
2SC3391

Silicon NPN Epitaxial Planar

HITACHI

ADE-208-1084 (Z)

1st. Edition

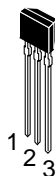
Mar. 2001

Application

VHF amplifier, Mixer, Local oscillator

Outline

SPAK



- 1. Emitter
- 2. Collector
- 3. Base

Absolute Maximum Ratings (Ta = 25°C)

Item	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}	4	V
Collector current	I_C	20	mA
Collector power dissipation	P_C	200	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

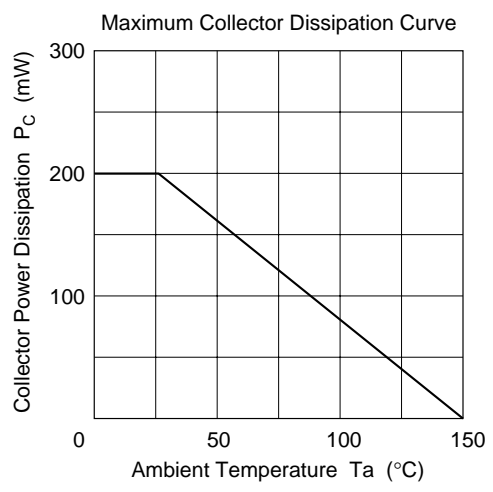
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	30	—	—	V	$I_C = 10\text{ }\mu\text{A}$, $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	20	—	—	V	$I_C = 1\text{ mA}$, $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	4	—	—	V	$I_E = 10\text{ }\mu\text{A}$, $I_C = 0$
Collector cutoff current	I_{CBO}	—	—	0.5	μA	$V_{CB} = 10\text{ V}$, $I_E = 0$
DC current transfer ratio	h_{FE}^{*1}	60	—	200		$V_{CE} = 6\text{ V}$, $I_C = 1\text{ mA}$
Base to emitter voltage	V_{BE}	—	0.72	—	V	$V_{CE} = 6\text{ V}$, $I_C = 1\text{ mA}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	0.17	—	V	$I_C = 20\text{ mA}$, $I_B = 4\text{ mA}$
Gain bandwidth product	f_T	450	940	—	MHz	$V_{CE} = 6\text{ V}$, $I_C = 5\text{ mA}$
Collector output capacitance	C_{ob}	—	0.9	1.2	pF	$V_{CB} = 10\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$
Power gain	PG	17	20	—	dB	$V_{CE} = 6\text{ V}$, $I_C = 1\text{ mA}$, $f = 100\text{ MHz}$
Noise figure	NF	—	3.5	5.5	dB	$V_{CE} = 6\text{ V}$, $I_C = 1\text{ mA}$, $R_g = 50\text{ }\Omega$, $f = 100\text{ MHz}$

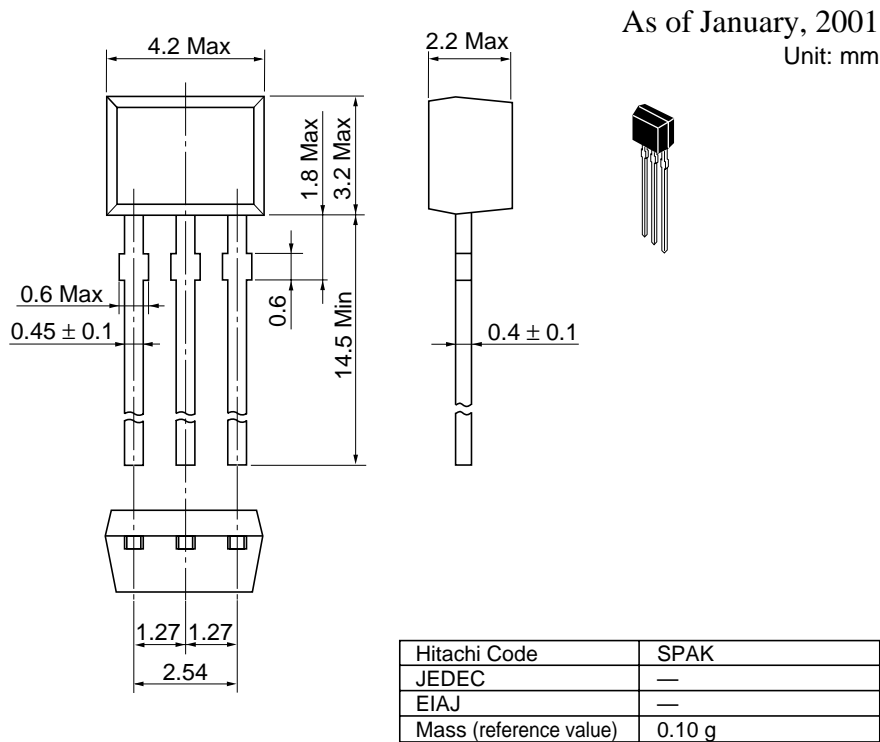
Note: 1. The 2SC3391 is grouped by h_{FE} as follows.

B	C
60 to 120	100 to 200

See characteristic curves of 2SC535.



Package Dimensions



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