

ISA1603AM1-T150

FOR LOW FREQUENCY AMPLIFY APPLICATION
SILICON PNP EPITAXIAL TYPE

AEC-Q101 Compliance

DESCRIPTION

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

FEATURE

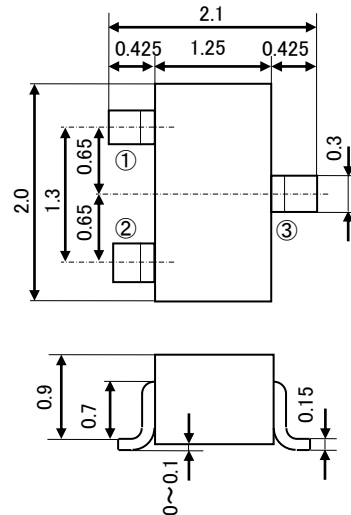
- Small collector to emitter saturation voltage.
 $V_{CE(sat)} = -0.3V \text{ max (@} I_C = -100mA / I_B = -10mA \text{)}$
- Excellent linearity of DC forward current gain.
- Super mini package for easy mounting.

APPLICATION

For small type machine low frequency voltage amplify application

OUTLINE DRAWING

Unit: mm



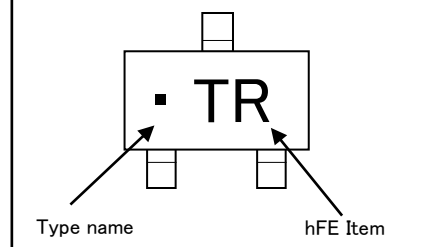
TERMINAL CONNECTER

- 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	$V_{(BR)CEO}$	$I_C = -100 \mu\text{A}$, $R_{BE} = \infty$	-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

