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# 2SC4308

Silicon NPN Epitaxial Planar

# HITACHI

ADE-208-1103 (Z)  
1st. Edition  
Mar. 2001

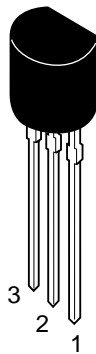
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## Application

VHF Wide band amplifier

## Outline

TO-92 (2)



1. Base
2. Emitter
3. Collector

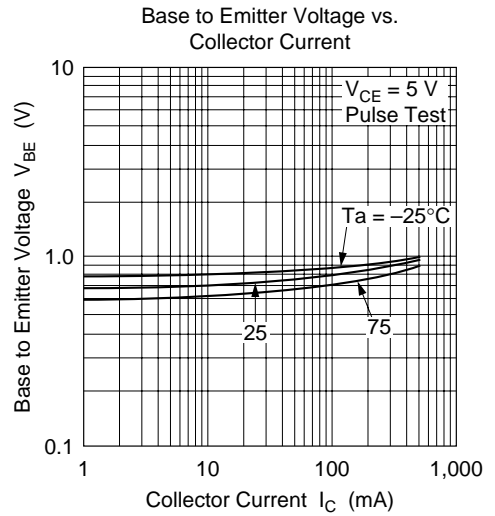
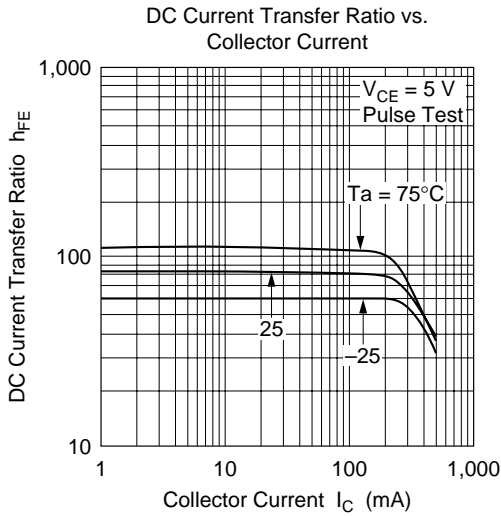
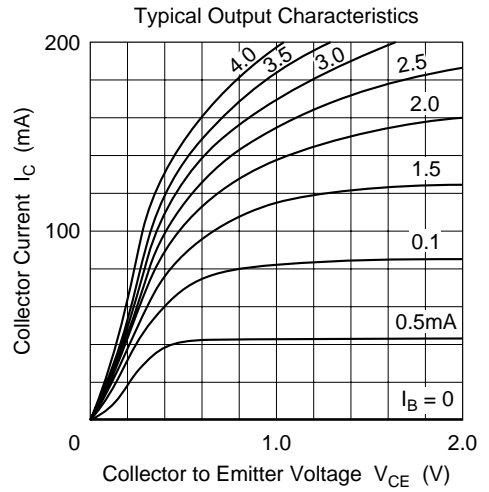
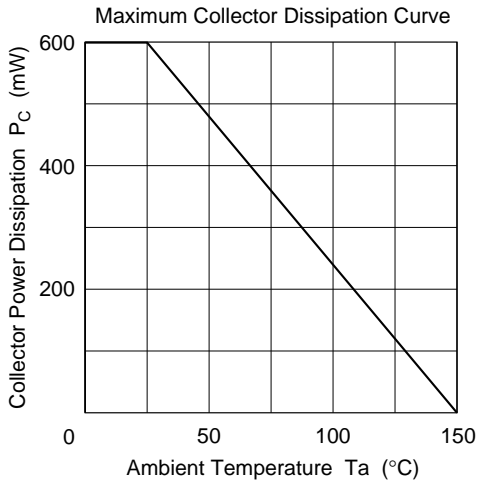
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### Absolute Maximum Ratings (Ta = 25°C)

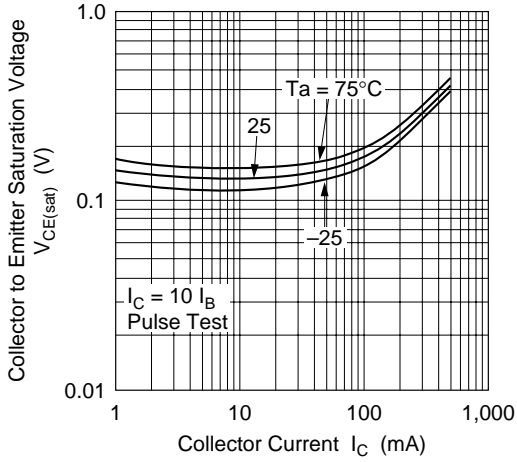
Item	Symbol	Rated	Unit
Collector to base voltage	$V_{CBO}$	30	V
Collector to emitter voltage	$V_{CEO}$	20	V
Emitter to base voltage	$V_{EBO}$	3	V
Collector current	$I_C$	300	mA
Collector peak current	$i_{C(peak)}$	500	mA
Collector power dissipation	$P_C$	600	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

