
2SC1907

Silicon NPN Epitaxial Planar

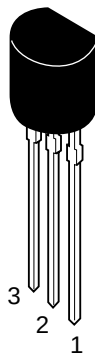
HITACHI

Application

UHF TV Tuner, Local oscillator

Outline

TO-92 (2)



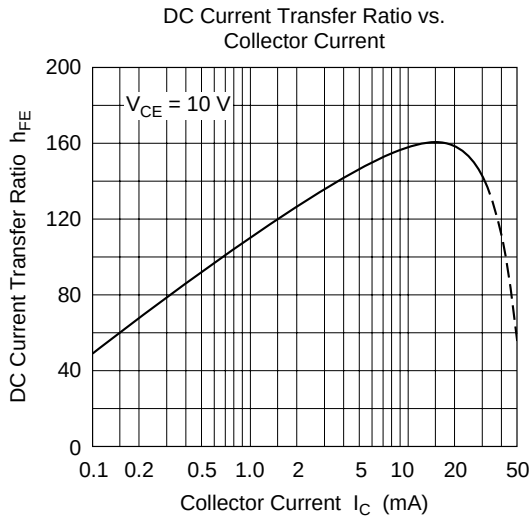
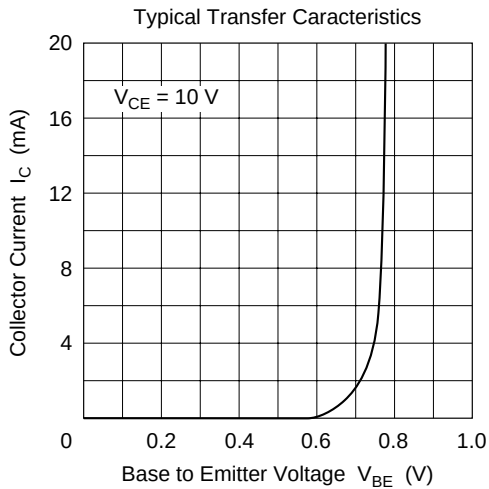
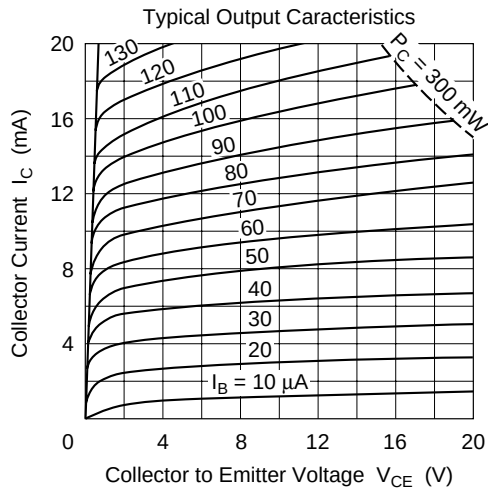
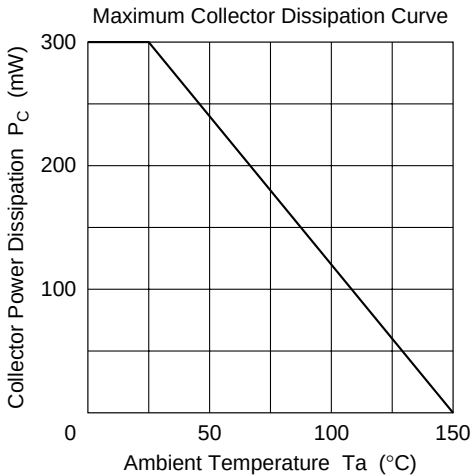
- 1. Emitter
- 2. Collector
- 3. Base

