

isc Silicon NPN RF Transistor

2SC1907

DESCRIPTION

- Low Noise
- High Gain Bandwidth Product

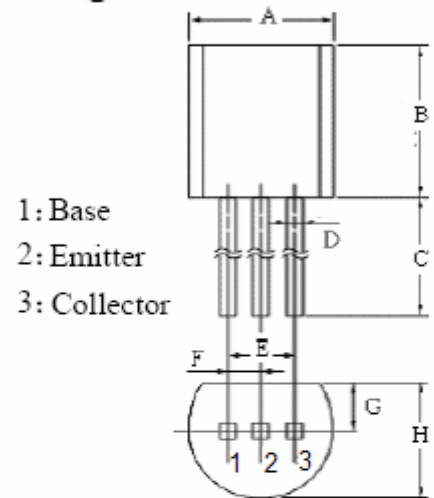
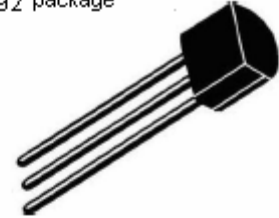
APPLICATIONS

- Designed for VHF TV tuner and local oscillator applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	30	V
V _{CEO}	Collector-Emitter Voltage	19	V
V _{EBO}	Emitter-Base Voltage	2	V
I _C	Collector Current-Continuous	50	mA
I _E	Emitter Current-Continuous	-50	mA
P _C	Collector Power Dissipation @T _C =25°C	0.3	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-55~150	°C

