

2SA1603

FOR LOW FREQUENCY AMPLIFY APPLICATION
SILICON PNP EPITAXIAL TYPE(Super mini type)

DESCRIPTION

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

FEATURE

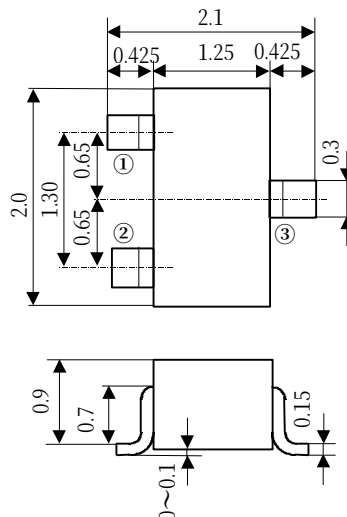
- Small collector to emitter saturation voltage.
 $V_{CE(sat)} = -0.3V$ max
- Excellent linearity of DC forward gain.
- Super mini package for easy mounting

APPLICATION

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

OUTLINE DRAWING

Unit: mm



JEITA: SC-70

TERMINAL CONNECTER

- ①: BASE
②: EMITTER
③: COLLECTOR

MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Ratings	Unit
V_{CBO}	Collector to Base voltage	-50	V
V_{CEO}	Collector to Emitter voltage	-50	V
V_{EBO}	Emitter to Base voltage	-6	V
I_O	Collector current	-100	mA
P_C	Collector dissipation	150	mW
T_j	Junction temperature	+125	°C
T_{stg}	Storage temperature	-55~+125	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

Parameter	Symbol	Test conditions	Limits			Unit
			Min	Typ	Max	
C to E break down voltage	$V(BR)_{CEO}$	$I_C = -100 \mu A, R_{BE} = \infty$	-50	-	-	V
Collector cut off current	I_{CBO}	$V_{CB} = -50V, I_E = 0mA$	-	-	-0.5	μA
Emitter cut off current	I_{EBO}	$V_{EB} = -4V, I_C = 0mA$	-	-	-0.5	μA
DC forward current gain	hFE	$V_{CE} = -6V, I_C = -1mA$ ※	120	-	820	
DC forward current gain	hFE	$V_{CE} = -6V, I_C = -0.1mA$	70	-	-	
C to E Saturation Vlotage	$V_{CE(sat)}$	$I_C = -30mA, I_B = -1.5mA$	-	-	-0.3	V
Gain bandwidth product	fT	$V_{CE} = -6V, I_E = 10mA$	-	200	-	MHz
Collector output capacitance	Cob	$V_{CB} = -6V, I_E = 0, f = 1MHz$	-	2.5	-	pF

※ It shows hFE classification in below table.

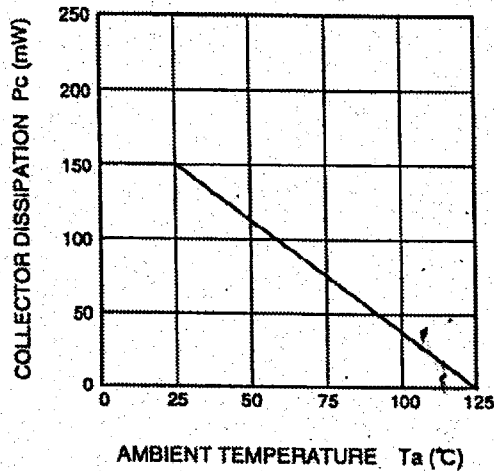
Item	Q	R	S	T
h F E Item	120~270	180~390	270~560	390~820

