

# 2SD636, 2SD637

## Silicon NPN Epitaxial Planar Type

For low-power general amplification

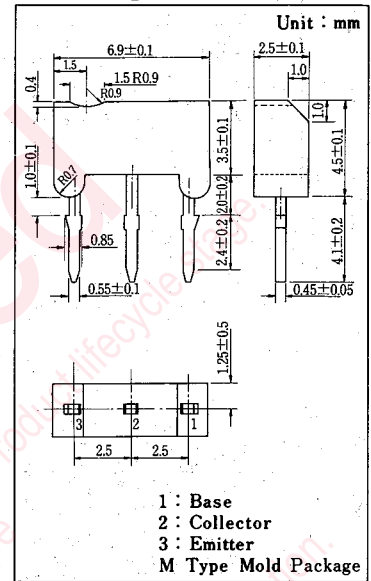
### ■ Features

- High DC current gain  $h_{FE}$
- Low collector-emitter saturation voltage  $V_{CE(sat)}$
- An M type mold package that allows easy manual and automatic insertion.  
Can be firmly mounted flush to PCB surface

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

Item	Symbol	Value	Unit
Collector-Base Voltage	$V_{CBO}$	30	V
		60	
Collector-Emitter Voltage	$V_{CEO}$	25	V
		50	
Emitter-Base Voltage	$V_{EBO}$	7	V
Peak Collector Voltage	$I_{CP}$	200	mA
Collector Current	$I_C$	100	mA
Collector Power Dissipation	$P_C$	400	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 ~ +150	$^\circ\text{C}$

### ■ Package Dimensions

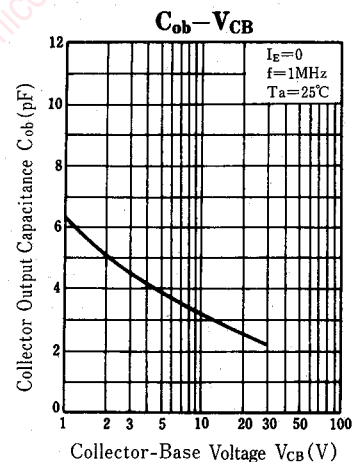
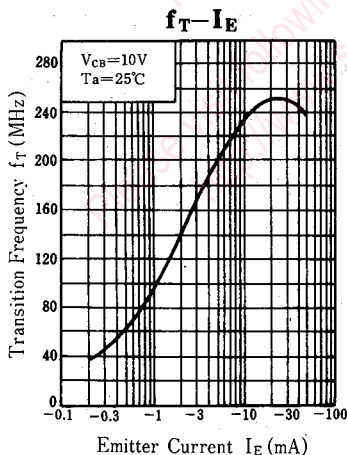
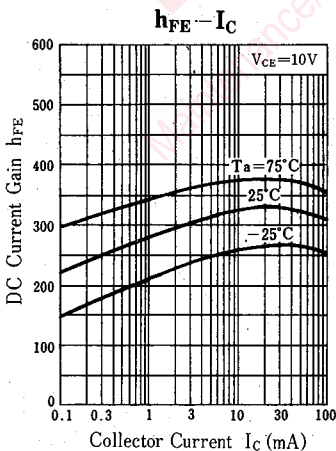
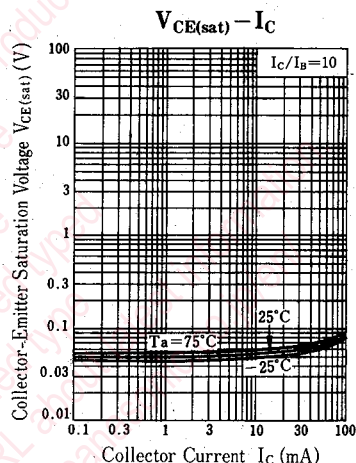
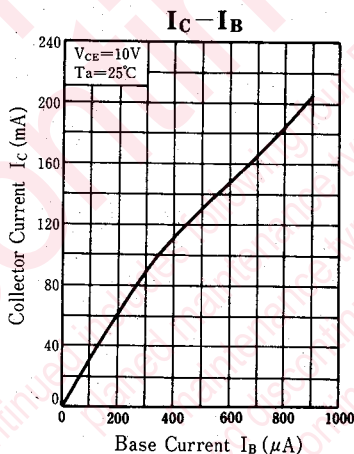
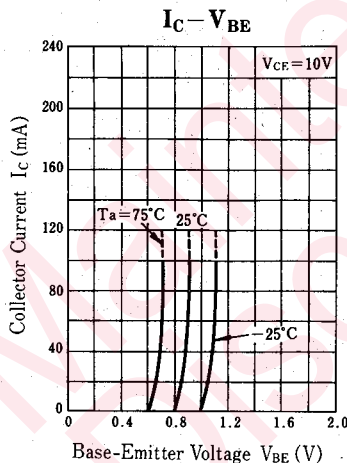
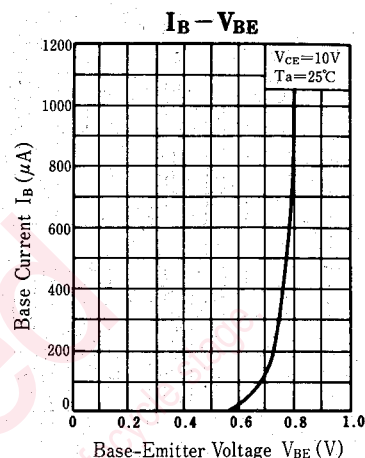
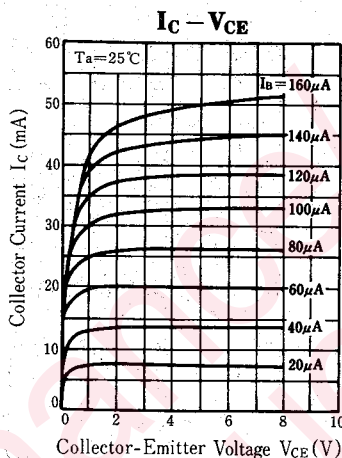
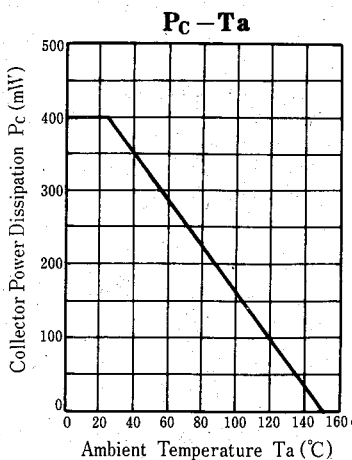