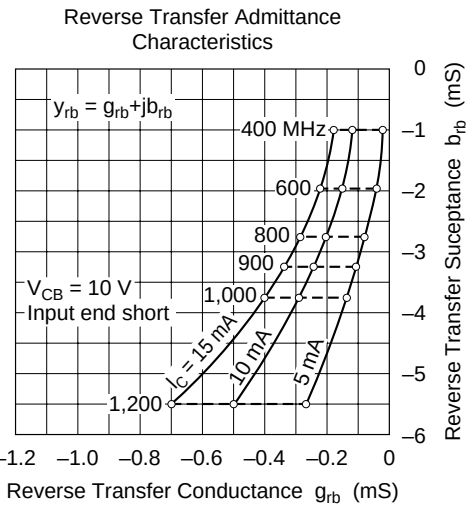
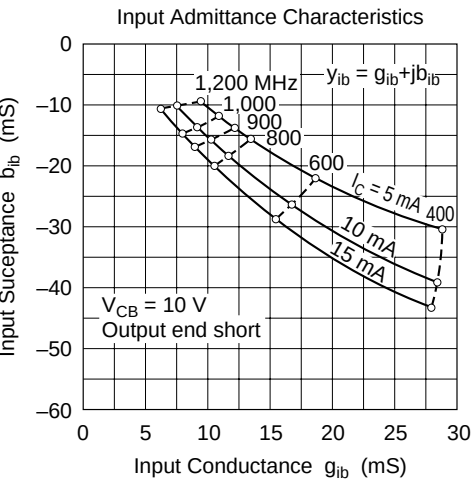
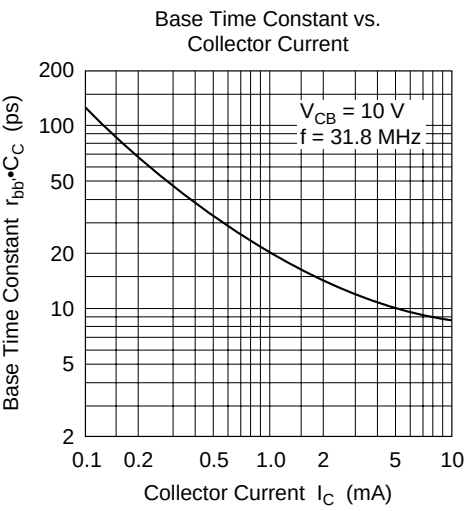
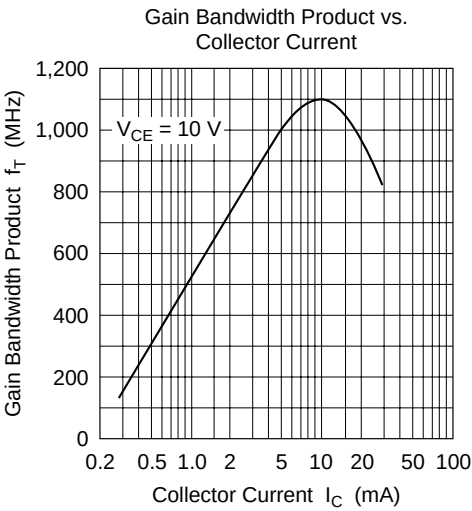
Absolute Maximum Ratings (Ta = 25°C)

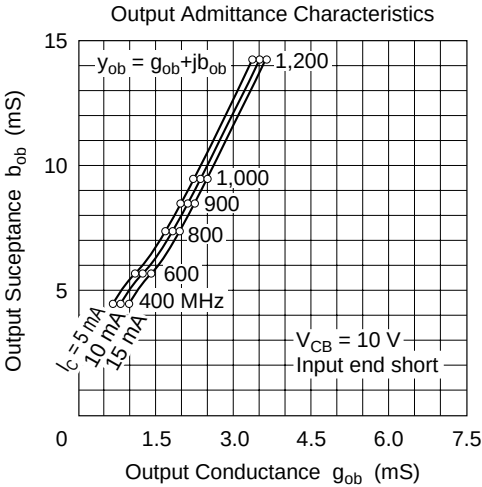
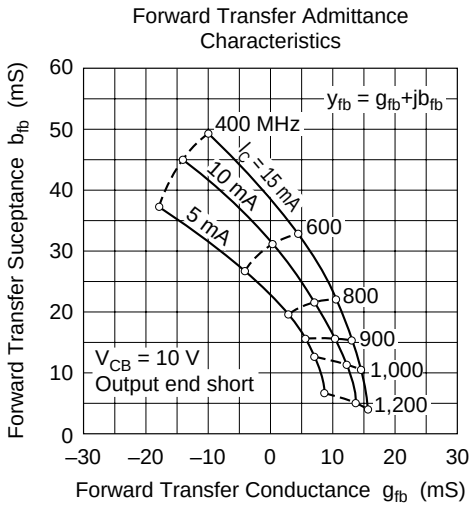
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	30	V
Collector to emitter voltage	V_{CEO}	19	V
Emitter to base voltage	V_{EBO}	2	V
Collector current	I_C	50	mA
Emitter current	I_E	−50	mA
Collector power dissipation	P_C	300	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

