NEC
ELECTRON DEVICE

NPN SILICON TRANSISTOR
2SC1070(B)

DESCRIPTION

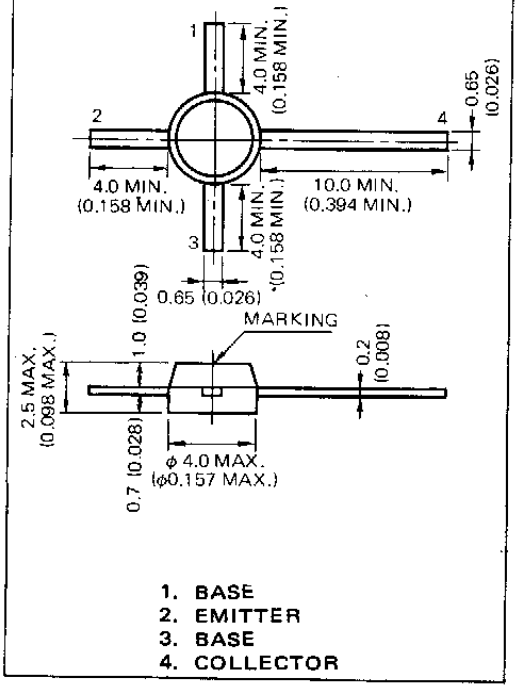
The 2SC1070(B) is specifically designed for UHF RF amplifier applications. The 2SC1070(B) features high power gain, low noise, and excellent forward AGC characteristics in a tiny fourlead plastic package designed to realize easy and economical mounting.

FEATURES

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

PACKAGE DIMENSIONS

in millimeters (inches)



1. BASE
2. EMITTER
3. BASE
4. COLLECTOR

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_{CBO} Collector to Base Voltage . . . . 30 V
- V_{CEO} Collector to Emitter Voltage . . 25 V
- V_{EBO} Emitter to Base Voltage . . . . . 4.0 V
- I_C Collector Current . . . . . 20 mA
- I_B Base Current . . . . . 10 mA

ELECTRICAL CHARACTERISTICS (Ta = 25 °C)

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
h_{FE}	DC Current Gain	60	100	200		V_{CE}=10 V, I_C=3.0 mA
I_{AGC}	AGC Current	−8	−10	−11	mA	I_E for which $G_{pbAGC}=G_{pb}$ −30 dB*
f_T	Gain Bandwidth Product	750	900		MHz	V_{CE}=10 V, I_E=−3.0 mA
C_{ob}	Output Capacitance		0.6	0.8	pF	V_{CB}=10 V, I_E=0, f=1 MHz
NF	Noise Figure		4.5	6.0	dB	V_{CB}=10 V, I_E=−3.0 mA, f=900 MHz
G_{pb}	Power Gain	14			dB	V_{CB}=10 V, I_E=−3.0 mA, f=900 MHz
I_{CBO}	Collector Cutoff Current			0.1	μA	V_{CB}=25 V, I_E=0

* Classification of I_{AGC}

Rank	L	K
Range (mA)	−8.0 — −10	−9.0 — −11

I_{AGC} Test Conditions : I_E for which $G_{pbAGC}=G_{pb}$ −30 dB