
2SC2471

Silicon NPN Epitaxial

HITACHI

Application

- UHF Amplifier
- UHF TV Tuner, Local oscillator

Outline

TO-92 (2)



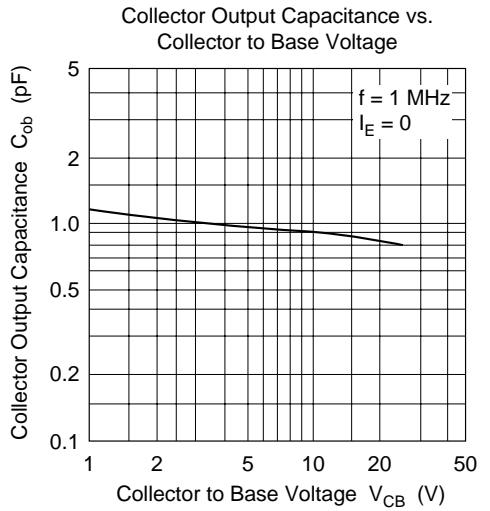
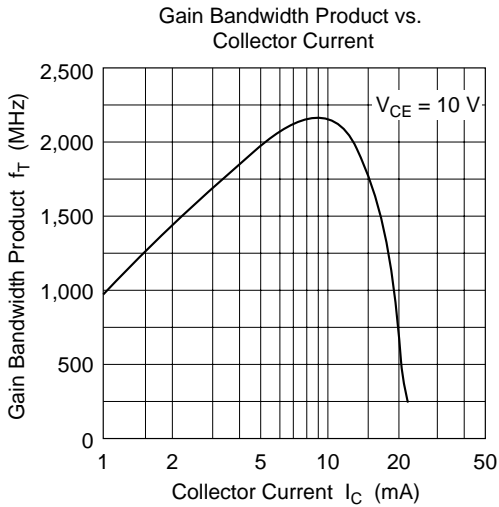
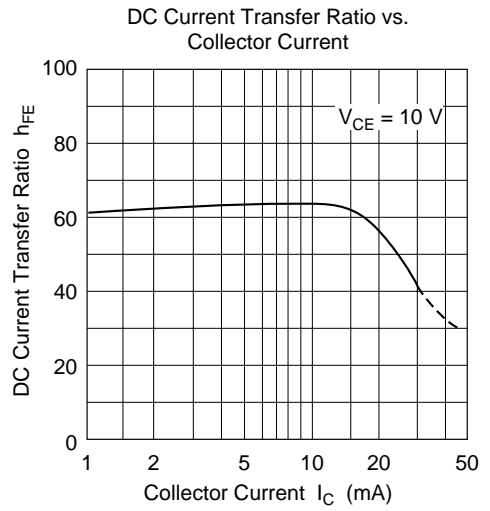
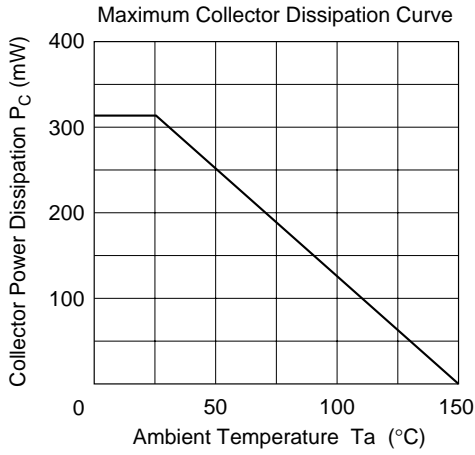
1. Base
2. Emitter
3. Collector

Absolute Maximum Ratings (Ta = 25°C)

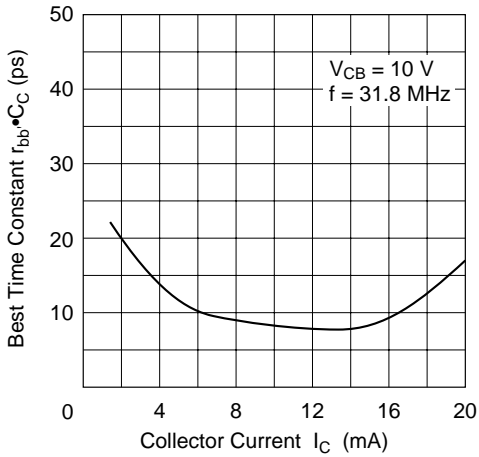
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	30	V
Collector to emitter voltage	V_{CEO}	30	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_C	50	mA
Collector power dissipation	P_C	310	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

Electrical Characteristics (Ta = 25°C)

