2SC2471

Silicon NPN Epitaxial

HITACHI

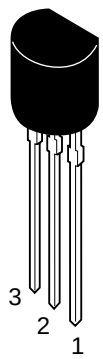
ADE-208-1065 (Z)
1st. Edition
Mar. 2001

Application

- UHF Amplifier
- UHF TV Tuner, Local oscillator

Outline

TO-92 (2)



1. Base
2. Emitter
3. Collector

Hitachi semiconductor

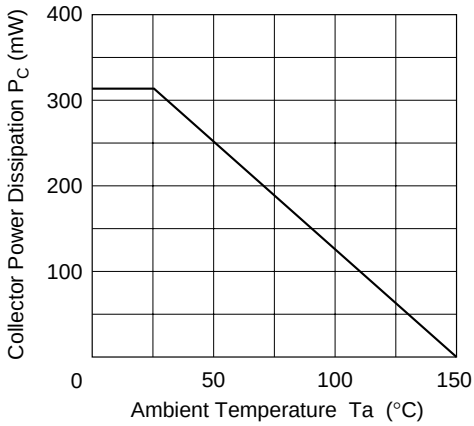
Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	30	V
Collector to emitter voltage	V_{CEO}	30	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_C	50	mA
Collector power dissipation	P_C	310	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

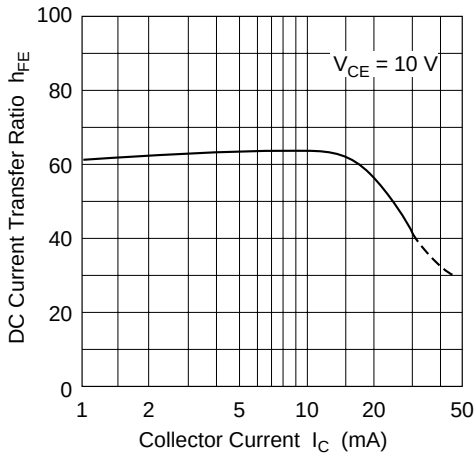
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	30	—	—	V	I_C = 10 µA, I_E = 0
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	30	—	—	V	I_C = 1 mA, R_{BE} = ∞
Emitter to base breakdown voltage	$V_{(BR)EBO}$	3	—	—	V	I_E = 10 µA, I_C = 0
Collector cutoff current	I_{CBO}	—	—	100	nA	V_{CB} = 24 V, I_E = 0
Emitter cutoff current	I_{EBO}	—	—	100	nA	V_{EB} = 2 V, I_C = 0
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	300	mV	I_C = 10 mA, I_B = 5 mA
Base to emitter voltage	V_{BE}	—	—	0.95	V	V_{CE} = 10 V, I_C = 5 mA
DC current transfer ratio	h_{FE}	20	—	—		V_{CE} = 10 V, I_C = 5 mA
Gain bandwidth product	f_T	1000	2000	—	MHz	V_{CE} = 10 V, I_C = 5 mA
Collector output capacitance	Cob	—	0.9	1.5	pF	V_{CB} = 10 V, I_E = 0, f = 1 MHz
Base time constant	$r_{bb'} \cdot C_C$	—	12	20	ps	V_{CB} = 10 V, I_C = 5 mA, f = 31.8 MHz

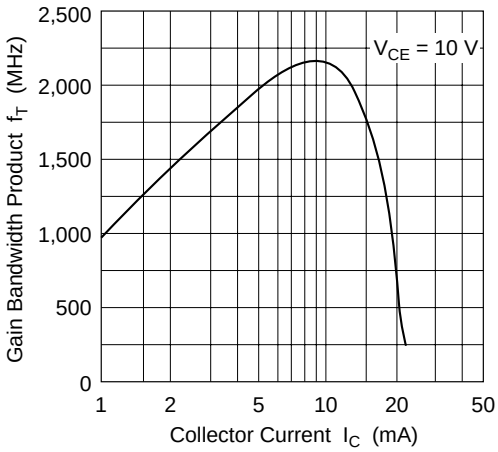
Maximum Collector Dissipation Curve



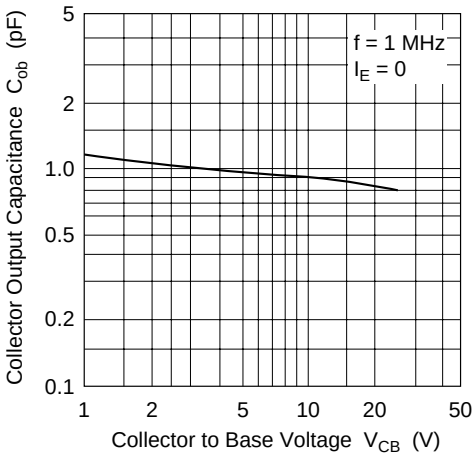
DC Current Transfer Ratio vs. Collector Current



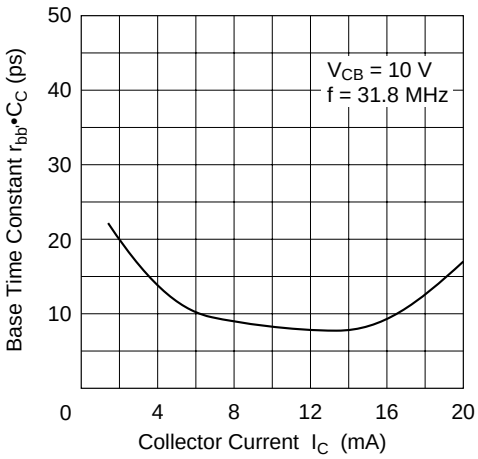
Gain Bandwidth Product vs. Collector Current



