

isc Silicon NPN RF Transistor

2SC3130

DESCRIPTION

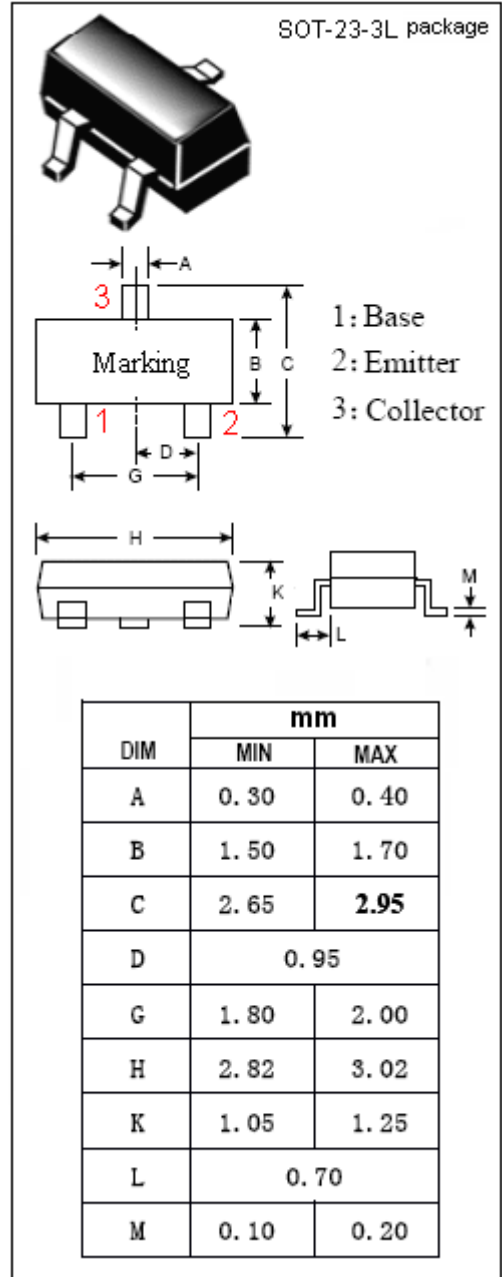
- High Current-Gain Bandwidth Product
- Small Output Capacitance

APPLICATIONS

- Designed for high-frequency amplification, oscillation, mixing applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	15	V
V _{CEO}	Collector-Emitter Voltage	10	V
V _{EBO}	Emitter-Base Voltage	3	V
I _C	Collector Current-Continuous	50	mA
P _C	Collector Power Dissipation @T _C =25°C	0.15	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-55~150	°C



isc Silicon NPN RF Transistor

2SC3130

ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=10\mu\text{A}$; $I_C=0$	3			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=2\text{mA}$; $I_B=0$	10			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=20\text{mA}$; $I_B=4\text{mA}$			0.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=10\text{V}$; $I_E=0$			1	μA
h_{FE}	DC Current Gain	$I_C=5\text{mA}$; $V_{CE}=4\text{V}$	75		400	
f_T	Current-Gain—Bandwidth Product	$I_E=-5\text{mA}$; $V_{CB}=4\text{V}$; $f=200\text{MHz}$	1.4	1.9	2.5	GHz
C_{OB}	Output Capacitance	$I_E=0$; $V_{CB}=4\text{V}$; $f=1\text{MHz}$		1.4		pF
$r_{bb'} \cdot C_C$	Base Time Constant	$I_E=-5\text{mA}$; $V_{CB}=4\text{V}$; $f=31.9\text{MHz}$		11		ps
C_{re}	Feed-Back Capacitance	$I_E=0$; $V_{CB}=4\text{V}$; $f=1.0\text{MHz}$		0.45		pF

◆ h_{FE} Classification

Class	P	Q	R
Marking	ISP	ISQ	ISR
h_{FE}	75-130	110-220	200-400

isc Silicon NPN RF Transistor

2SC3130