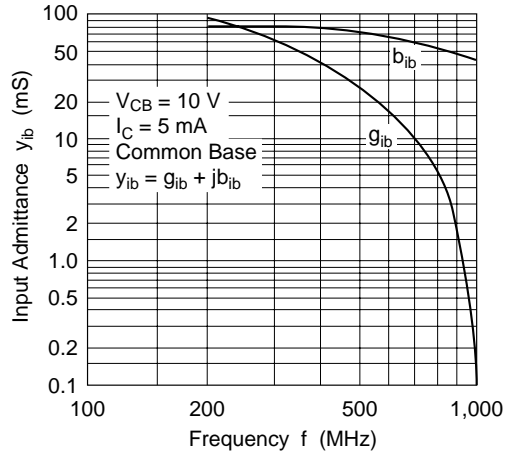
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	30	—	—	V	$I_C = 10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	30	—	—	V	$I_C = 1 \text{ mA}, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	3	—	—	V	$I_E = 10 \mu A,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



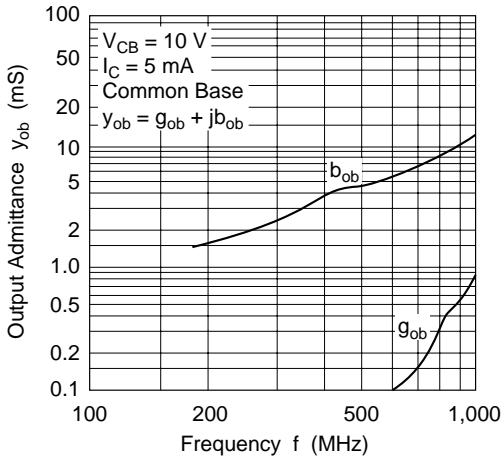
Base Time Constant vs. Collector Current



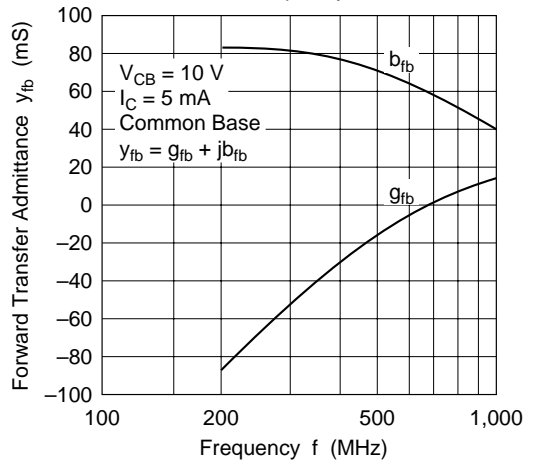
Input Admittance vs. Frequency

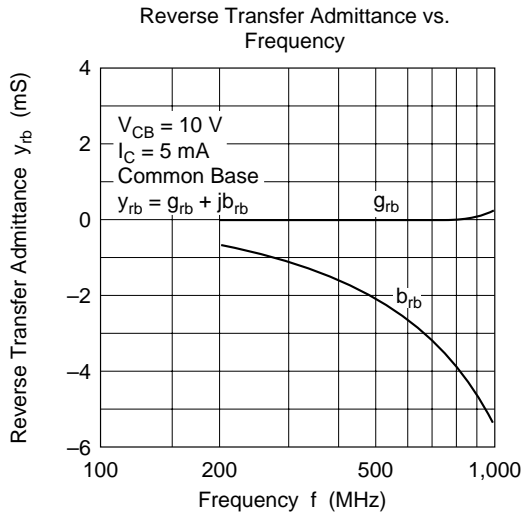


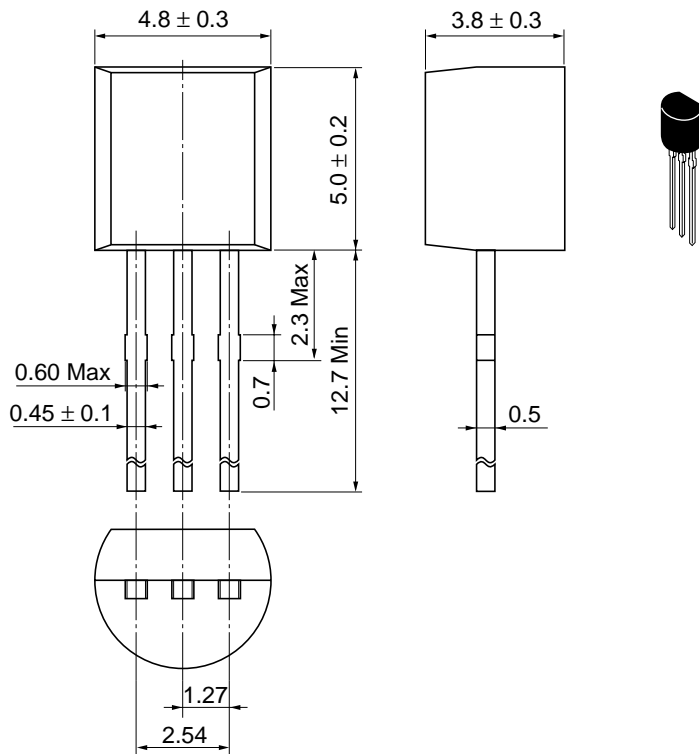
Output Admittance vs. Frequency



Forward Transfer Admittance vs. Frequency







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

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