

ISA1603AM1

FOR LOW FREQUENCY AMPLIFY APPLICATION
SILICON PNP EPITAXIAL TYPE

DESCRIPTION

ISA1603AM1 is a mini package resin sealed
silicon PNP epitaxial transistor,
It is designed for low frequency voltage application.

FEATURE

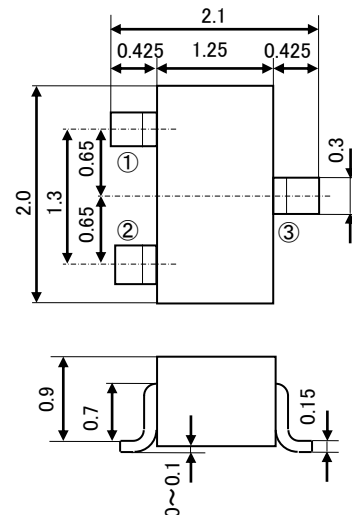
- Small collector to emitter saturation voltage.
 $V_{CE(sat)} = -0.3V \text{ max } (@I_C = -100mA / I_B = -10mA)$
- Excellent linearity of DC forward current gain.
- Super mini package for easy mounting.

APPLICATION

For small type machine low frequency voltage amplify application

OUTLINE DRAWING

Unit : mm



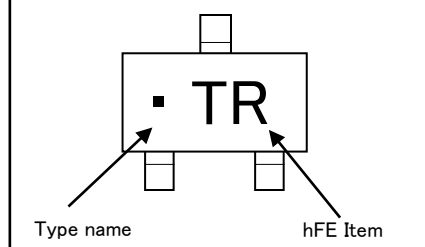
TERMINAL CONNECTER

- ① : BASE JEITA : SC-70
② : EMITTER JEDEC : -
③ : COLLECTOR

MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Ratings	Unit
Collector to Base voltage	V_{CBO}	-60	V
Emitter to Base voltage	V_{EBO}	-6	V
Collector to Emitter voltage	V_{CEO}	-50	V
Collector current	I_C	-150	mA
Collector dissipation	P_C	200	mW
Junction temperature	T_J	+150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

MARKING



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

Parameter	Symbol	Test conditions	Limits			Unit
			Min	Typ	Max	
C to E breakdown voltage	$V_{(BR)CEO}$	$I_C = -100 \mu A, R_{BE} = \infty$	-50	-	-	V
Collector cut off current	I_{CBO}	$V_{CB} = -60V, I_E = 0mA$	-	-	-0.1	μA
Emitter cut off current	I_{EBO}	$V_{EB} = -4V, I_C = 0mA$	-	-	-0.1	μA
DC forward current gain ※	h_{FE}	$V_{CE} = -6V, I_C = -1mA$	120	-	560	-
DC forward current gain	h_{FE}	$V_{CE} = -6V, I_C = -0.1mA$	70	-	-	-
C to E Saturation voltage	$V_{CE(sat)}$	$I_C = -100mA, I_B = -10mA$	-	-	-0.3	V
Gain bandwidth product	f_T	$V_{CE} = -6V, I_E = 10mA$	-	200	-	MHz
Collector output capacitance	C_{ob}	$V_{CB} = -6V, I_E = 0, f = 1MHz$	-	4.0	-	pF
Noise figure	NF	$V_{CE} = -6V, I_E = 0.3mA, f = 100Hz, R_G = 10k \Omega$	-	-	20	dB

