

2SD1449

Silicon NPN Epitaxial Planar Type

For low-frequency, low-noise amplification

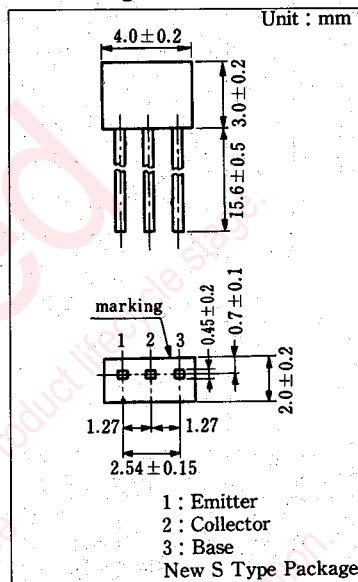
■ Features

- Ideal for high-density mounting
- Automatic insertion by radial taping possible
- Low noise voltage NV

■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	120	V
Collector-Emitter Voltage	V_{CEO}	120	V
Emitter-Base Voltage	V_{EBO}	5	V
Peak Collector Voltage	I_{CP}	50	mA
Collector Current	I_C	20	mA
Collector Power Dissipation	P_C	300	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 ~ +150	°C

■ Package Dimensions



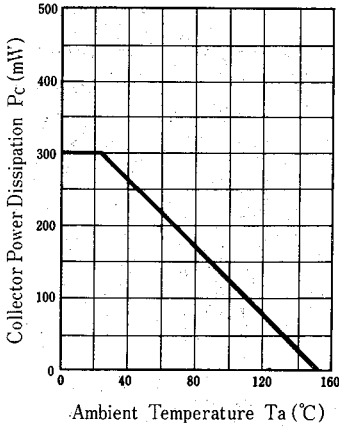
■ Electrical Characteristics (Ta=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=50\text{ V}, I_E=0$			100	nA
	I_{CEO}	$V_{CE}=50\text{ V}, I_B=0$			1	μA
Collector-Base Voltage	V_{CBO}	$I_C=10\ \mu\text{A}, I_E=0$	120			V
Collector-Emitter Voltage	V_{CEO}	$I_C=1\text{ mA}, I_B=0$	120			V
Emitter-Base Voltage	V_{EBO}	$I_E=10\ \mu\text{A}, I_C=0$	5			V
DC Current Gain	h_{FE}^*	$V_{CE}=5\text{ V}, I_C=2\text{ mA}$	180		700	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=20\text{ mA}, I_B=2\text{ mA}$			0.6	V
Transition Frequency	f_T	$V_{CB}=10\text{ V}, I_E=-2\text{ mA}, f=200\text{ MHz}$		200		MHz
Noise Voltage	NV	$V_{CE}=40\text{ V}, I_C=1\text{ mA}, G_V=80\text{ dB}$ $R_g=100\text{ k}\Omega, \text{Function}=\text{FLAT}$			150	mV

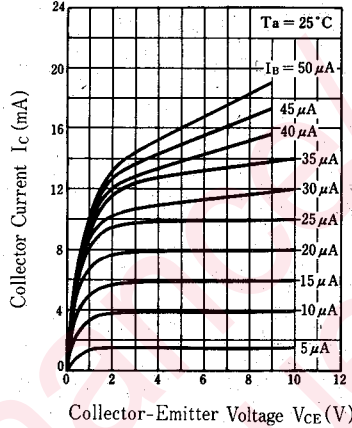
* h_{FE} Ranking

Rank	R	S	T
h_{FE}	180~360	260~520	360~700

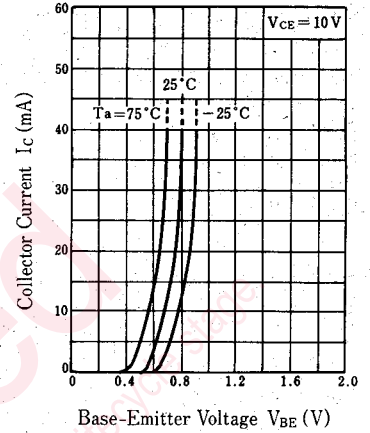
$P_C - T_a$



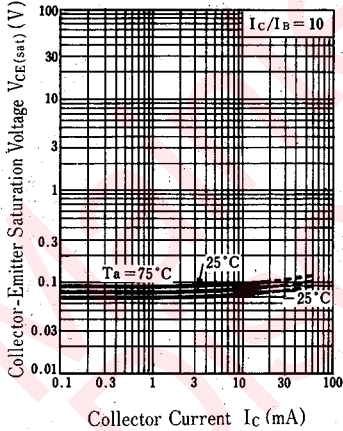
$I_C - V_{CE}$



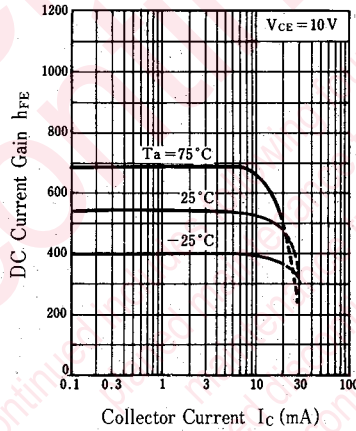
$I_C - V_{BE}$



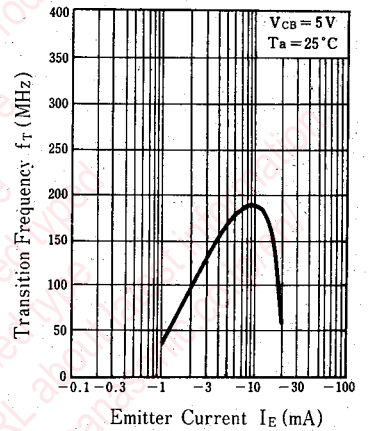
$V_{CE(sat)} - I_C$



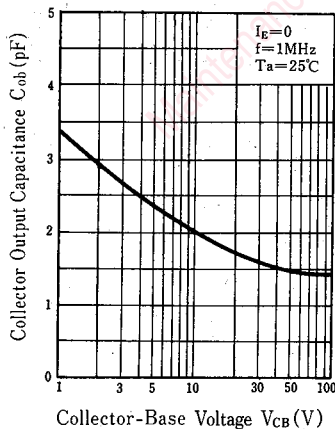
$h_{FE} - I_C$



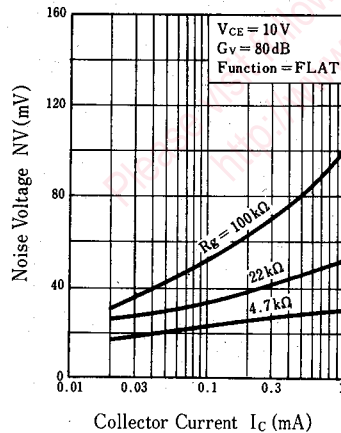
$f_T - I_E$



$C_{ob} - V_{CB}$



$NV - I_C$



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