

isc Silicon NPN RF Transistor

2SC1907

**DESCRIPTION**

- Low Noise
- High Gain Bandwidth Product

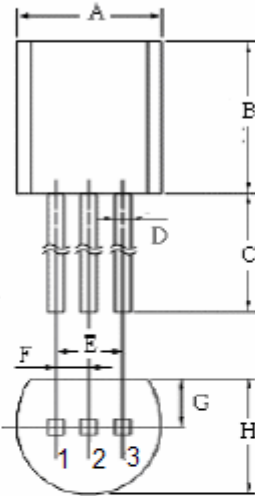
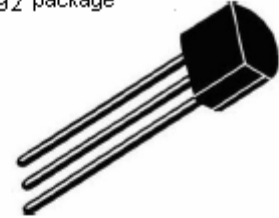
**APPLICATIONS**

- Designed for VHF TV tuner and local oscillator applications.

**ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage	30	V
V <sub>CEO</sub>	Collector-Emitter Voltage	19	V
V <sub>EBO</sub>	Emitter-Base Voltage	2	V
I <sub>C</sub>	Collector Current-Continuous	50	mA
I <sub>E</sub>	Emitter Current-Continuous	-50	mA
P <sub>C</sub>	Collector Power Dissipation @T <sub>C</sub> =25°C	0.3	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature Range	-55~150	°C

