

2SD637

Silicon NPN epitaxial planer type

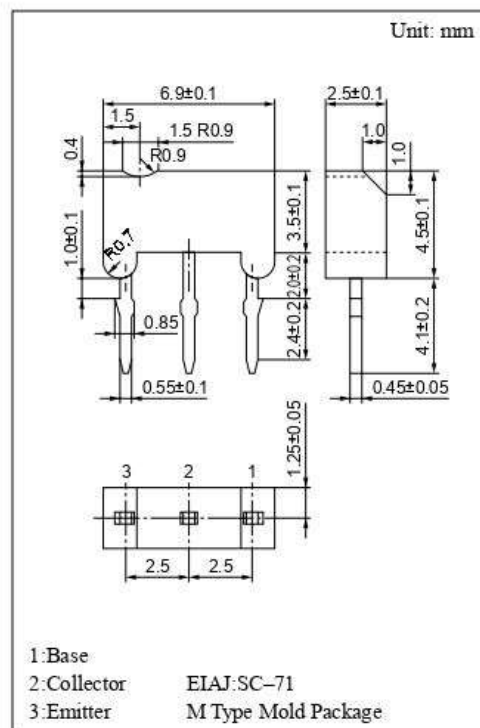
For low-power general amplification

Features

- High forward current transfer ratio h_{FE} .
- Low collector to emitter saturation voltage $V_{CE(sat)}$.
- M type package allowing easy automatic and manual insertion as well as stand-alone fixing to the printed circuit board.

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

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	60	V
Collector to emitter voltage	V_{CEO}	50	V
Emitter to base voltage	V_{EBO}	7	V
Peak collector current	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}	$-55 \sim +150$	$^\circ\text{C}$



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

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 20\text{V}, I_E = 0$			1	μA
	I_{CEO}	$V_{CE} = 20\text{V}, I_B = 0$			1	μA
Collector to base voltage	V_{CBO}	$I_C = 10\mu\text{A}, I_E = 0$	60			V
Collector to emitter voltage	V_{CEO}	$I_C = 2\text{mA}, I_B = 0$	50			V
Emitter to base voltage	V_{EBO}	$I_E = 10\mu\text{A}, I_C = 0$	7			V
Forward current transfer ratio	h_{FE}^*	$V_{CE} = 10\text{V}, I_C = 2\text{mA}$	160		460	
Collector to 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} Rank classification

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