2SA1603

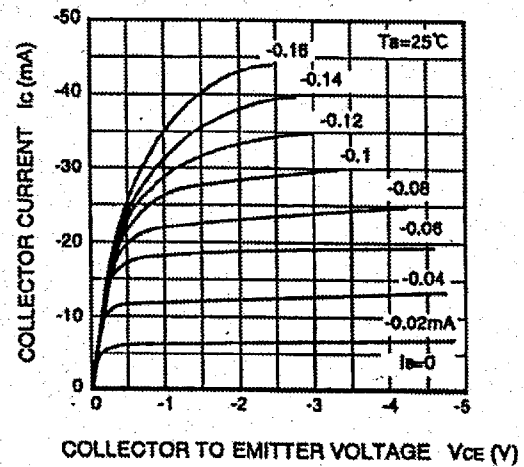
For Low Frequency Amplify Application
Silicon PNP Epitaxial Type (Super Mini type)

TYPICAL CHARACTERISTICS

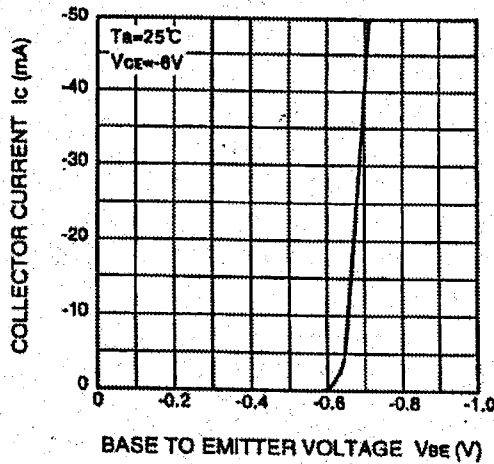
COLLECTOR DISSIPATION
VS. AMBIENT TEMPERATURE



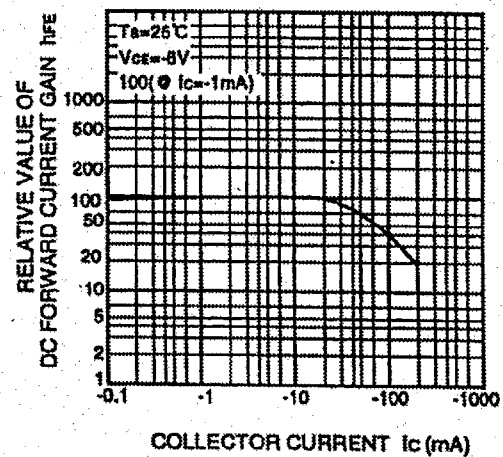
COMMON EMITTER OUTPUT



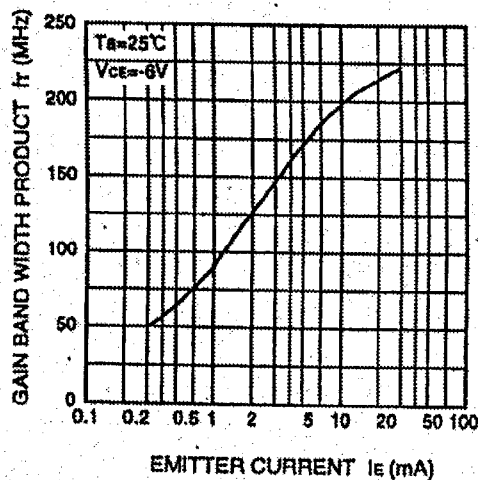
COMMON EMITTER TRANSFER



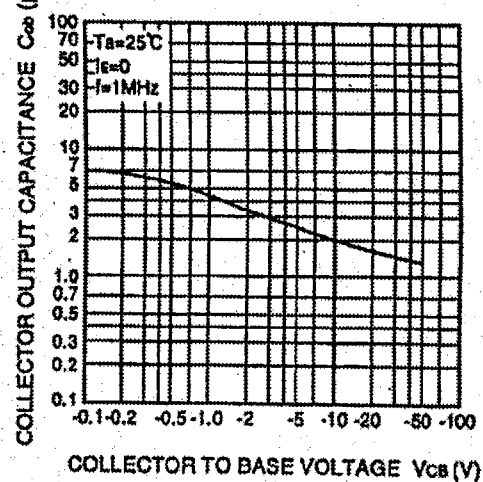
DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT



GAIN BAND WIDTH PRODUCT
VS. EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE
VS. COLLECTOR TO BASE VOLTAGE





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