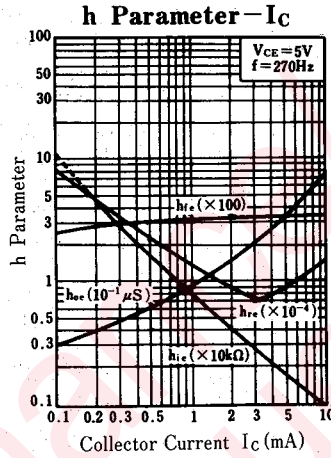
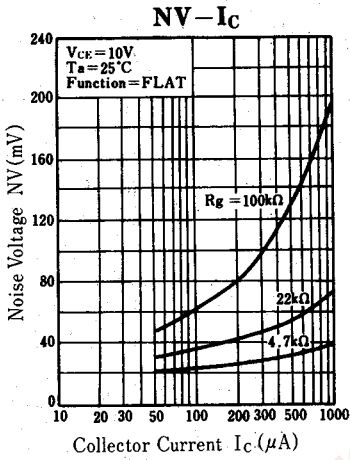
### ■ Electrical Characteristics ( $T_a=25^\circ\text{C}$ )

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=20\text{ V}, I_E=0$			1	$\mu\text{A}$
	$I_{CEO}$	$V_{CE}=20\text{ V}, I_B=0$			1	
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	$V_{CE(sat)}$	$I_C=100\ \text{mA}, I_B=10\ \text{mA}$		0.3	0.5	V
Transition Frequency	$f_T$	$V_{CB}=10\text{ V}, I_E=-2\ \text{mA}, f=200\text{ MHz}$		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





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