
2SC4308

Silicon NPN Epitaxial Planar

HITACHI

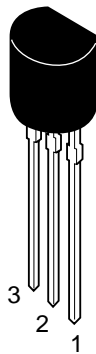
ADE-208-1103 (Z)
1st. Edition
Mar. 2001

Application

VHF Wide band amplifier

Outline

TO-92 (2)



1. Base
2. Emitter
3. Collector

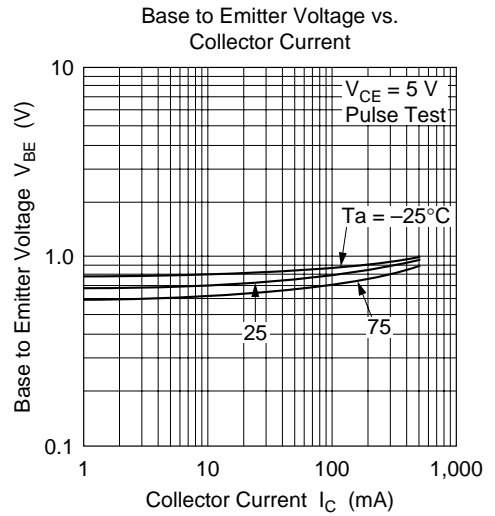
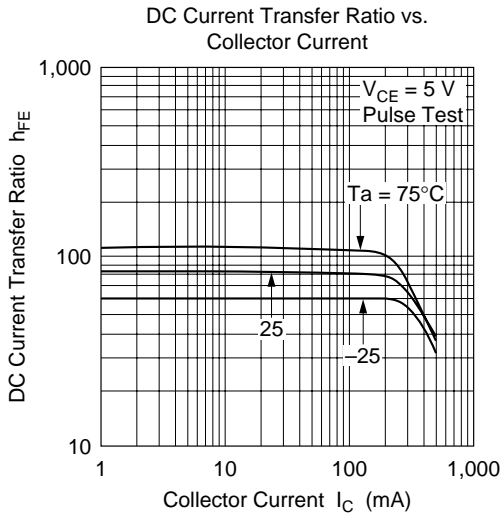
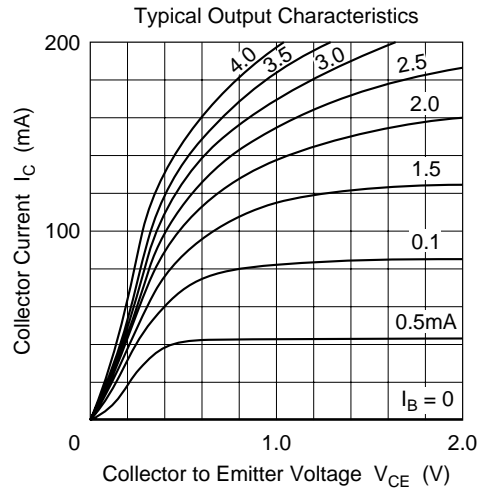
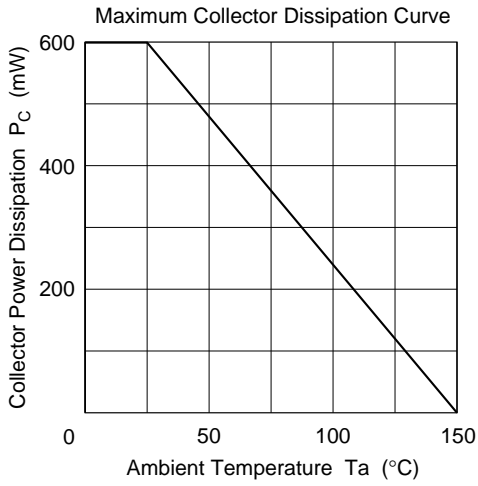
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Absolute Maximum Ratings (Ta = 25°C)

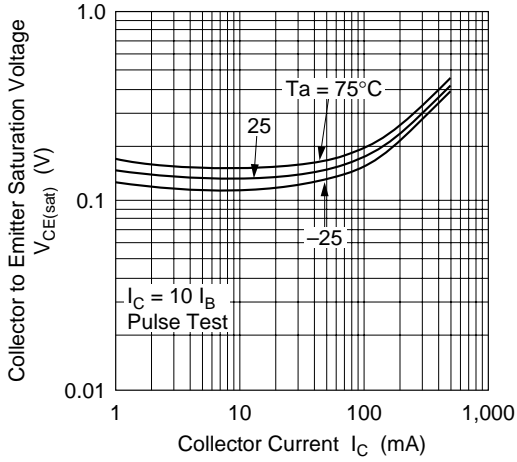
Item	Symbol	Rated	Unit
Collector to base voltage	V_{CBO}	30	V
Collector to emitter voltage	V_{CEO}	20	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_C	300	mA
Collector peak current	$i_{C(peak)}$	500	mA
Collector power dissipation	P_C	600	mW
Junction temperature	T_j	150	°C
Storage temperature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

