2SA1309, 2SA1309A

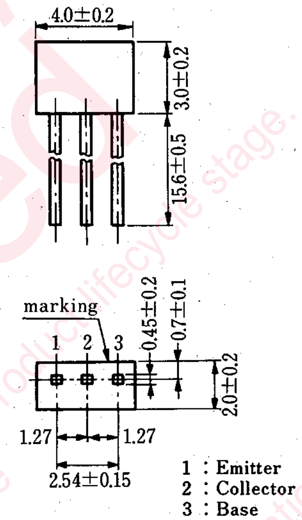
Silicon PNP Epitaxial Planar Type

For low-frequency amplification
Complementary pair with 2SC3311 and 2SC3311A

■ Features

- High DC current gain h_{FE}
- Automatic insertion by radial taping possible

■ Package Dimensions



■ Absolute Maximum Ratings (Ta=25°C)

Item		Symbol	Value	Unit
Collector-Base Voltage	2SA1309	V_{CBO}	−30	V
	2SA1309A		−60	
Collector-Emitter Voltage	2SA1309	V_{CEO}	−25	V
	2SA1309A		−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	℃
Storage Temperature		T_{stg}	−55～+150	℃

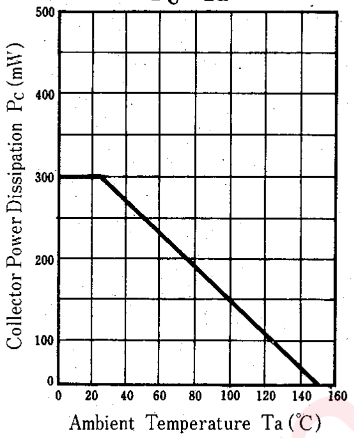
■ Electrical Characteristics (Ta=25°C)

Item		Symbol	Condition	min.	typ.	max.	Unit
Collector Cutoff Current		I_{CBO}	$V_{CB}=-10$ V, $I_E=0$			−100	nA
		I_{CEO}	$V_{CE}=-10$ V, $I_B=0$			−1	μA
Collector-Base Voltage	2SA1309	V_{CBO}	$I_C=-10$ μA, $I_E=0$	−30			V
	2SA1309A			−60			
Collector-Emitter Voltage	2SA1309	V_{CEO}	$I_C=-2$ mA, $I_B=0$	−25			V
	2SA1309A			−50			
Emitter-Base Voltage		V_{EBO}	$I_E=-10$ μA, $I_C=0$	−7			V
DC Current Gain		h_{FE}*	$V_{CE}=-10$ V, $I_C=-2$ mA	160		460	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=-50$ mA, $I_B=-5$ mA			−0.3	V
Transition Frequency		f_T	$V_{CB}=-10$V, $I_E=1$mA, f=200MHz		80		MHz
Collector Output Capacitance		C_{ob}	$V_{CB}=-10$ V, $I_E=0$, f=1 MHz		3.5		pF

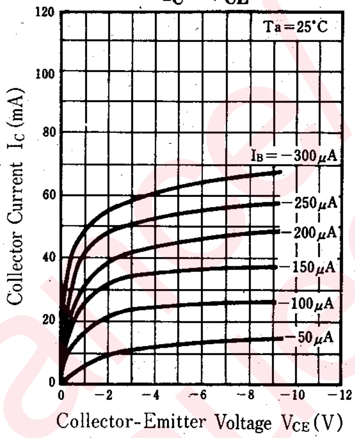
*h_{FE} Ranking

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

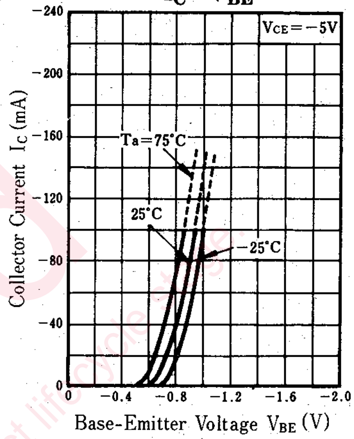
$P_C - Ta$



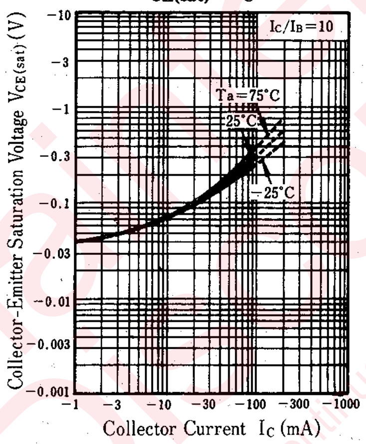
$I_C - V_{CE}$



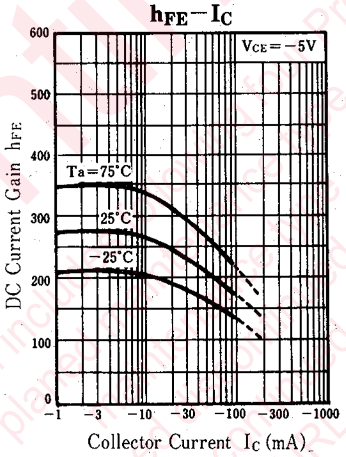
$I_C - V_{BE}$



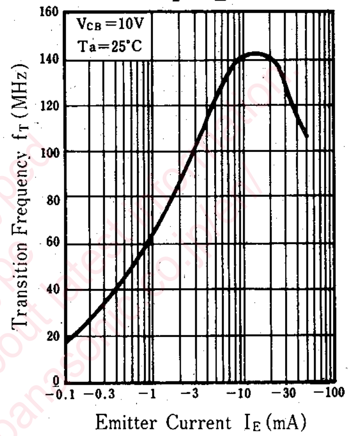
$V_{CE(sat)} - I_C$



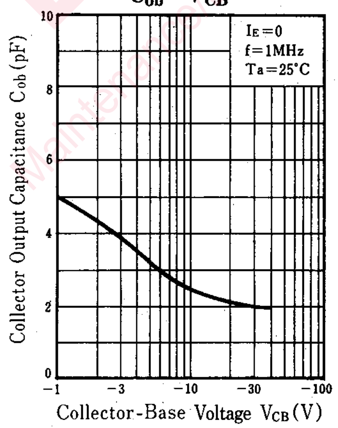
$h_{FE} - I_C$



$f_T - I_E$



$C_{ob} - V_{CB}$



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