

2SA1531, 2SA1531A

Silicon PNP epitaxial planar type

For low-frequency and low-noise amplification
Complementary to 2SC3929 and 2SC3929A

■ Features

- Low noise voltage NV
- High forward current transfer ratio h_{FE}
- S-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing

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

Parameter	Symbol	Rating	Unit
Collector to base voltage	2SA1531	-35	V
	2SA1531A	-55	
Collector to emitter voltage	2SA1531	-35	V
	2SA1531A	-55	
Emitter to base voltage	V_{EBO}	-5	V
Peak collector current	I_{CP}	-100	mA
Collector current	I_C	-50	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

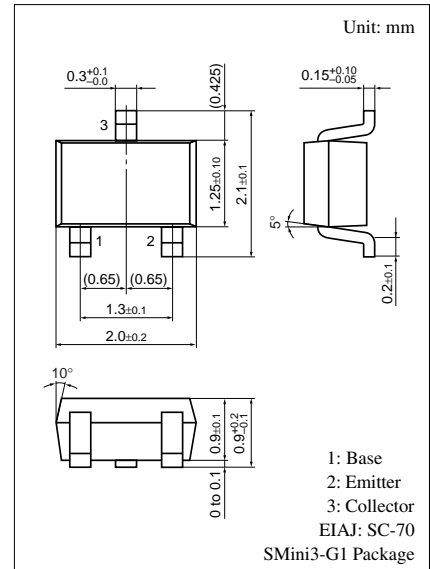
■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -10\text{ V}, I_E = 0$			-100	nA
	I_{CEO}	$V_{CE} = -10\text{ V}, I_B = 0$			-1	μA
Collector to base voltage	V_{CBO}	$I_C = -10\text{ }\mu\text{A}, I_E = 0$	-35			V
			-55			
Collector to emitter voltage	V_{CEO}	$I_C = -2\text{ mA}, I_B = 0$	-35			V
			-55			
Emitter to base voltage	V_{EBO}	$I_E = -10\text{ }\mu\text{A}, I_C = 0$	-5			V
Forward current transfer ratio *2	h_{FE}	$V_{CE} = -5\text{ V}, I_C = -2\text{ mA}$	180		700	
Collector to emitter saturation voltage *1	$V_{CE(sat)}$	$I_C = -100\text{ mA}, I_B = -10\text{ mA}$			-0.6	V
Base to emitter voltage *1	V_{BE}	$V_{CE} = -1\text{ V}, I_C = -100\text{ mA}$		-0.7	-1.0	V
Transition frequency	f_T	$V_{CB} = -10\text{ V}, I_E = 2\text{ mA}, f = 200\text{ MHz}$		80		MHz
Noise voltage	NV	$V_{CE} = -10\text{ V}, I_C = -1\text{ mA}, G_V = 80\text{ dB}$ $R_g = 100\text{ k}\Omega, \text{Function} = \text{FLAT}$			150	mV