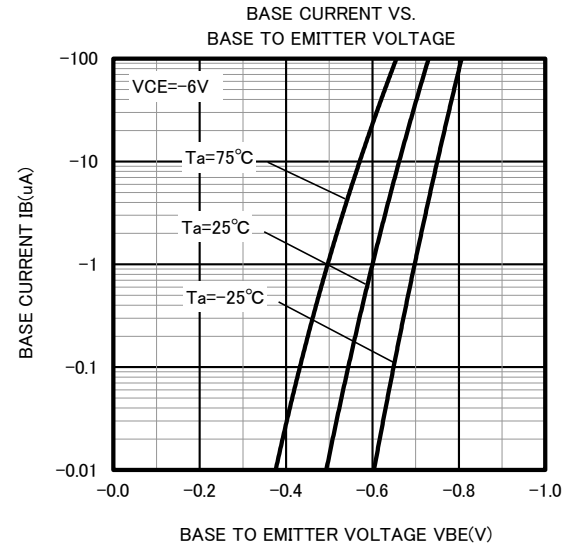
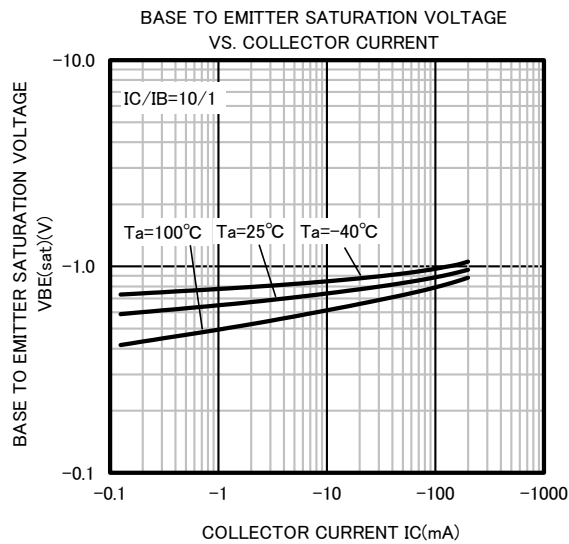
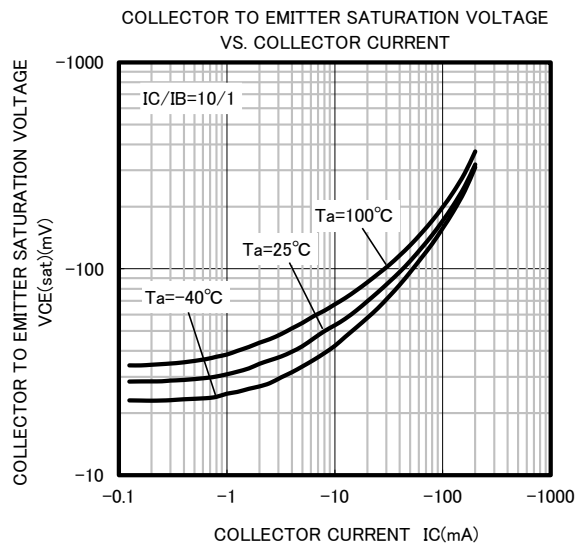
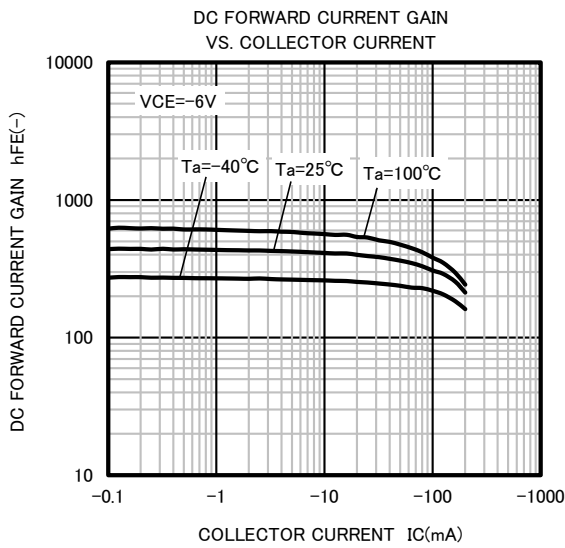
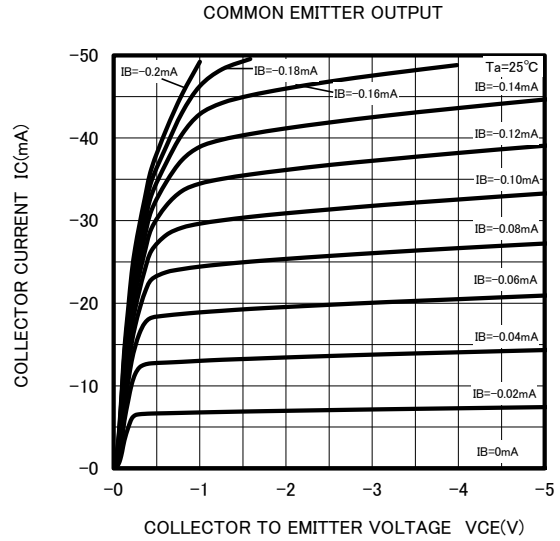
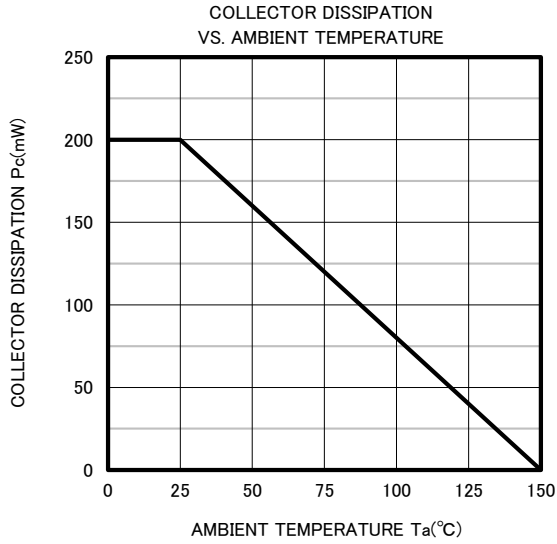
※) It shows hFE classification at right table.

