

isc Silicon NPN RF Transistor

2SC2954

DESCRIPTION

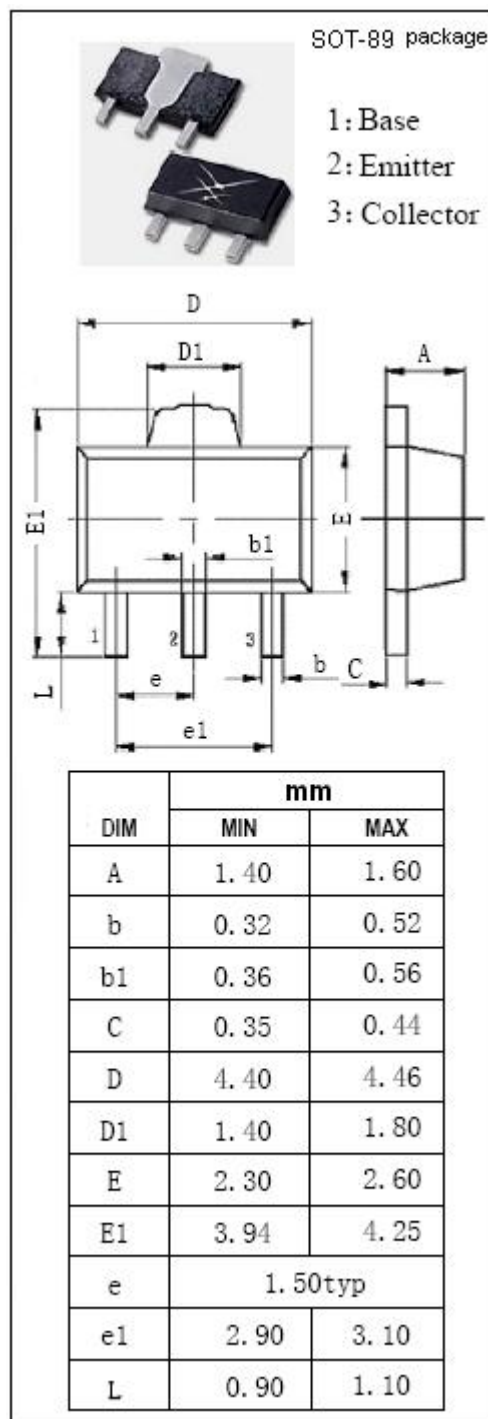
- Low Noise and High Gain
 $NF = 2.3 \text{ dB TYP. ; } |S_{21e}|^2 = 20 \text{ dB TYP.}$
@ $f = 200 \text{ MHz}$
 $NF = 2.4 \text{ dB TYP. ; } |S_{21e}|^2 = 12.5 \text{ dB TYP.}$
@ $f = 500 \text{ MHz}$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for low noise wide band amplifier and buffer amplifier of OSC, for VHF and CATV band.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	35	V
V_{CEO}	Collector-Emitter Voltage	18	V
V_{EBO}	Emitter-Base Voltage	3.0	V
I_C	Collector Current-Continuous	0.15	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	2	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$



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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	μA
h_{FE}	DC Current Gain	$I_C=50\text{mA}; V_{CE}=10\text{V}$	30		200	
f_T	Current-Gain—Bandwidth Product	$I_C=50\text{mA}; V_{CE}=10\text{V}$	3.0	4.0		GHz
C_{re}	Feed-Back Capacitance	$I_E=0; V_{CB}=10\text{V}; f=1.0\text{MHz}$		1.1	1.8	pF
$ S_{21e} ^2$	Insertion Power Gain	$I_C=50\text{mA}; V_{CE}=10\text{V}; f=500\text{MHz}$ $R_G=50\Omega$	10	12.5		dB
NF	Noise Figure	$I_C=30\text{mA}; V_{CE}=10\text{V}; f=500\text{MHz}$ $R_G=50\Omega$		2.4	4.0	dB

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