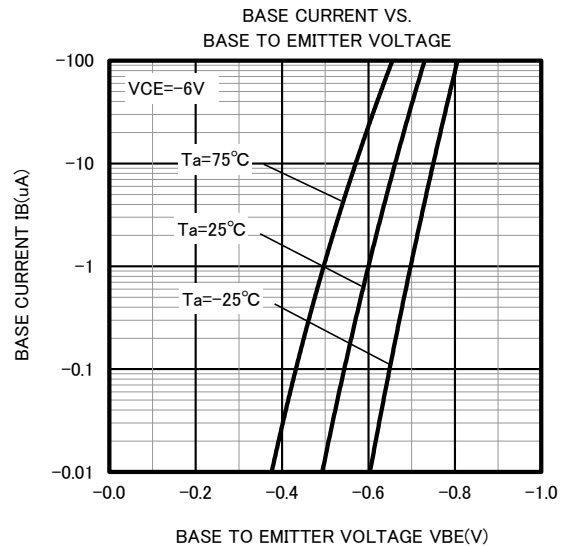
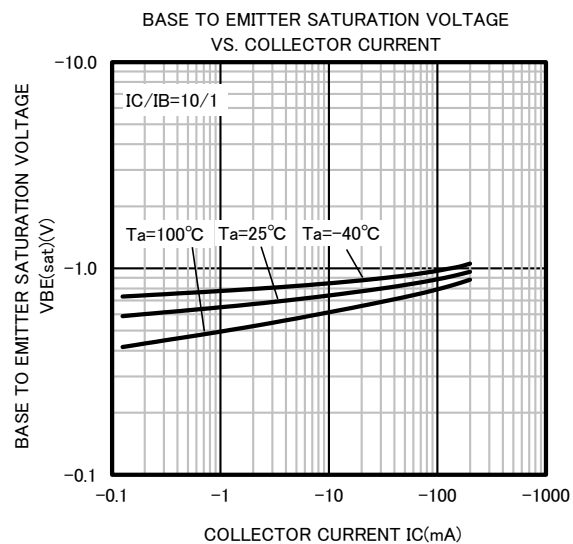
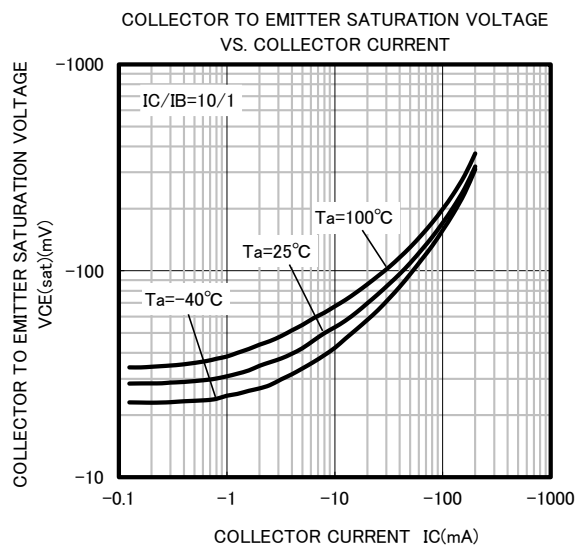
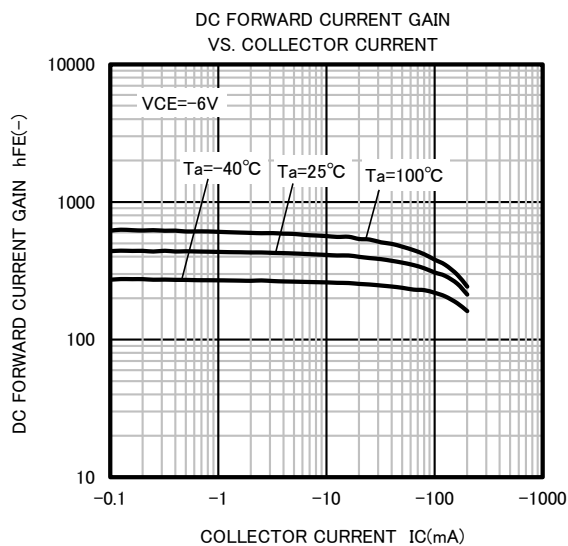
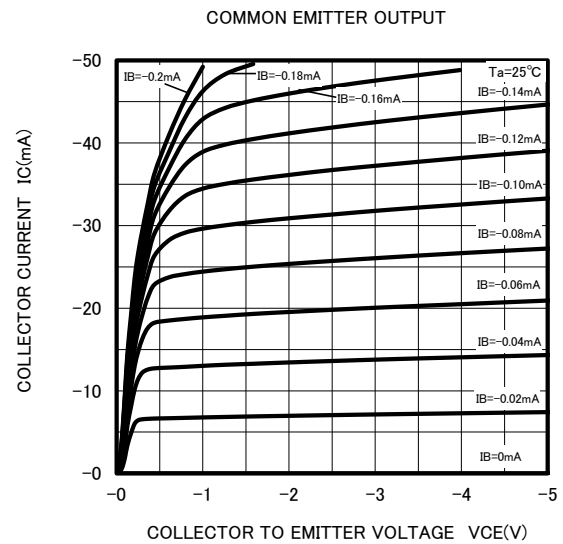
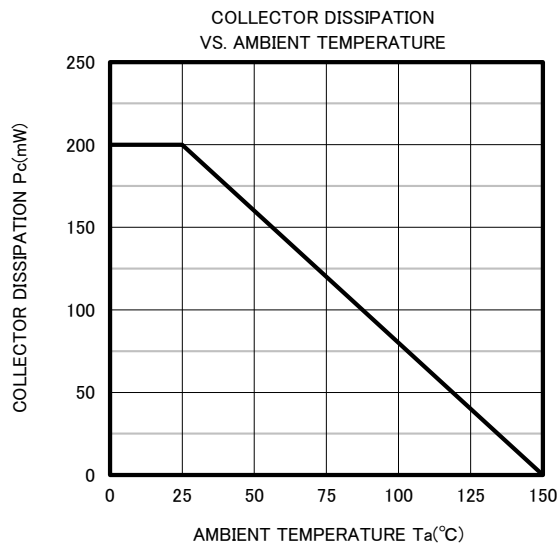
※) It shows hFE classification at right table.