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

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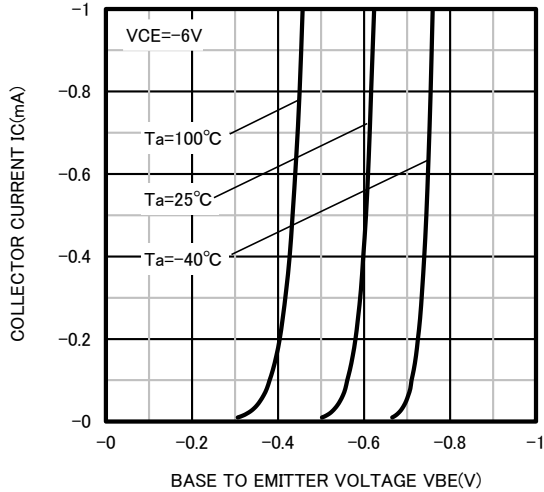
TYPICAL CHARACTERISTICS



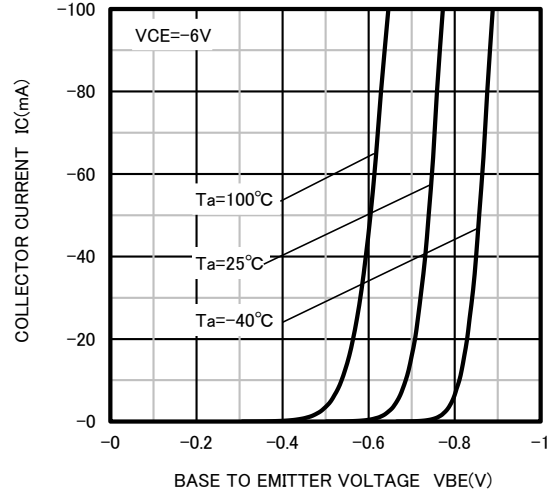
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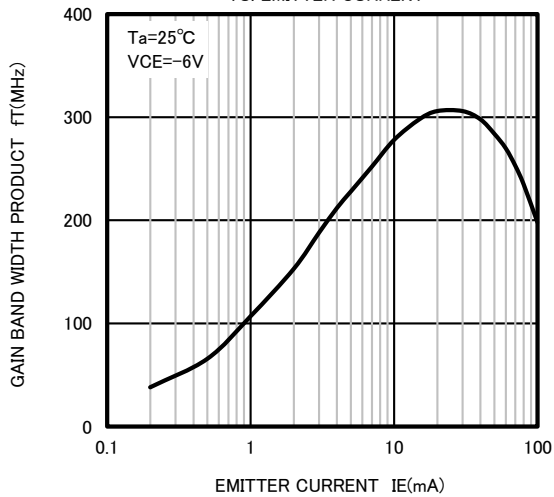
COMMON EMITTER TRANSFER



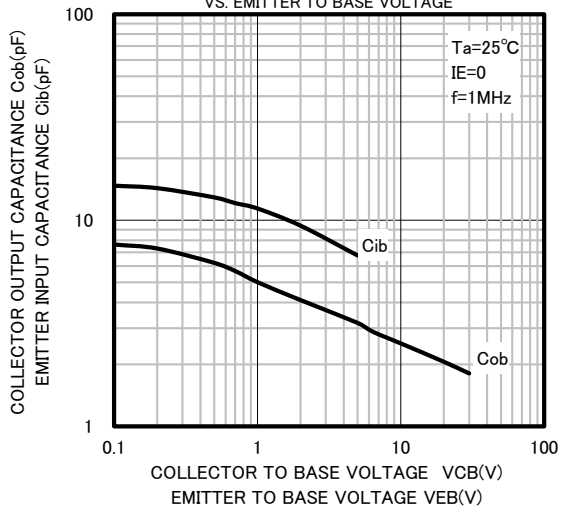
COMMON EMITTER TRANSFER



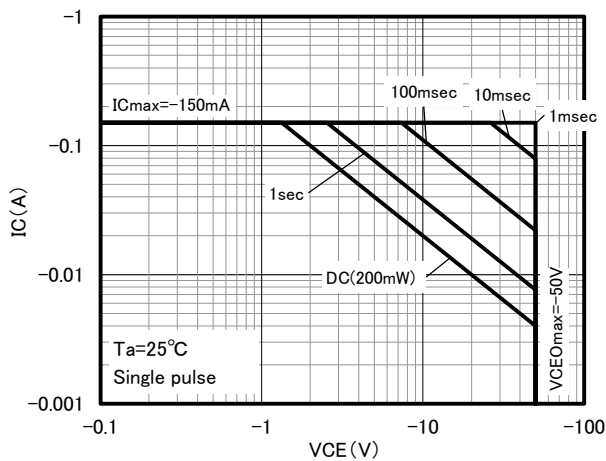
GAIN BAND WIDTH PRODUCT
VS. EMITTER CURRENT



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



ASO



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