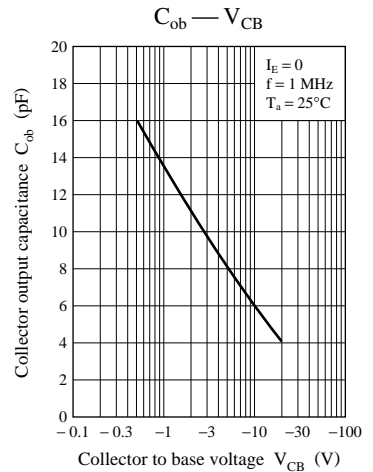
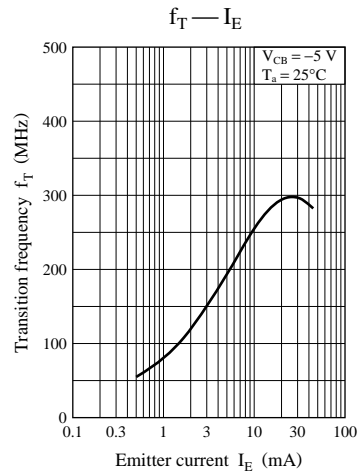
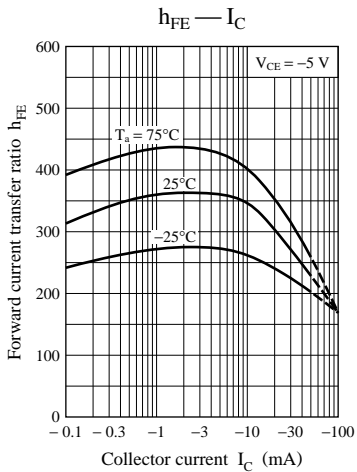
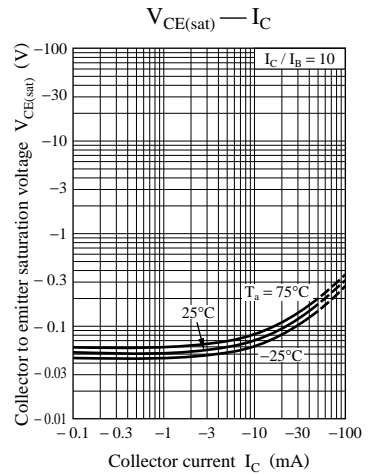
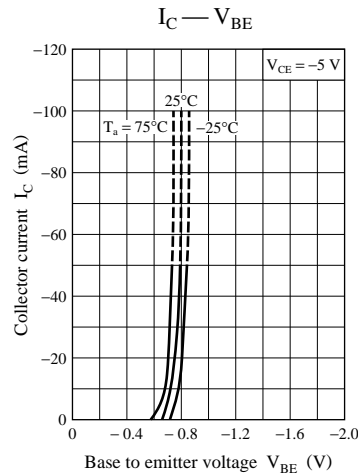
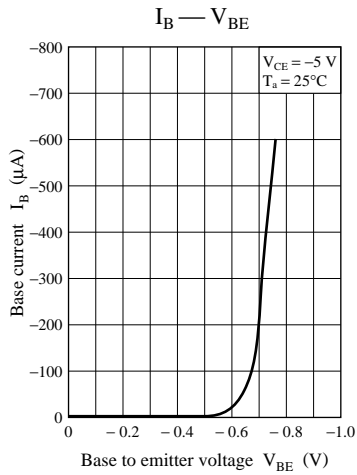
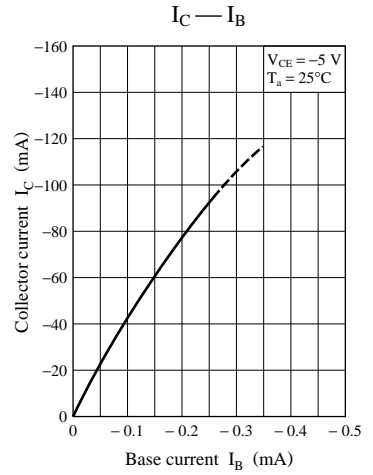
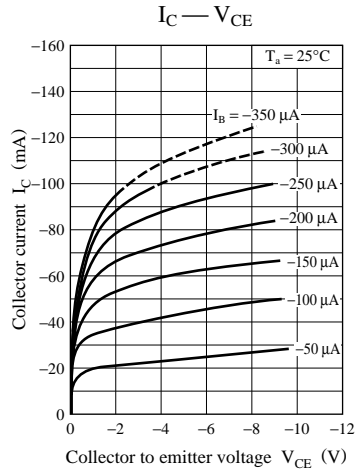
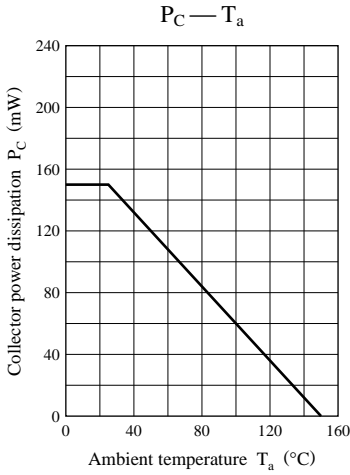
Note) *1: Pulse measurement