Item	Q	R	S
hFE	120 ~ 270	180 ~ 390	270 ~ 560

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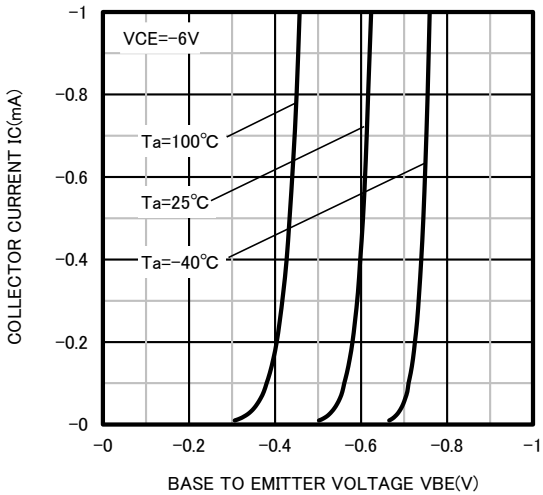
TYPICAL CHARACTERISTICS



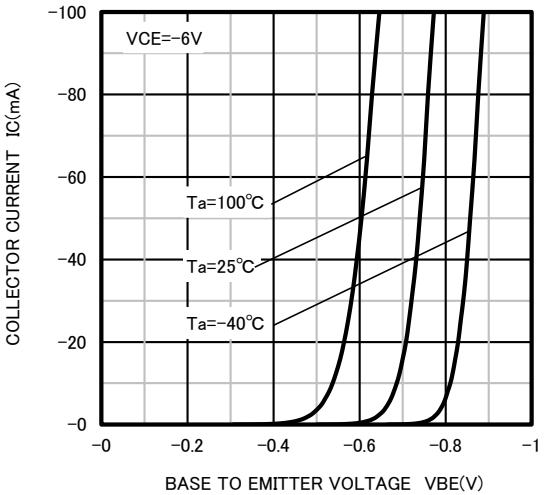
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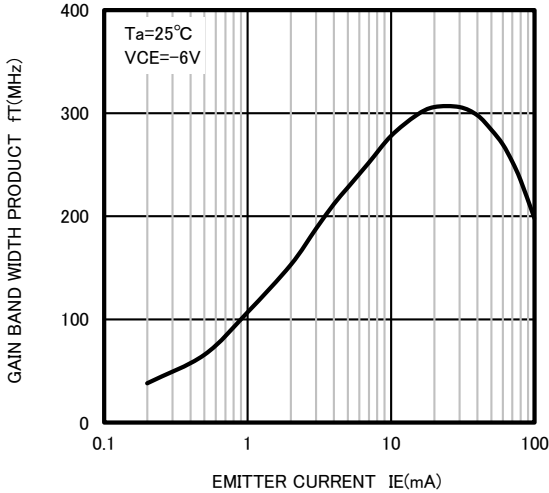
COMMON EMITTER TRANSFER



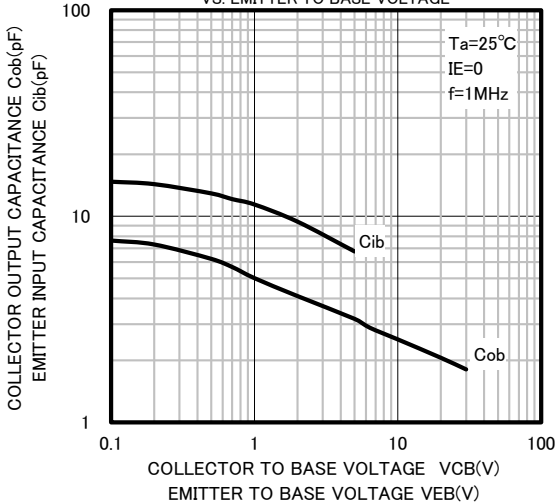
COMMON EMITTER TRANSFER



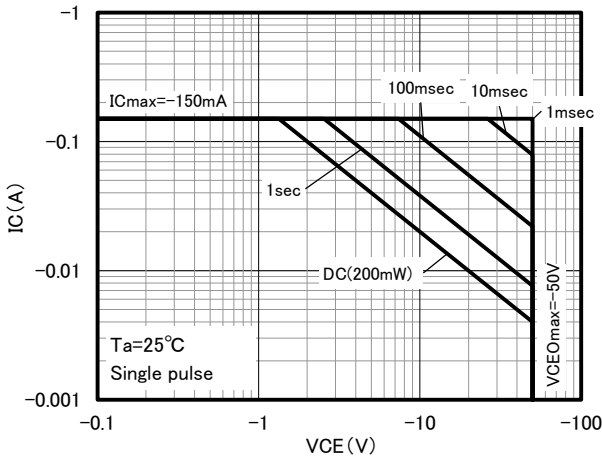
GAIN BAND WIDTH PRODUCT
VS. EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE
VS. COLLECTOR TO BASE VOLTAGE
EMITTER INPUT CAPACITANCE
VS. EMITTER TO BASE VOLTAGE



ASO



Keep safety first in your circuit designs!

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