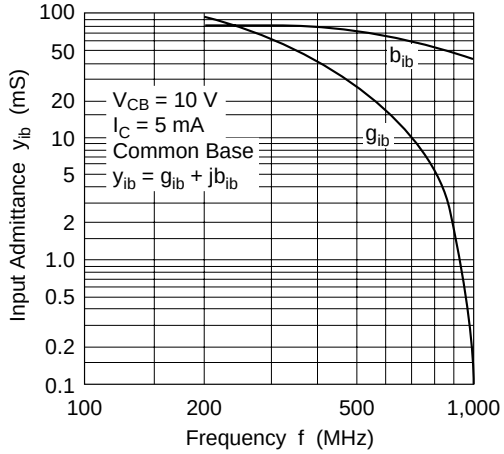
Collector Output Capacitance vs. Collector to Base Voltage



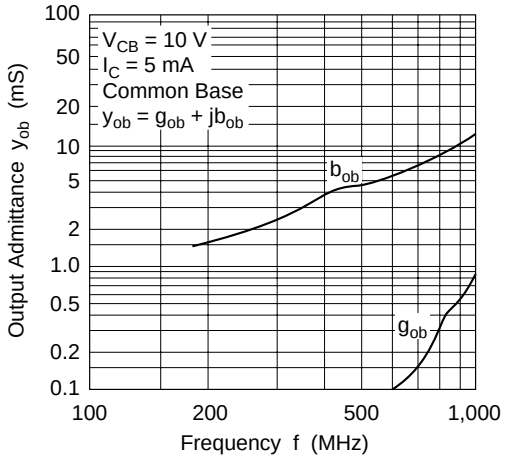
Base Time Constant vs.Collector Current



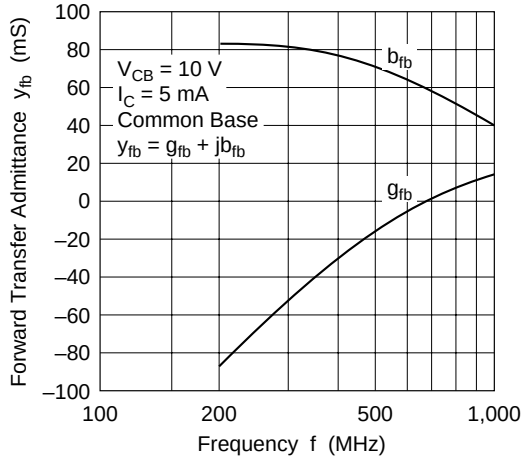
Input Admittance vs. Frequency



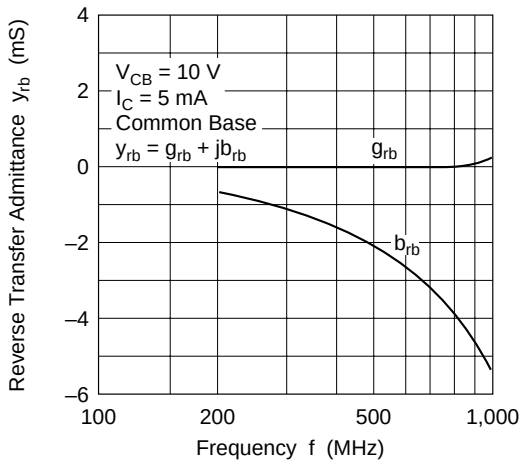
Output Admittance vs. Frequency



Forward Transfer Admittance vs. Frequency

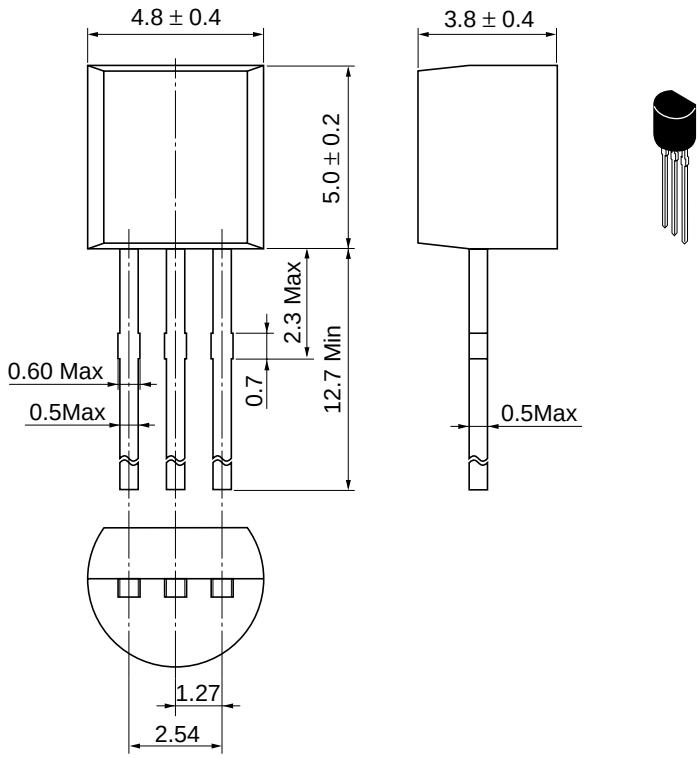


Reverse Transfer Admittance vs. Frequency



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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