

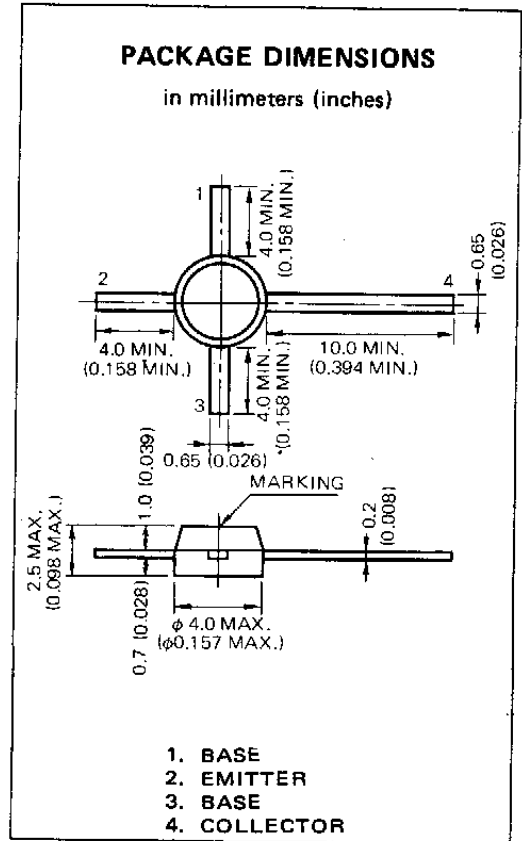
# NPN SILICON TRANSISTOR 2SC1070(B)

**DESCRIPTION** The 2SC1070(B) is specifically designed for UHF RF amplifier applications. The 2SC1070(B) features high power gain, low noise, and excellent forward AGC characteristics in a tiny fourlead plastic package designed to realize easy and economical mounting.

- FEATURES**
- Packaged in tiny plastic mold package.
  - Easy & economical mounting realizable with plastic mold package.
  - Forward AGC characteristic.
  - Balanced base.

**ABSOLUTE MAXIMUM RATINGS**

- Maximum Temperatures
- Storage Temperature . . . . . -55 to +125 °C
  - Junction Temperature . . . . . +125 °C Maximum
- Maximum Power Dissipation (Ta=25 °C)
- Total Power Dissipation . . . . . 200 mW
- Maximum Voltages and Currents (Ta=25 °C)
- V<sub>CBO</sub> Collector to Base Voltage . . . . 30 V
  - V<sub>CEO</sub> Collector to Emitter Voltage . . 25 V
  - V<sub>EBO</sub> Emitter to Base Voltage . . . . . 4.0 V
  - I<sub>C</sub> Collector Current . . . . . 20 mA
  - I<sub>B</sub> Base Current . . . . . 10 mA



**ELECTRICAL CHARACTERISTICS (Ta = 25 °C)**

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
h <sub>FE</sub>	DC Current Gain	60	100	200		V <sub>CE</sub> =10 V, I <sub>C</sub> =3.0 mA
I <sub>AGC</sub>	AGC Current	-8	-10	-11	mA	I <sub>E</sub> for which G <sub>pbAGC</sub> =G <sub>pb</sub> -30 dB*
f <sub>T</sub>	Gain Bandwidth Product	750	900		MHz	V <sub>CE</sub> =10 V, I <sub>E</sub> =-3.0 mA
C <sub>ob</sub>	Output Capacitance		0.6	0.8	pF	V <sub>CB</sub> =10 V, I <sub>E</sub> =0, f=1 MHz
NF	Noise Figure		4.5	6.0	dB	V <sub>CB</sub> =10 V, I <sub>E</sub> =-3.0 mA, f=900 MHz
G <sub>pb</sub>	Power Gain	14			dB	V <sub>CB</sub> =10 V, I <sub>E</sub> =-3.0 mA, f=900 MHz
I <sub>CBO</sub>	Collector Cutoff Current			0.1	μA	V <sub>CB</sub> =25 V, I <sub>E</sub> =0

\* Classification of I<sub>AGC</sub>

Rank	L	K
Range (mA)	-8.0 - -10	-9.0 - -11

I<sub>AGC</sub> Test Conditions : I<sub>E</sub> for which G<sub>pbAGC</sub>=G<sub>pb</sub> -30 dB