

**isc Silicon NPN RF Transistor**
**2SC4988**
**DESCRIPTION**

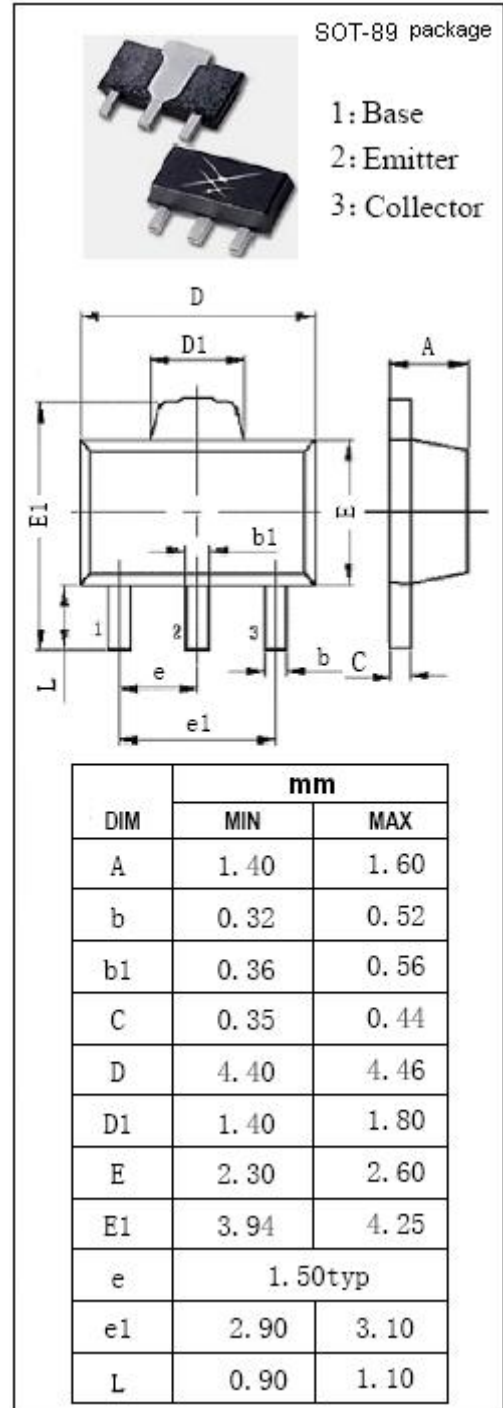
- High Gain Bandwidth Product  
 $f_T = 8.5 \text{ GHz TYP.}$
- High Gain, Low Noise Figure  
 $PG = 10.5 \text{ dB TYP.}, NF = 1.3 \text{ dB TYP. @ } f = 900 \text{ MHz}$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for use in VHF ~ UHF wide band amplifier.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	15	V
$V_{CEO}$	Collector-Emitter Voltage	9	V
$V_{EBO}$	Emitter-Base Voltage	1.5	V
$I_c$	Collector Current-Continuous	0.1	A
$P_C$	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	0.8	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



## isc Silicon NPN RF Transistor

## 2SC4988

## ELECTRICAL CHARACTERISTICS

T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> = 10 μ A ; I <sub>E</sub> = 0	15			V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 12V; I <sub>E</sub> = 0			1.0	μ A
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = 9V; R <sub>BE</sub> = ∞			1.0	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 1.5V; I <sub>C</sub> = 0			10	μ A
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 20mA ; V <sub>CE</sub> = 5V	50		250	
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 20mA ; V <sub>CE</sub> = 5V	5.5	8.5		GHz
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0 ; V <sub>CB</sub> = 5V; f= 1.0MHz		1.1	1.6	pF
PG	Power Gain	I <sub>C</sub> = 20mA ; V <sub>CE</sub> = 5V; f= 900MHz	7.5	10.5		dB
NF	Noise Figure	I <sub>C</sub> = 5mA ; V <sub>CE</sub> = 5V; f= 900MHz		1.3	2.5	dB

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