Electrical Characteristics (Ta = 25°C)

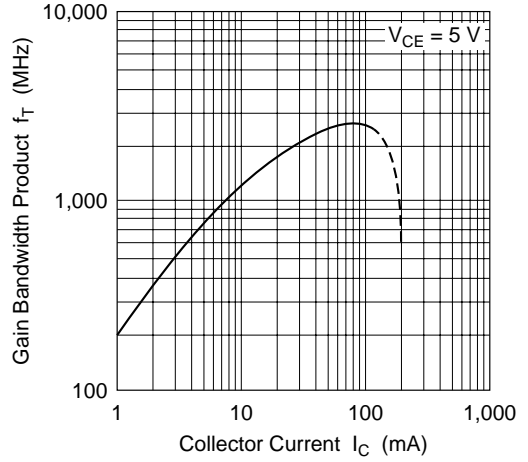
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	30	—	—	V	$I_C = 100 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	20	—	—	V	$I_C = 1 \text{ mA}, R_{BE} = \infty$
Collector cutoff current	I_{CBO}	—	—	1	μA	$V_{CB} = 25 \text{ V}, I_E = 0$
Emitter cutoff current	I_{EBO}	—	—	10	μA	$V_{EB} = 3 \text{ V}, I_E = 0$
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	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$



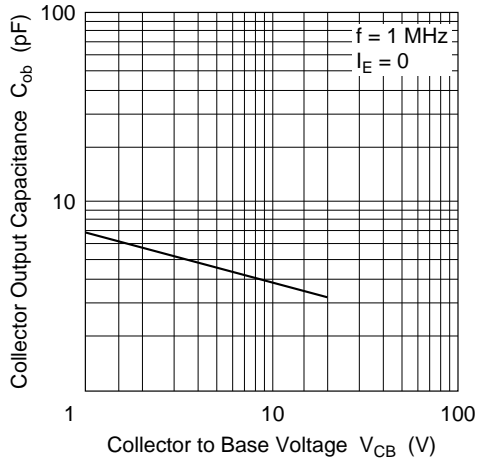
Collector to Emitter Saturation Voltage vs. Collector Current



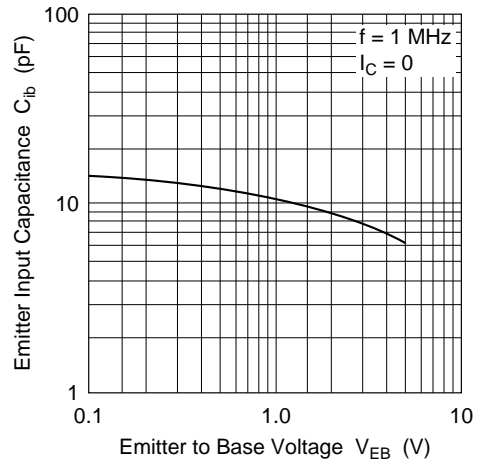
Gain Bandwidth Product vs. Collector Current



Collector Output Capacitance vs. Collector Current

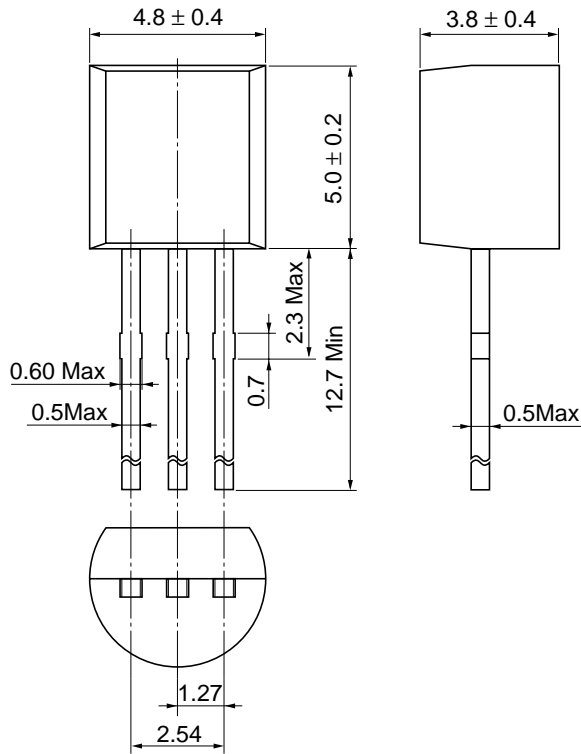


Emitter Input Capacitance vs. Emitter to Base Voltage



Package Dimensions

As of January, 2001
Unit: mm



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