TO-92 package



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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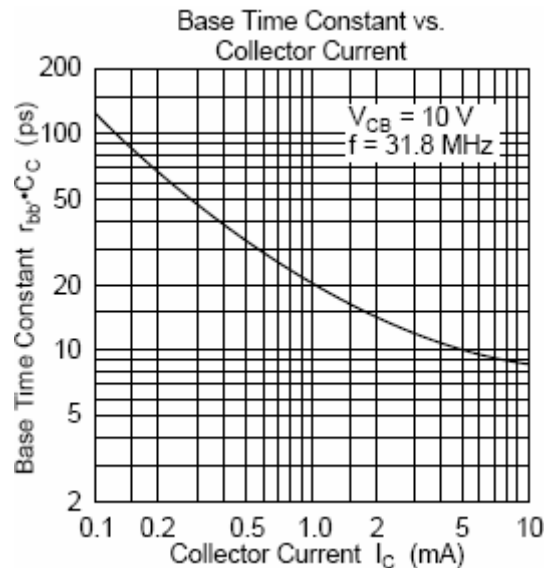
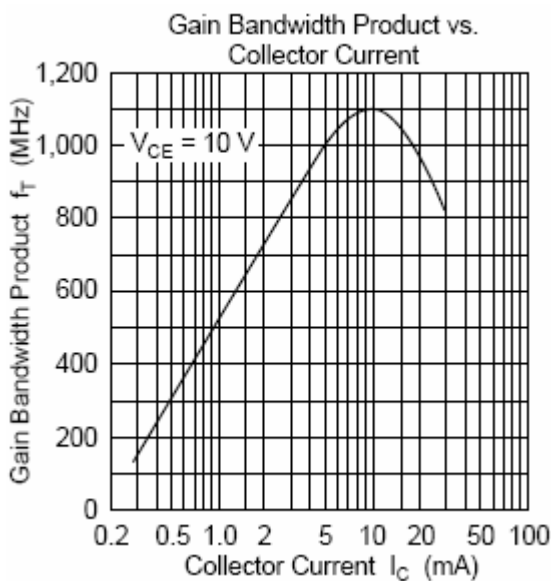
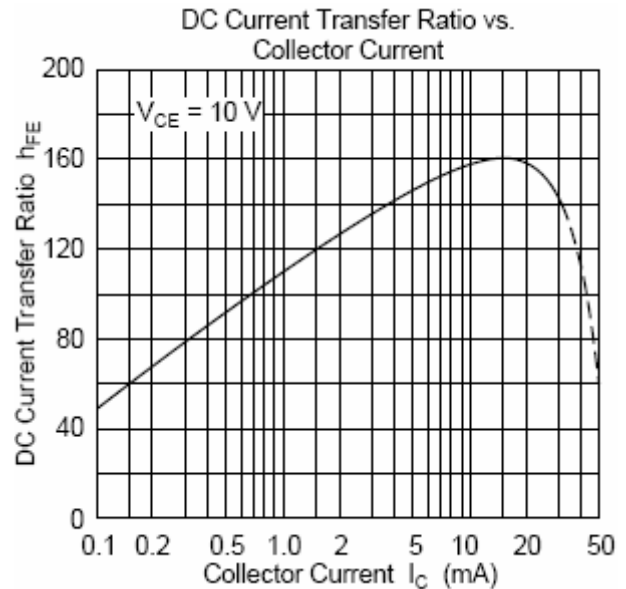
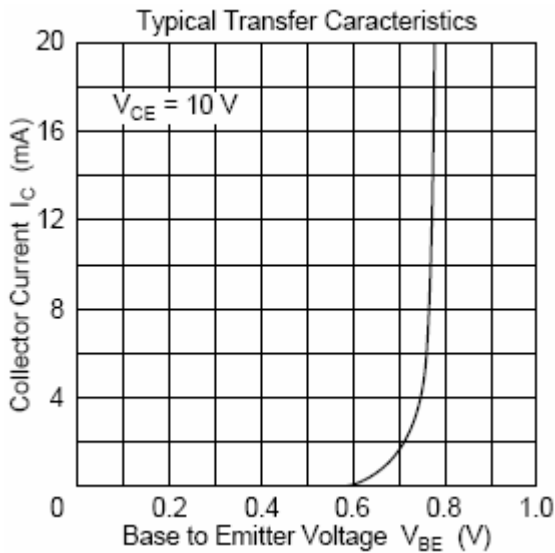
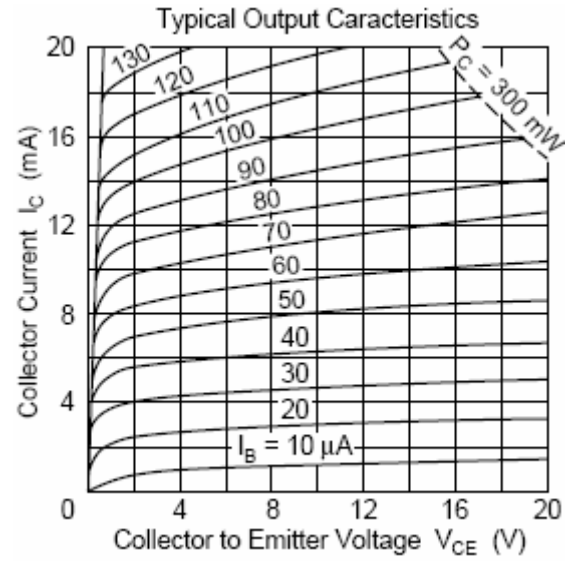
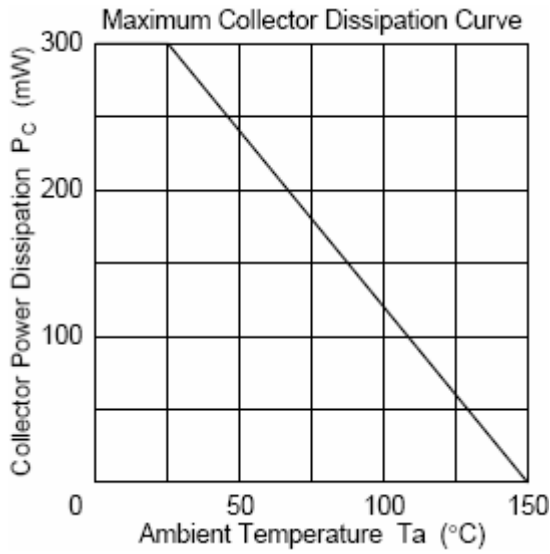
ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = 10\ \mu\text{A}$; $I_E = 0$	30			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 3\text{mA}$; $R_{BE} = \infty$	19			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 10\ \mu\text{A}$; $I_C = 0$	2			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 20\text{mA}$; $I_B = 4\text{mA}$			1.0	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = 10\text{V}$; $I_E = 0$			0.5	μA
h_{FE}	DC Current Gain	$I_C = 10\text{mA}$; $V_{CE} = 10\text{V}$	40			
f_T	Current-Gain—Bandwidth Product	$I_C = 10\text{mA}$; $V_{CE} = 10\text{V}$	900	1100		MHz
C_{OB}	Output Capacitance	$I_E = 0$; $V_{CB} = 10\text{V}$; $f = 1.0\text{MHz}$		1.0	2.0	pF
$r_{bb'} \cdot C_C$	Base Time Constant	$V_{CB} = 10\text{V}$, $I_C = 10\text{mA}$, $f = 31.8\text{MHz}$		10	25	ps
P_{out}	Oscillation Output Power	$V_{CB} = 10\text{V}$, $I_C = 10\text{mA}$; $f = 930\text{MHz}$		8		mW

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