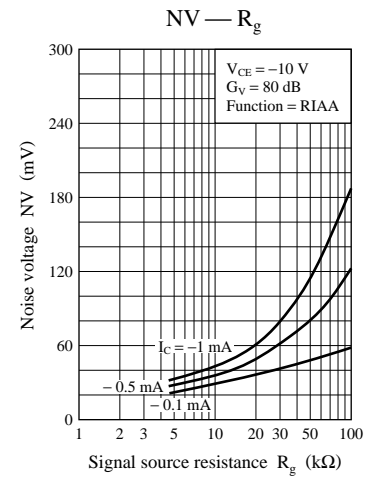
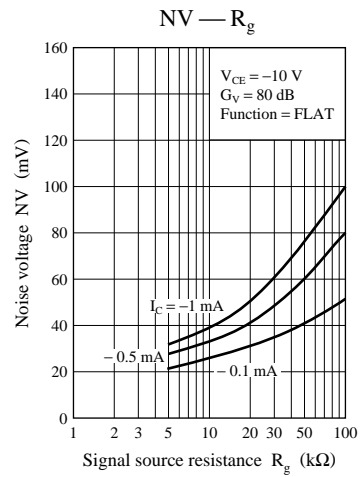
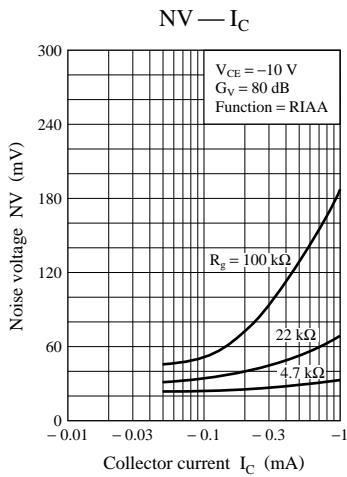
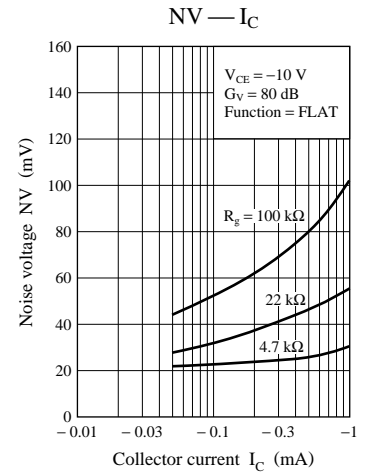
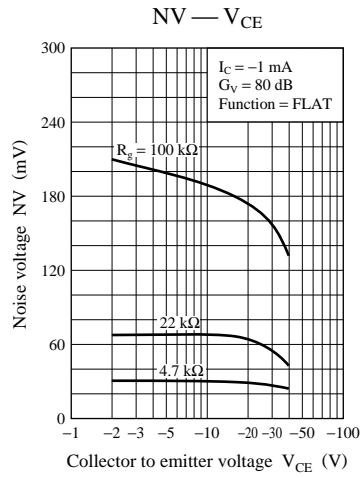
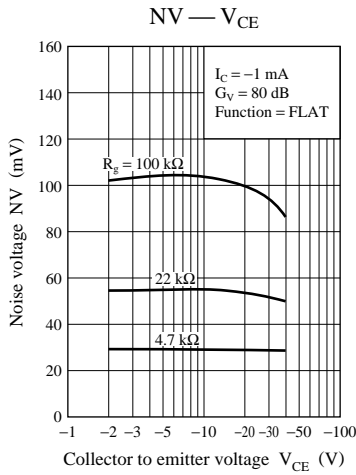
*2: h_{FE} Rank classification

Rank		R	S	T
h_{FE}		180 to 360	260 to 520	360 to 700
Marking symbol	2SA1531	FR	FS	FT
	2SA1531A	HR	HS	HT



Marking symbol: F (2SA1531)
H (2SA1531A)





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