

ISA1530AC1 ISA1603AM1

FOR LOW FREQUENCY AMPLIFY APPLICATION
SILICON PNP EPITAXIAL TYPE

DESCRIPTION

ISA1530AC1 ISA1603AM1 is super mini package resin sealed silicon PNP epitaxial type transistor.

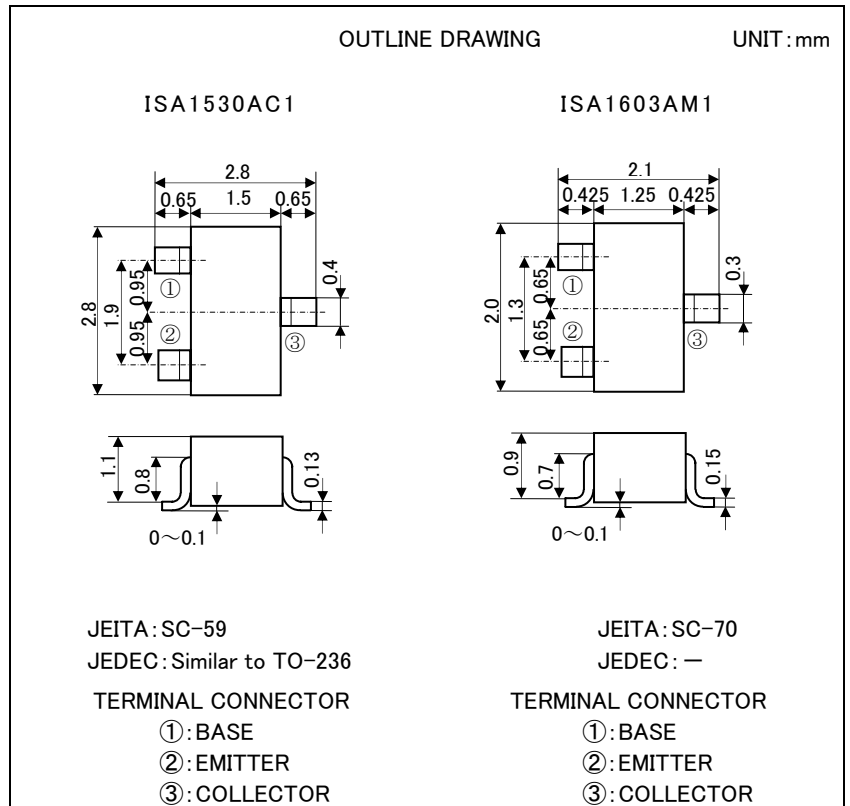
These are designed for low frequency voltage amplify application .

FEATURE

- Excellent linearity of DC forward current gain.
- Small collector to emitter saturation voltage
 $V_{CE(sat)}=-0.3V_{max}$

APPLICATION

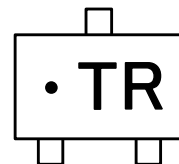
For small type machine low frequency voltage amplify application.



MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Ratings		UNIT
		ISA1530AC1	ISA1603AM1	
V_{CBO}	Collector to Base voltage	-60		V
V_{EBO}	Emitter to Base voltage	-6		V
V_{CEO}	Collector to Emitter voltage	-50		V
I_C	Collector current	-150		mA
P_C	Collector dissipation	200		mW
T_j	Junction temperature	+150		°C
T_{stg}	Storage temperature	-55~+150		°C

MARKING



ELECTRICAL CHARACTERISTICS (Ta=25°C)

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

*:It shows hFE classification in below table.