### Electrical Characteristics (Ta = 25°C)

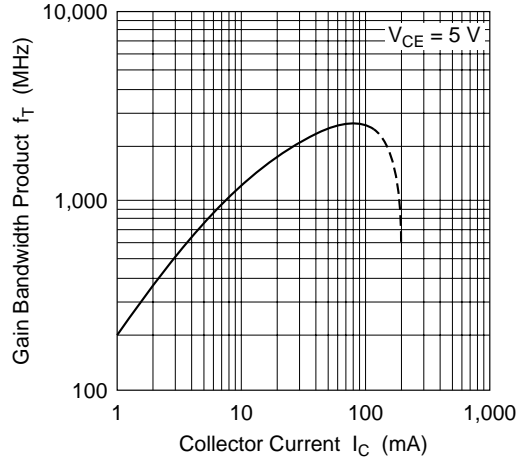
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	30	—	—	V	$I_C = 100 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	20	—	—	V	$I_C = 1 \text{ mA}, R_{BE} = \infty$
Collector cutoff current	$I_{CBO}$	—	—	1	$\mu A$	$V_{CB} = 25 \text{ V}, I_E = 0$
Emitter cutoff current	$I_{EBO}$	—	—	10	$\mu A$	$V_{EB} = 3 \text{ V}, I_E = 0$
DC current transfer ratio	$h_{FE}$	50	—	200		$V_{CE} = 5 \text{ V}, I_C = 50 \text{ mA}$
Gain bandwidth product	$f_T$	1.5	2.5	—	GHz	$V_{CE} = 5 \text{ V}, I_C = 50 \text{ mA}$
Collector output capacitance	$C_{ob}$	—	4.0	—	pF	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$



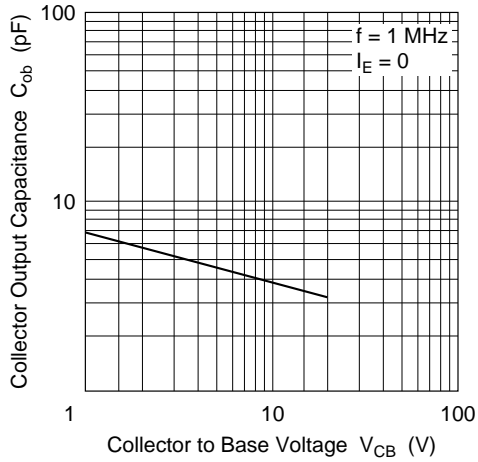
Collector to Emitter Saturation Voltage vs. Collector Current



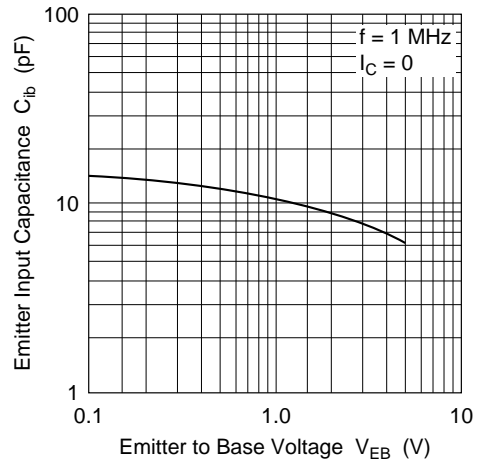
Gain Bandwidth Product vs. Collector Current



Collector Output Capacitance vs. Collector Current

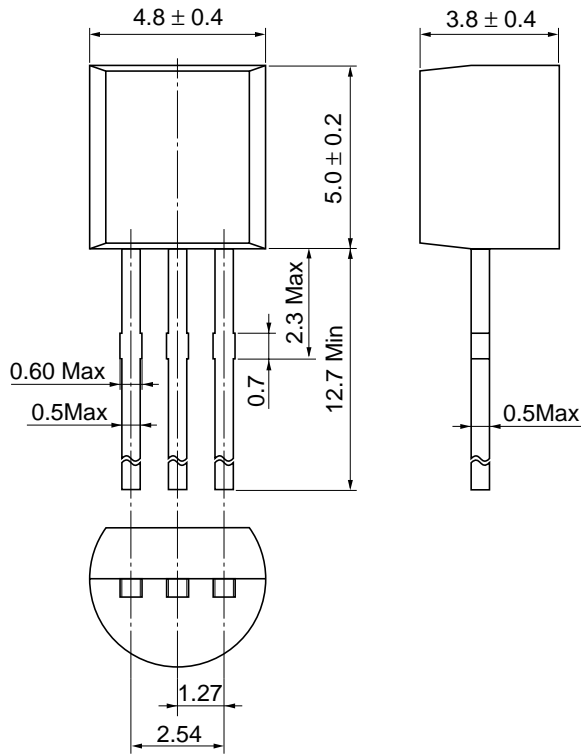


Emitter Input Capacitance vs. Emitter to Base Voltage



Package Dimensions

As of January, 2001  
Unit: mm



Hitachi Code	TO-92 (2)
JEDEC	Conforms
EIAJ	Conforms
Mass (reference value)	0.25 g

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