

**DESCRIPTION**

2SA1603 is a super mini package resin sealed silicon PNP epitaxial transistor, It is designed for low frequency voltage application.

**FEATURE**

- Small collector to emitter saturation voltage.  
VCE(sat)=-0.3V max
- Excellent linearity of DC forward gain.
- Super mini package for easy mounting

**APPLICATION**

For Hybrid IC,small type machine low frequency voltage Amplify application.

**MAXIMUM RATINGS(Ta=25 )**

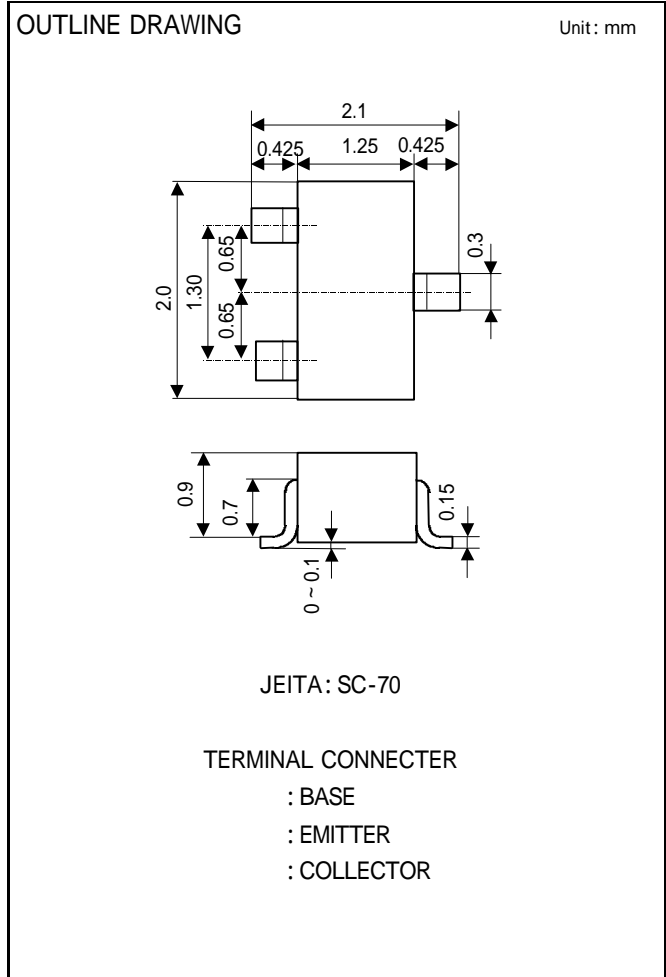
Symbol	Parameter	Ratings	Unit
V <sub>CBO</sub>	Collector to Base voltage	-50	V
V <sub>CEO</sub>	Collector to Emitter voltage	-50	V
V <sub>EBO</sub>	Emitter to Base voltage	-6	V
I <sub>O</sub>	Collector current	-100	mA
P <sub>C</sub>	Collector dissipation	150	mW
T <sub>j</sub>	Junction temperature	+ 125	
T <sub>stg</sub>	Storage temperature	-55 ~ + 125	

**ELECTRICAL CHARACTERISTICS(Ta=25 )**

Parameter	Symbol	Test conditions	Limits			Unit
			Min	Typ	Max	
C to E break down voltage	V(BR) <sub>CEO</sub>	I <sub>C</sub> =-100 μA ,R <sub>BE</sub> =	-50	-	-	V
Collector cut off current	I <sub>CBO</sub>	V <sub>CB</sub> =-50V, I <sub>E</sub> =0mA	-	-	-0.5	μA
Emitter cut off current	I <sub>EBO</sub>	V <sub>EB</sub> =-4V, I <sub>C</sub> =0mA	-	-	-0.5	μA
DC forward current gain	hFE	V <sub>CE</sub> =-6V, I <sub>C</sub> =-1mA	120	-	820	
DC forward current gain	hFE	V <sub>CE</sub> =-6V, I <sub>C</sub> =-0.1mA	70	-	-	
C to E Saturation Vlotage	VCE(sat)	I <sub>C</sub> =-30mA ,I <sub>B</sub> =-1.5mA	-	-	-0.3	V
Gain bandwidth product	fT	V <sub>CE</sub> =-6V, I <sub>E</sub> =10mA	-	200	-	MHz
Collector output capacitance	Cob	V <sub>CB</sub> =-6V, I <sub>E</sub> =0,f=1MHz	-	2.5	-	pF

) It shows hFE classification in below table.