TO-92 package



1: Base  
2: Emitter  
3: Collector

DIM	mm	
	MIN	MAX
A	4.33	4.83
B	4.33	4.83
C	14.0	15.0
D	0.36	0.56
E	2.54	
F	1.27	
G	0.92	1.12
H	3.40	3.60

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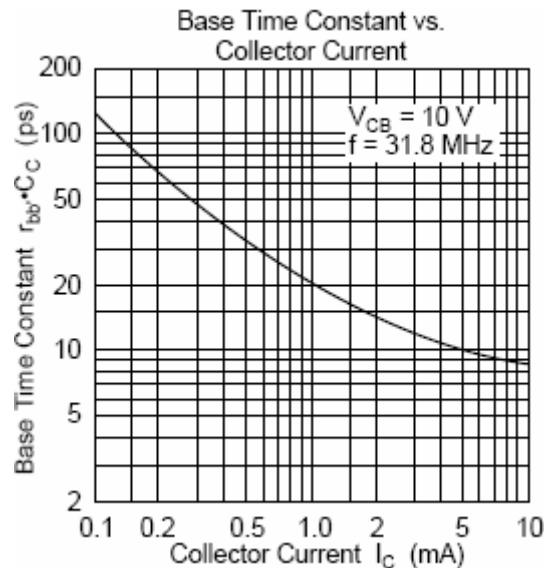
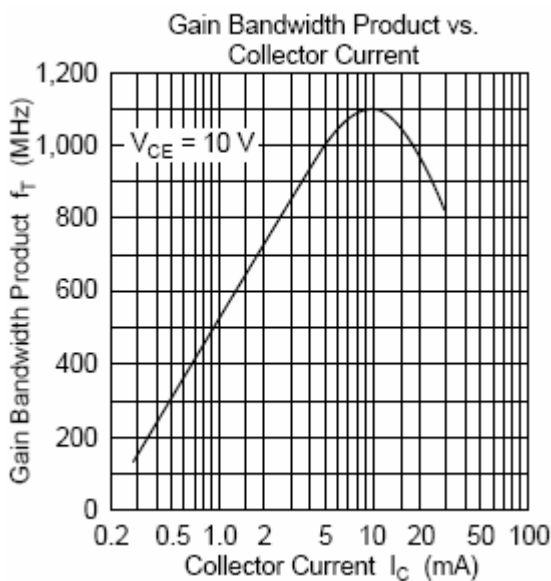
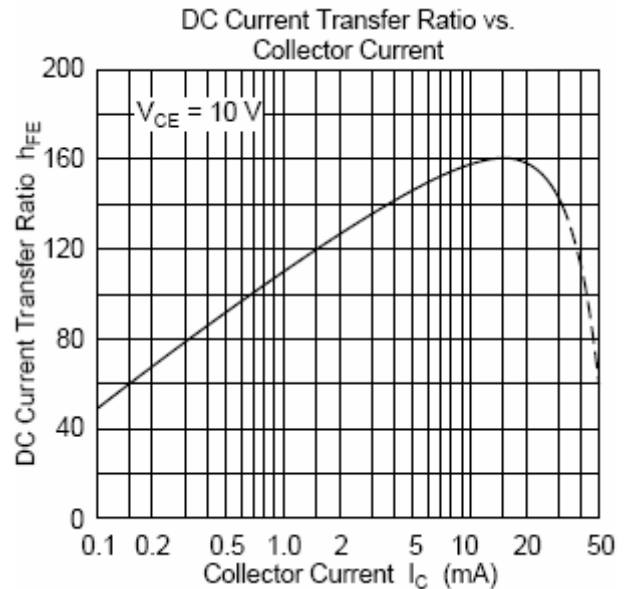
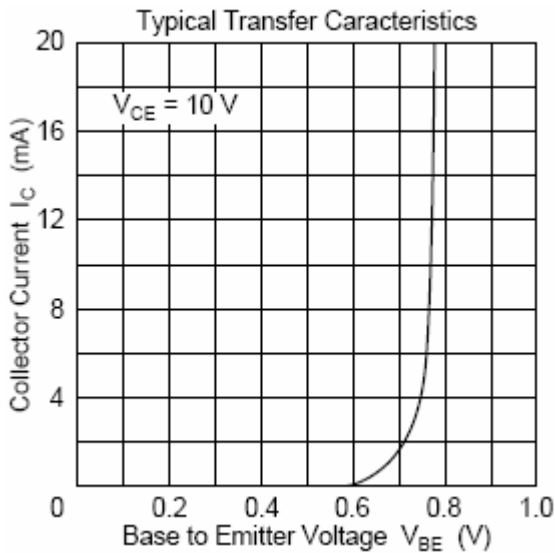
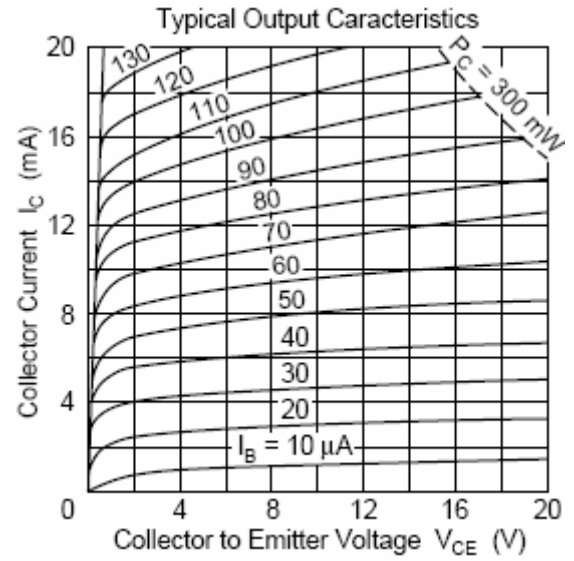
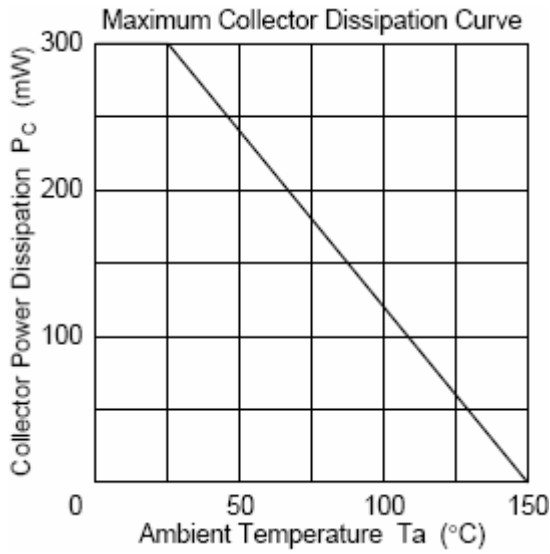
## ELECTRICAL CHARACTERISTICS

T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> = 10 μ A ; I <sub>E</sub> = 0	30			V
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 3mA ; R <sub>BE</sub> = ∞	19			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 10 μ A ; I <sub>C</sub> = 0	2			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 20mA ; I <sub>B</sub> = 4mA			1.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 10V; I <sub>E</sub> = 0			0.5	μ A
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 10mA ; V <sub>CE</sub> = 10V	40			
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 10mA ; V <sub>CE</sub> = 10V	900	1100		MHz
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0 ; V <sub>CB</sub> = 10V;f= 1.0MHz		1.0	2.0	pF
r <sub>bb'</sub> • C <sub>C</sub>	Base Time Constant	V <sub>CB</sub> = 10V,I <sub>C</sub> = 10 mA,f = 31.8 MHz		10	25	ps
P <sub>out</sub>	Oscillation Output Power	V <sub>CB</sub> = 10 V,I <sub>C</sub> = 10mA;f = 930MHz		8		mW

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