

**isc Silicon NPN RF Transistor**

**2SC3110**

**DESCRIPTION**

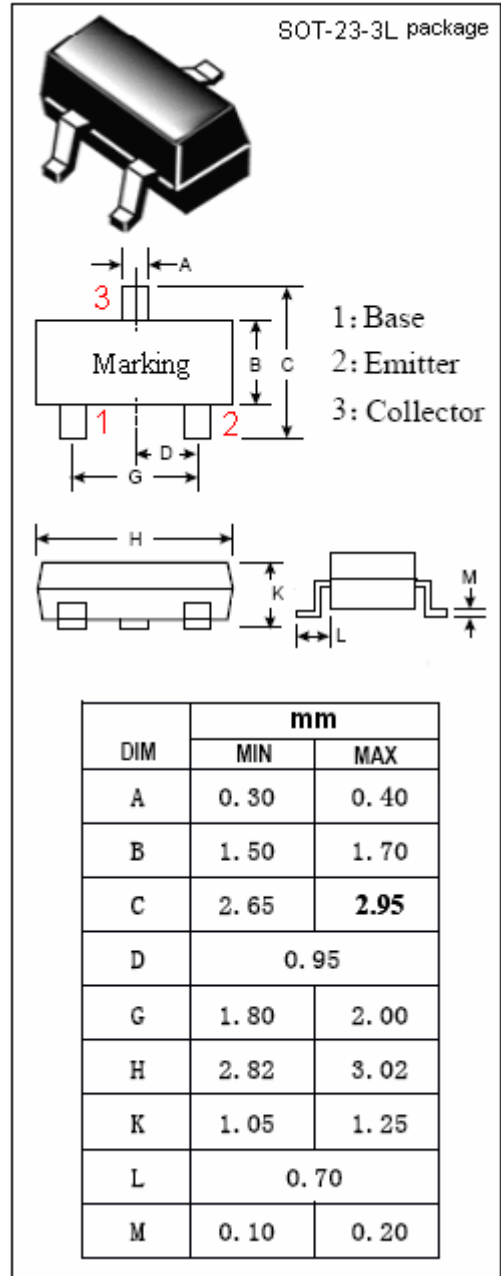
- Low Noise
- High Gain
- High Current-Gain Bandwidth Product

**APPLICATIONS**

- Designed for use in RF wide band low noise amplifier.

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

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage	15	V
V <sub>CEO</sub>	Collector-Emitter Voltage	12	V
V <sub>EBO</sub>	Emitter-Base Voltage	2.5	V
I <sub>C</sub>	Collector Current-Continuous	30	mA
I <sub>CP</sub>	Collector Current-Peak	50	mA
P <sub>C</sub>	Collector Power Dissipation @T <sub>C</sub> =25°C	0.2	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature Range	-55~150	°C



## isc Silicon NPN RF Transistor

## 2SC3110

## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=10\text{V}; I_E=0$			0.1	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=2\text{V}; I_C=0$			1	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$I_C=10\text{mA}; V_{CE}=10\text{V}$	40			
$f_T$	Current-Gain—Bandwidth Product	$I_E=-10\text{mA}; V_{CE}=10\text{V}$		4.5		GHz
$C_{OB}$	Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f=1.0\text{MHz}$			1.2	pF
$ S_{21e} ^2$	Insertion Power Gain	$I_C=20\text{mA}; V_{CE}=10\text{V}; f=0.8\text{GHz}$	9	12		dB
GUM	Power Gain		12	14		dB
NF	Noise Figure	$I_C=5\text{mA}; V_{CE}=10\text{V}; f=0.8\text{GHz}$		1.3	2.5	dB