2SD636, 2SD637

Silicon NPN Epitaxial Planar Type

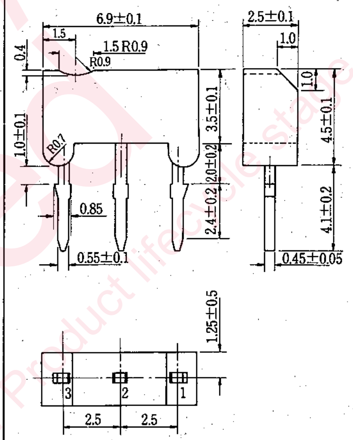
For low-power general amplification

■ 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

■ Package Dimensions

Unit : mm



1 : Base
2 : Collector
3 : Emitter
M Type Mold Package

■ Absolute Maximum Ratings (Ta=25°C)

Item		Symbol	Value	Unit
Collector-Base Voltage	2SD636	V_{CBO}	30	V
	2SD637		60	
Collector-Emitter Voltage	2SD636	V_{CEO}	25	V
	2SD637		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	℃
Storage Temperature		T_{stg}	−55～+150	℃

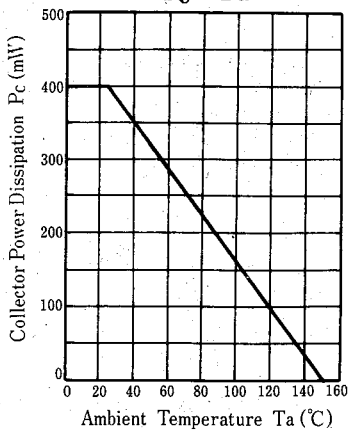
■ Electrical Characteristics (Ta=25°C)

Item		Symbol	Condition	min.	typ.	max.	Unit
Collector Cutoff Current		I_{CBO}	$V_{CB}=20$ V, $I_E=0$			1	μA
		I_{CEO}	$V_{CE}=20$ V, $I_B=0$			1	
Collector-Base Voltage	2SD636	V_{CBO}	$I_C=10$ μA, $I_E=0$	30			V
	2SD637			60			
Collector-Emitter Voltage	2SD636	V_{CEO}	$I_C=2$ mA, $I_B=0$	25			V
	2SD637			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		$V_{CE(sat)}$	$I_C=100$ mA, $I_B=10$ mA		0.3	0.5	V
Transition Frequency		f_T	$V_{CB}=10$V, $I_E=-2$mA, f=200MHz		150		MHz
Collector Output Capacitance		C_{ob}	$V_{CB}=10$ V, $I_E=0$, f=1 MHz		3.5		pF

