

DESCRIPTION The 2SC2869 is designed for Low Noise Amplifier of VHF & UHF band.

- FEATURES**
- Low Noise and High Gain
NF = 1.2 dB TYP.
Ga = 10.5 dB TYP. $V_{CE} = 8\text{ V}$, $I_C = 5\text{ mA}$, $f = 1.0\text{ GHz}$
 - High Power Gain
MAG = 16.5 dB TYP.
 $V_{CE} = 8\text{ V}$, $I_C = 20\text{ mA}$, $f = 1.0\text{ GHz}$

ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures

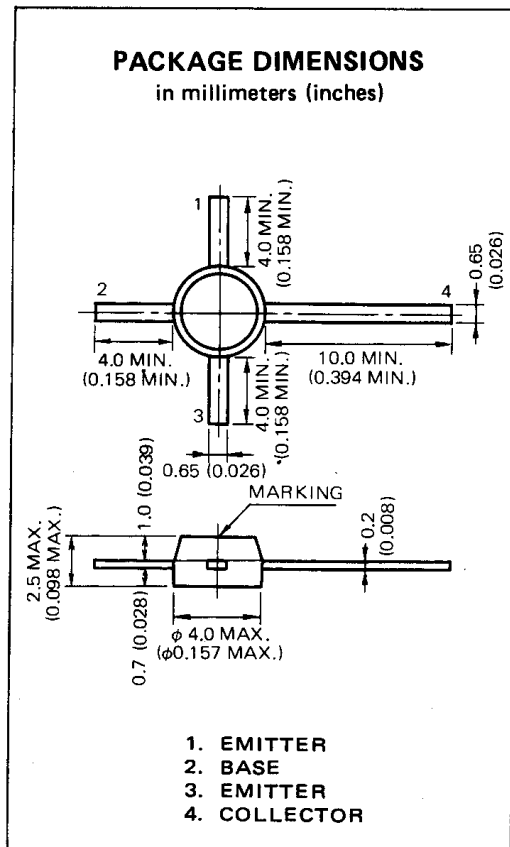
Storage Temperature -65 to +150 °C
Junction Temperature 150 °C Maximum

Maximum Power Dissipation ($T_c = 130\text{ °C}$)

Total Power Dissipation 400 mW

Maximum Voltages and Current ($T_a = 25\text{ °C}$)

V_{CBO} Collector to Base Voltage 20 V
 V_{CEO} Collector to Emitter Voltage 10 V
 V_{EBO} Emitter to Base Voltage 3.0 V
 I_C Collector Current 80 mA



ELECTRICAL CHARACTERISTICS ($T_a = 25\text{ °C}$)

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
h_{FE}	DC Current Gain	30	80	300	—	$V_{CE} = 8\text{ V}$, $I_C = 20\text{ mA}$
f_T	Gain Bandwidth Product		8		GHz	$V_{CE} = 8\text{ V}$, $I_E = 20\text{ mA}$
C_{ob}^*	Output Capacitance		0.7	1.0	pF	$V_{CB} = 10\text{ V}$, $I_E = 0$, $f = 1.0\text{ MHz}$
$ S_{21e} ^2$	Insertion Power Gain	11.5	13		dB	$V_{CE} = 8\text{ V}$, $I_C = 20\text{ mA}$, $f = 1.0\text{ GHz}$
NF	Noise Figure		1.2	2.5	dB	$V_{CE} = 8\text{ V}$, $I_C = 5\text{ mA}$, $f = 1.0\text{ GHz}$
I_{CBO}	Collector Cutoff Current			1.0	μA	$V_{CB} = 10\text{ V}$, $I_E = 0$
I_{EBO}	Emitter Cutoff Current			1.0	μA	$V_{EB} = 1.0\text{ V}$, $I_C = 0$

*The emitter should be connected to the guard terminal of the capacitance bridge.