

# SILICON TRANSISTOR 2SC2954

# NPN SILICON EPITAXIAL TRANSISTOR POWER MINI MOLD

### **DESCRIPTION**

The 2SC2954 is an NPN epitaxial silicon transistor disigned for low noise wide band amplifier and buffer amplifier of OSC, for VHF and CATV bnad.

#### **FEATURES**

· Low Noise and High Gain.

f = 200 MHz, 500 MHz NF: 2.3 dB, 2.4 dB  $|S_{21}e|$ : 20 dB, 12.5 dB

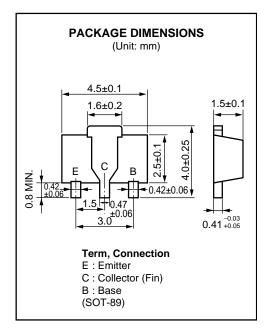
Large P<sub>T</sub> in Small Package.

PT: 2 W with 16 cm $^2 \times 0.7$  mm Ceramic Substrate.

## ABSOLUTE MAXIMUM RATINGS (TA = 25 °C)

Collector to Base Voltage	Vсво	35	V
Collector to Emitter Voltage	Vceo	18	V
Emitter to Base Voltage	VEBO	3.0	V
Collector Current	Ic	150	mΑ
Total Power Dissipation	P <sub>T</sub> *	2.0	W
Termal Resistance	$R_{th(j-a)}^{\star}$	62.5	°C/W
Junction Temperature	$T_{j}$	150	°C
Storage Temperature	T <sub>stg</sub>	-65 to +150	°C

\* With 16 cm<sup>2</sup> × 0.7 mm Ceramic Substrate



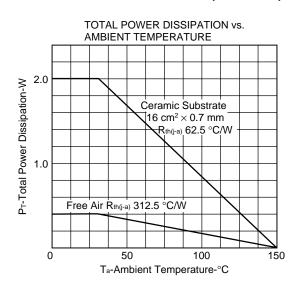


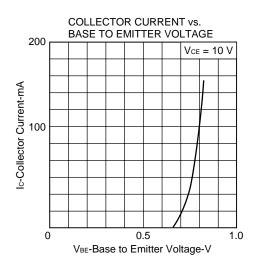
# **ELECTRICAL CHARACTERISTICS (TA = 25 °C)**

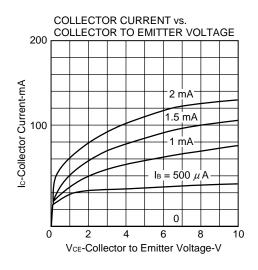
CHARACTERISTIC	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Collector Cutoff Current	Ісво	Vcb = 10 V, IE = 0			100	nA
DC Current Gain	hfe	Vce = 10 V, Ic = 50 mA *1	30	100	200	_
Gain Bandwidth Product	fτ	Vce = 10 V, Ic = 50 mA	3.0	4.0		GHz
Feedback Capacitance	Cre	V <sub>CB</sub> = 10 V, Emitter Grounded, f = 1.0 MHz		1.1	1.8	pF
Insertion Power Gain	S <sub>21</sub> e   <sup>2</sup>	$\label{eq:Vce} \begin{aligned} \text{Vce} &= 10 \text{ V, Ic} = 50 \text{ mA, f} = 500 \text{ MHz} \\ \text{Rg} &= 50 \Omega \end{aligned}$	10	12.5		dB
Noise Figure	NF	$\label{eq:Vce} \begin{aligned} \text{Vce} &= 10 \text{ V, Ic} = 30 \text{ mA, f} = 500 \text{ MHz} \\ \text{Rg} &= 50 \Omega \end{aligned}$		2.4	4.0	dB

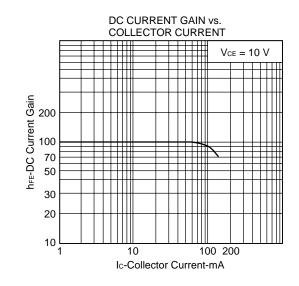
<sup>\*1</sup> Pulse Measurement PW  $\leq$  350  $\mu$ s, duty cycle 2 %/Pulsed