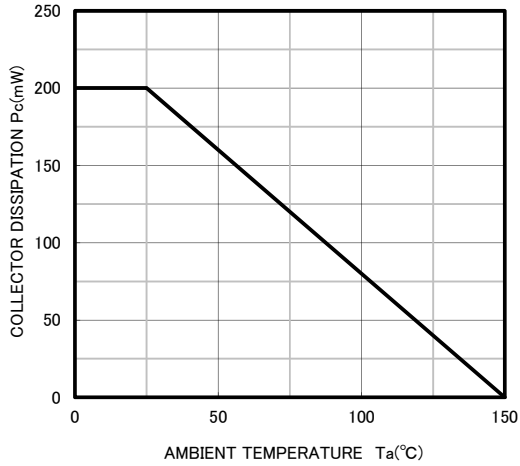
	Q	R	S
hFE	120~270	180~390	270~560

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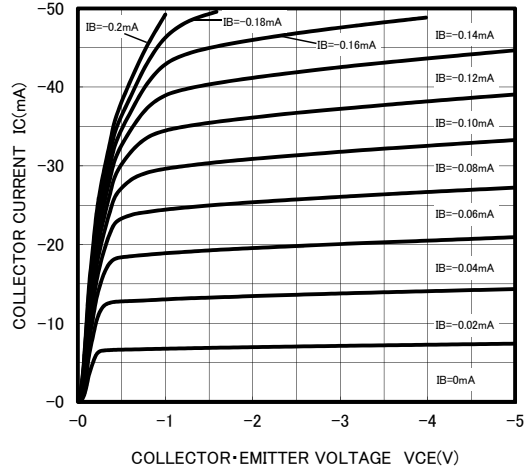
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TYPICAL CHARACTERISTICS

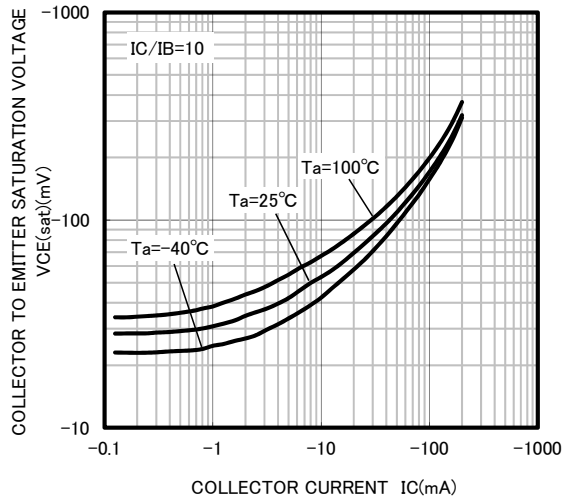
COLLECTOR DISSIPATION
VS AMBIENT TEMPERATURE