Item	Q	R	S	T
h F E Item	120-270	180-390	270-560	390-820

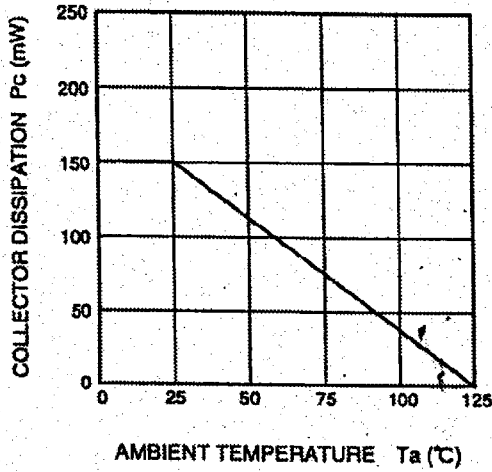


# 2SA1603

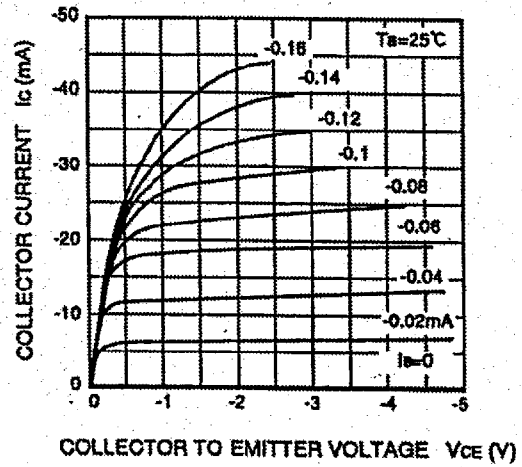
For Low Frequency Amplify Application  
Silicon PNP Epitaxial Type (Super Mini type)

## TYPICAL CHARACTERISTICS

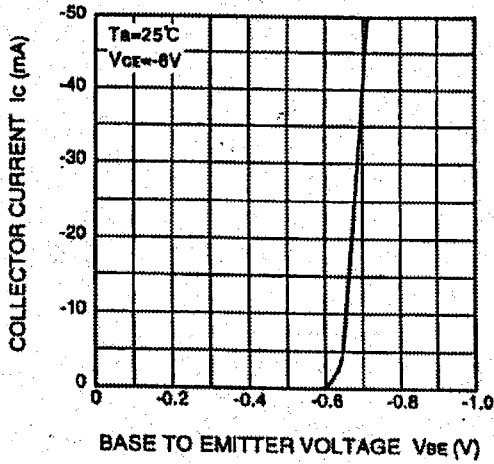
COLLECTOR DISSIPATION  
VS. AMBIENT TEMPERATURE



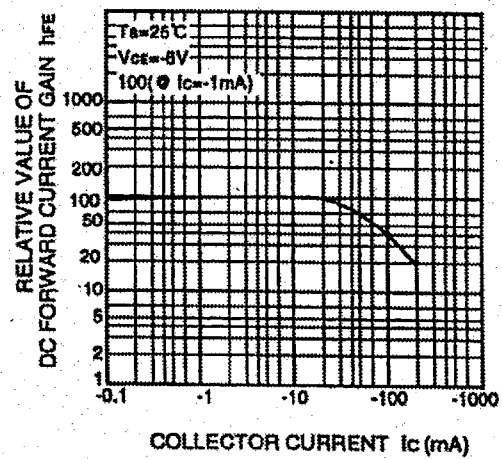
COMMON EMITTER OUTPUT



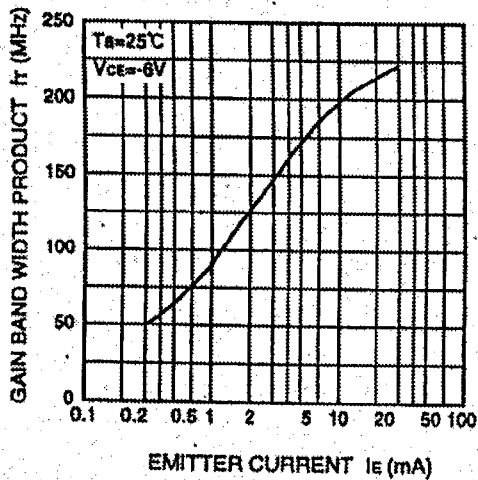
COMMON EMITTER TRANSFER



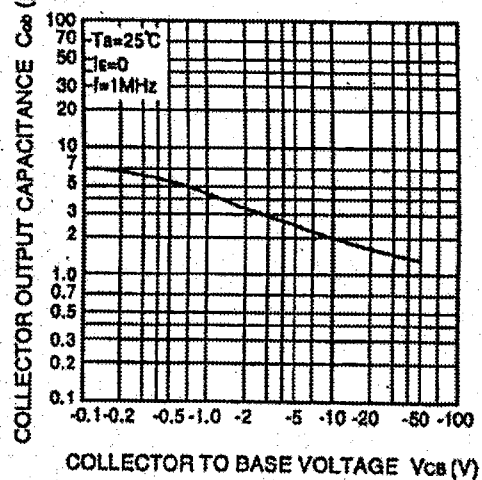
DC FORWARD CURRENT GAIN  
VS. COLLECTOR CURRENT



GAIN BAND WIDTH PRODUCT  
VS. EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE  
VS. COLLECTOR TO BASE VOLTAGE





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