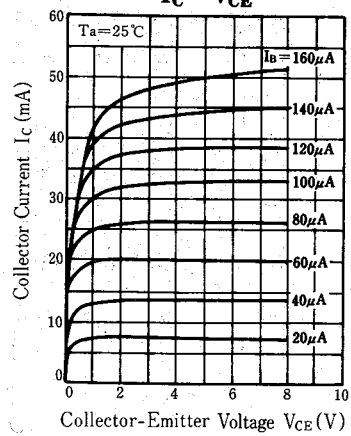
* h_{FE} Ranking

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

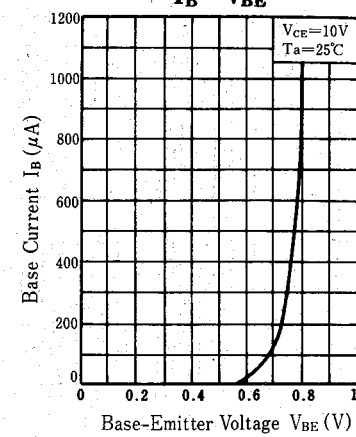
$P_C - Ta$



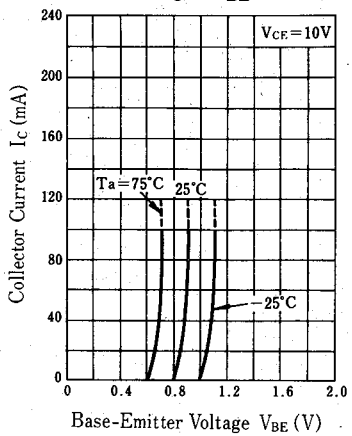
$I_C - V_{CE}$



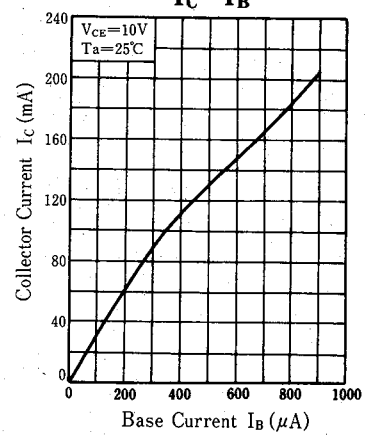
$I_B - V_{BE}$



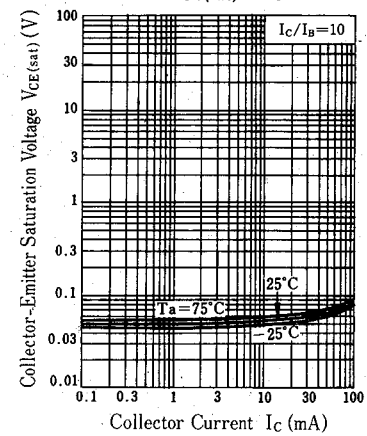
$I_C - V_{BE}$



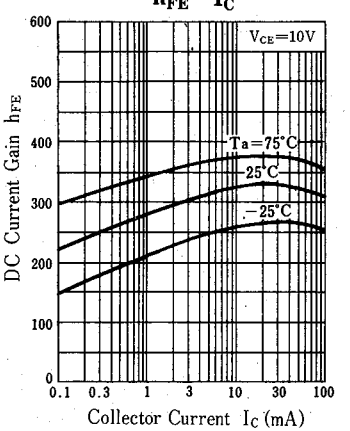
$I_C - I_B$



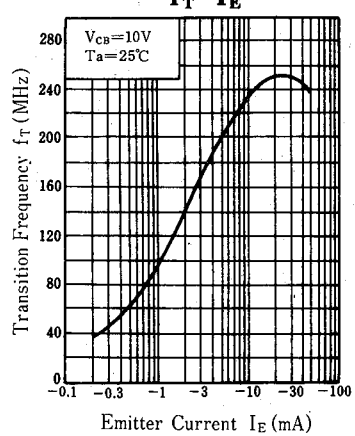
$V_{CE(sat)} - I_C$



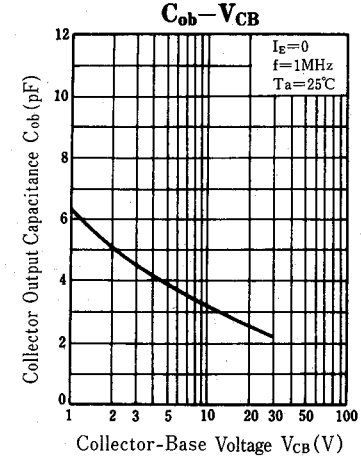
$h_{FE} - I_C$



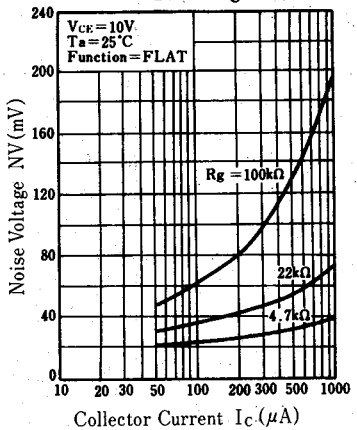
$f_T - I_E$



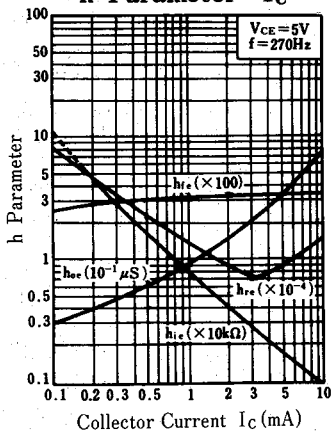
$C_{ob} - V_{CB}$



NV − I_C



h Parameter − I_C



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