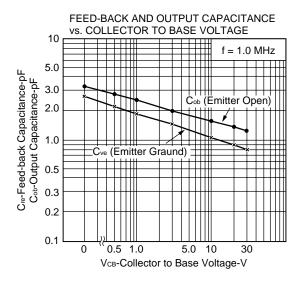
# TYPICAL CHARACTERISTICS (TA = 25 °C)

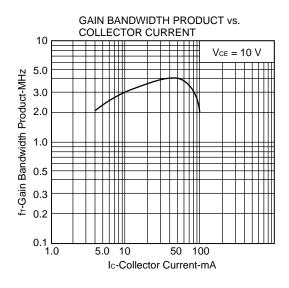


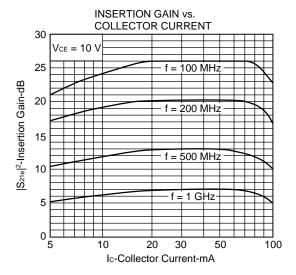


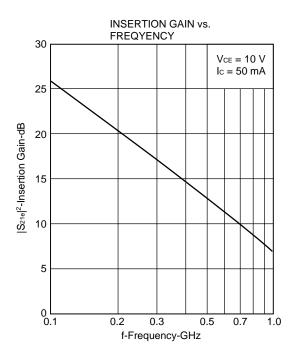




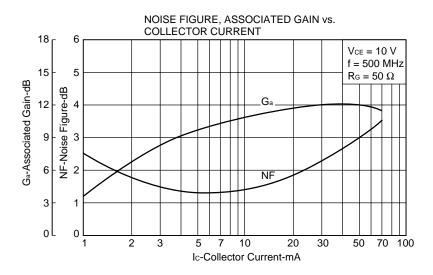


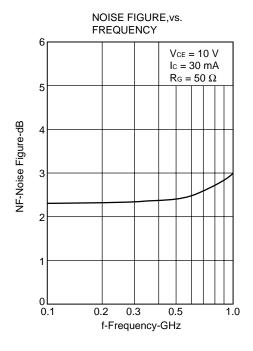


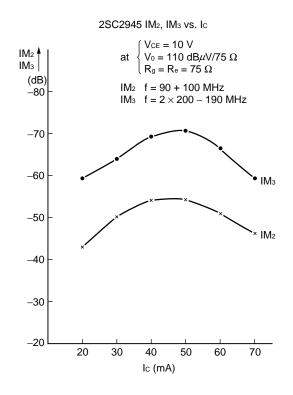


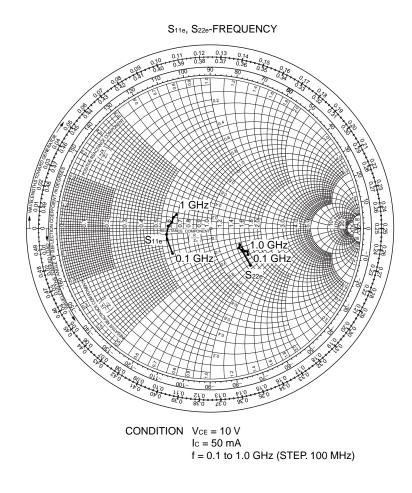


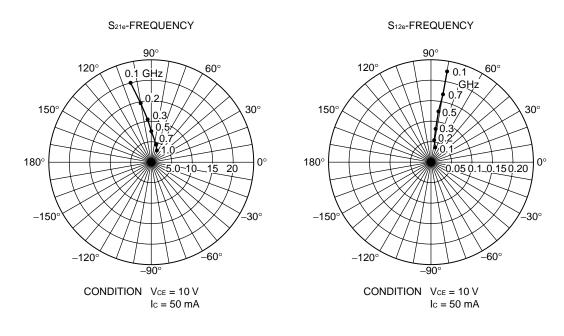












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Anti-radioactive design is not implemented in this product.

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