

isc Silicon NPN RF Transistor

2SC1907

DESCRIPTION

- Low Noise
- High Gain Bandwidth Product
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

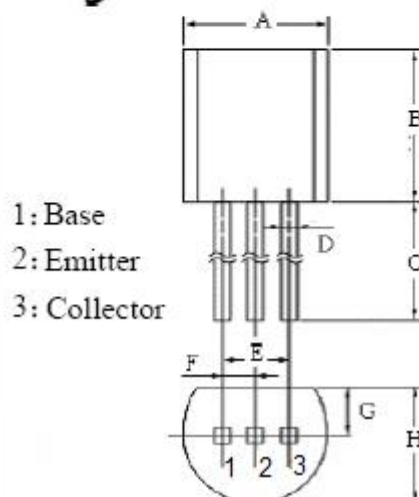
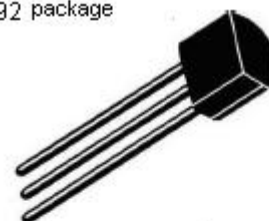
APPLICATIONS

- Designed for VHF TV tuner and local oscillator applications.

ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

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 @ $T_c=25^{\circ}\text{C}$	0.3	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}\text{C}$

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

isc Silicon NPN RF Transistor

2SC1907

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
$\tau_{bb'} \cdot C_C$	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

NOTICE:

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.