2SC3390

Silicon NPN Epitaxial

HITACHI

ADE-208-1083 (Z) 1st. Edition Mar. 2001

Application

- Low frequency low noise amplifier
- HF amplifier

Outline

SPAK



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



2SC3390

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit	
Collector to base voltage	V_{CBO}	55	V	
Collector to emitter voltage	V_{CEO}	50	V	
Emitter to base voltage	V_{EBO}	5	V	
Collector current	I _c	100	mA	
Collector power dissipation	P _c	300	mW	
Junction temperature	Tj	150	°C	
Storage temperature	Tstg	-55 to +150	°C	

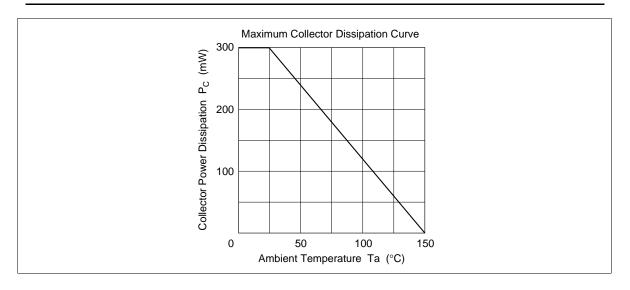
Electrical Characteristics ($Ta = 25^{\circ}C$)

Item	Symbol	Min	Тур	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{\text{(BR)CBO}}$	55	_	_	V	$I_{c} = 10 \ \mu A, \ I_{E} = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	50	_	_	V	$I_{C} = 1 \text{ mA}, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	_	_	V	$I_{E} = 10 \mu A, I_{C} = 0$
Collector cutoff current	I _{CBO}	_	_	0.5	μΑ	V _{CB} = 18 V, I _E = 0
Emitter cutoff current	I _{EBO}	_	_	0.5	μΑ	$V_{EB} = 2 \text{ V}, I_{C} = 0$
DC current transfer ratio	h _{FE} *1	100	_	320		$V_{CE} = 12 \text{ V}, I_{C} = 2 \text{ mA}$
Base to emitter voltage	V _{BE}	_	_	0.75	V	$V_{CE} = 12 \text{ V}, I_{C} = 2 \text{ mA}$
Collector to emitter saturation voltage	$V_{\text{CE(sat)}}$	_	_	0.2	V	I _C = 10 mA, I _B = 1 mA
Gain bandwidth product	f⊤	_	200	_	MHz	$V_{CE} = 12 \text{ V}, I_{C} = 2 \text{ mA}$
Collector output capacitance	Cob	_	_	3.5	pF	$V_{CB} = 10 \text{ V}, I_{E} = 0, f = 1 \text{ MHz}$
Noise figure	NF	_	1.0	5.0	dB	$V_{CE} = 6 \text{ V}, I_{C} = 0.1 \text{ mA},$ $R_{g} = 1 \text{ k}\Omega, f = 1 \text{ kHz}$

Note: 1. The 2SC3390 is grouped by $h_{\rm FE}$ as follows.

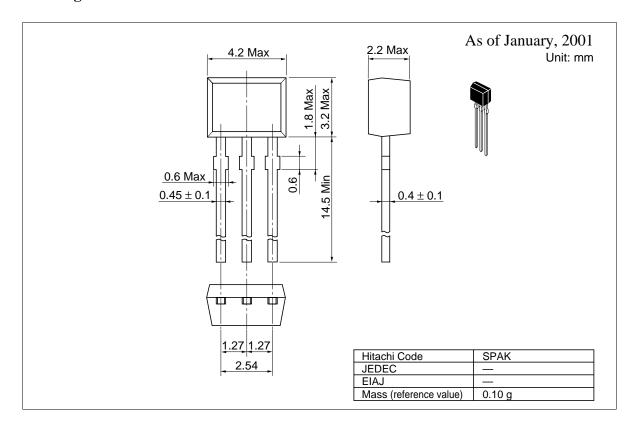
B C 100 to 200 160 to 320

See characteristic curves of 2SC458(LG).



2SC3390

Package Dimensions



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