

# 2SC2377

Silicon NPN epitaxial planer type

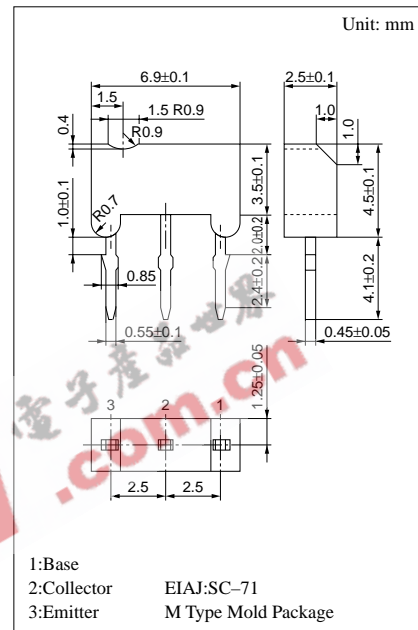
For high-frequency amplification

## Features

- Optimum for RF amplification of FM/AM radios.
- High transition frequency  $f_T$ .
- 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	$V_{CBO}$	30	V
Collector to emitter voltage	$V_{CEO}$	20	V
Emitter to base voltage	$V_{EBO}$	3	V
Collector current	$I_C$	15	mA
Collector power dissipation	$P_C$	400	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 ~ +150	$^\circ\text{C}$



## 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
	$I_{CEO}$	$V_{CE} = 20\text{V}, I_B = 0$			10	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 3\text{V}, I_C = 0$			1	$\mu\text{A}$
Forward current transfer ratio	$h_{FE}^*$	$V_{CB} = 6\text{V}, I_E = -1\text{mA}$	65		260	
Base to emitter voltage	$V_{BE}$	$V_{CB} = 6\text{V}, I_E = -1\text{mA}$		720		mV
Transition frequency	$f_T$	$V_{CB} = 6\text{V}, I_E = -1\text{mA}, f = 100\text{MHz}$	450	650		MHz
Noise figure	NF	$V_{CB} = 6\text{V}, I_E = -1\text{mA}$		3.3	5	dB
Power gain	PG	$V_{CB} = 6\text{V}, I_E = -1\text{mA}$	20	24		dB
Common emitter reverse transfer capacitance	$C_{re}$	$V_{CE} = 6\text{V}, I_C = 1\text{mA}$		0.8	1	pF

\* $h_{FE}$  Rank classification

Rank	C	D
$h_{FE}$	65 ~ 160	100 ~ 260