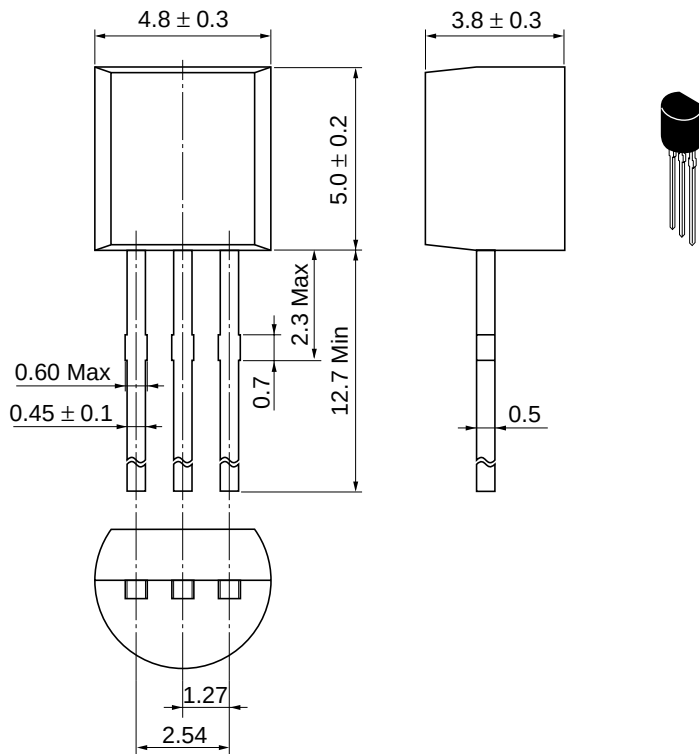
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	30	—	—	V	$I_C = 10\text{ }\mu\text{A}$, $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	19	—	—	V	$I_C = 3\text{ mA}$, $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	2	—	—	V	$I_E = 10\text{ }\mu\text{A}$, $I_C = 0$
Collector cutoff current	I_{CBO}	—	—	0.5	μA	$V_{CB} = 10\text{ V}$, $I_E = 0$
DC current transfer ratio	h_{FE}	40	—	—		$V_{CE} = 10\text{ V}$, $I_C = 10\text{ mA}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	0.2	1.0	V	$I_C = 20\text{ mA}$, $I_B = 4\text{ mA}$
Collector output capacitance	C_{ob}	—	1.0	2.0	pF	$V_{CB} = 10\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$
Gain bandwidth product	f_T	900	1100	—	MHz	$V_{CE} = 10\text{ V}$, $I_C = 10\text{ mA}$
Base time constant	$r_{bb'} \cdot C_C$	—	10	25	ps	$V_{CB} = 10\text{ V}$, $I_C = 10\text{ mA}$, $f = 31.8\text{ MHz}$
Oscillation output power	P_{out}	—	8	—	mW	$V_{CB} = 10\text{ V}$, $I_C = 10\text{ mA}$, $f = 930\text{ MHz}$









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

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