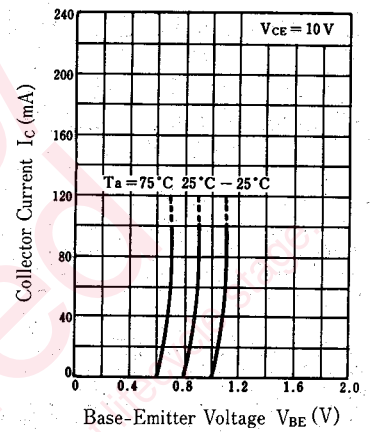
$P_c - T_a$



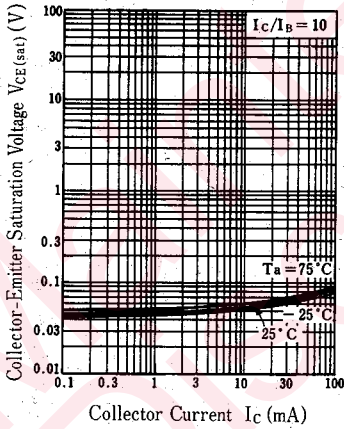
$I_c - V_{CE}$



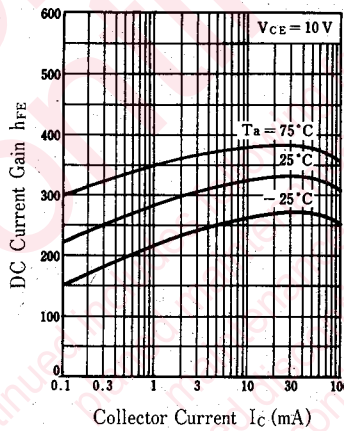
$I_c - V_{BE}$



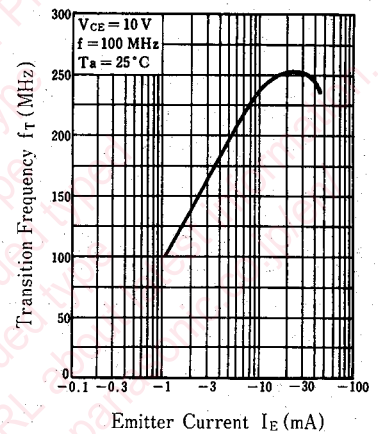
$V_{CE(sat)} - I_c$



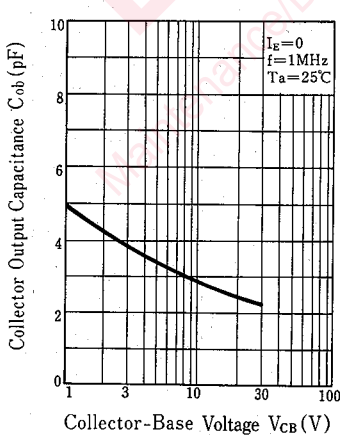
$h_{FE} - I_c$



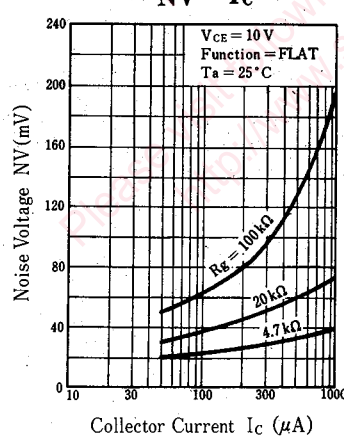
$f_T - I_E$



$C_{ob} - V_{CB}$



$NV - I_c$



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