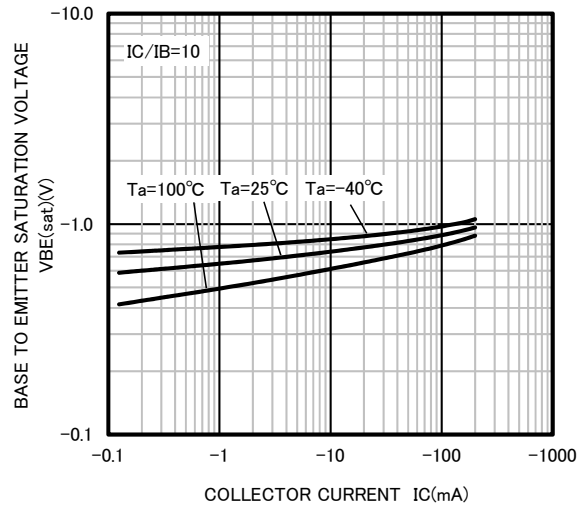
COMMON EMITTER OUTPUT



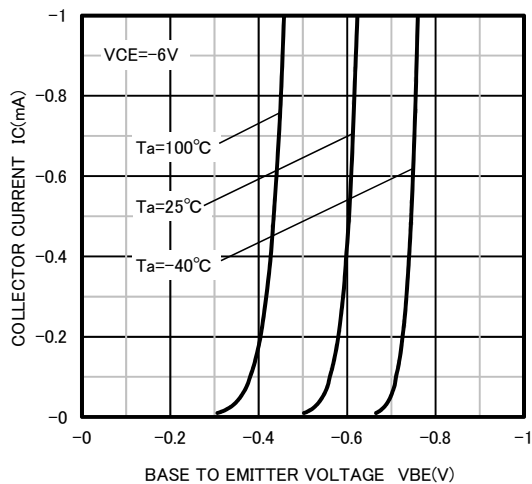
COLLECTOR TO EMITTER SATURATION VOLTAGE
VS COLLECTOR CURRENT



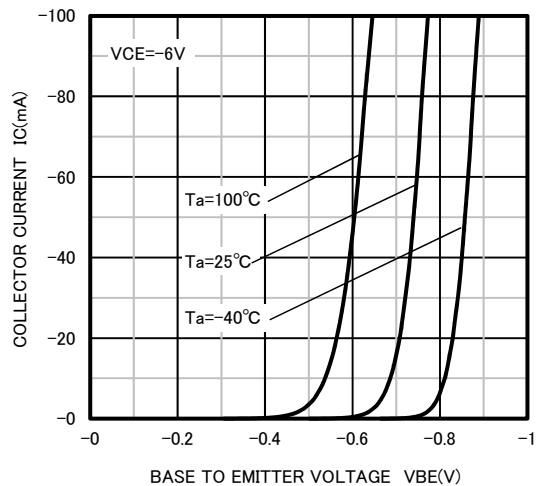
BASE TO EMITTER SATURATION VOLTAGE
VS COLLECTOR CURRENT



COMMON EMITTER TRANSFER



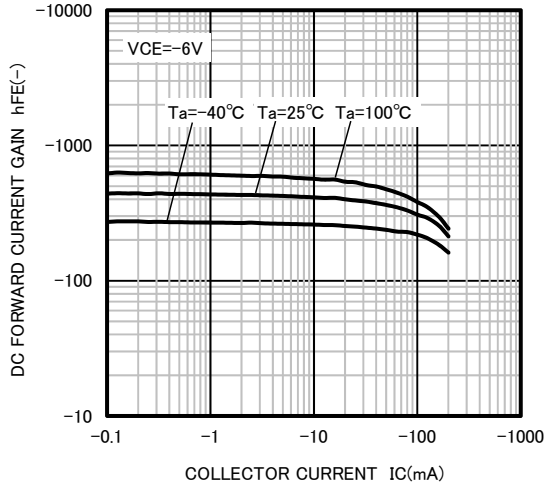
COMMON EMITTER TRANSFER



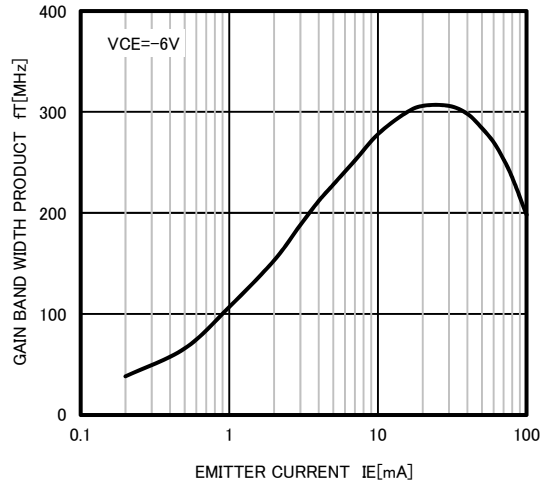
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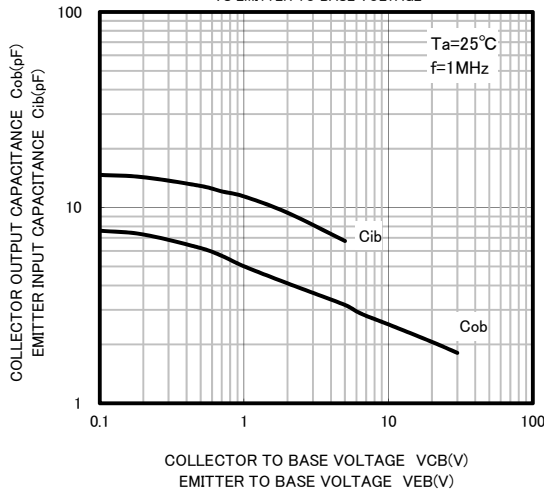
DC FORWARD CURRENT GAIN
VS COLLECTOR CURRENT



GAIN BAND WIDTH PRODUCT
VS. EMITTER CURRENT



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





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