〈SMALL-SIGNAL TRANSISTOR〉

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 VCE(sat)=−0.3Vmax

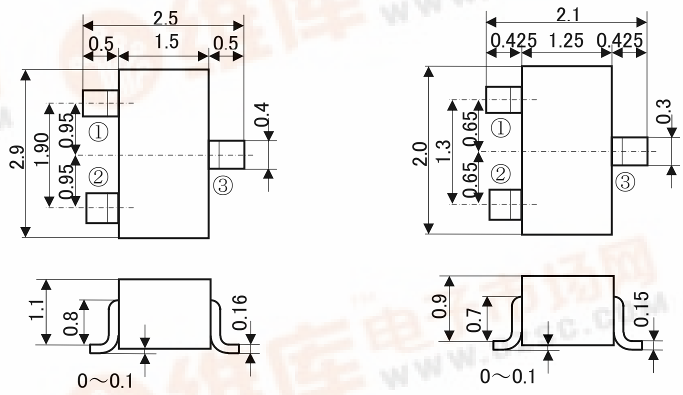
APPLICATION

For small type machine low frequency voltage amplify application.

OUTLINE DRAWING

UNIT : mm

ISA1530AC1 ISA1603AM1



JEITA : SC−59
JEDEC : TO−236 resemblance

TERMINAL CONNECTOR
①: BASE
②: EMITTER
③: COLLECTOR

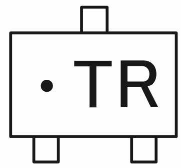
JEITA : SC−70
JEDEC : −

TERMINAL CONNECTOR
①: BASE
②: EMITTER
③: COLLECTOR

MAXIMUM RATINGS (Ta=25℃)

Symbol	Parameter	Ratings ISA1530AC1	Ratings ISA1603AM1	UNIT
V_{CBO}	Collector to Base voltage	−60		V
V_{EBO}	Collector to Emitter voltage	−6		V
V_{CEO}	Emitter to Base voltage	−50		V
I_C	Collector current	−150		mA
P_C	Collector dissipation	200		mW
Tj	Junction temperature	+150		℃
Tstg	Storage temperature	−55～+150		℃

MARKING



ELECTRICAL CHARACTERISTICS (Ta=25℃)

Symbol	Parameter	Test conditions	Limits Min	Limits Ave	Limits Max	UNIT
$V_{(BR)CEO}$	Collector to Emitter Breakdown voltage	I_C=−100μA, R_{BE}=∞	−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, RG=10kΩ			20	dB

*: It shows hFE classification in below table.

	Q	R	S
hFE	120～270	180～390	270～560

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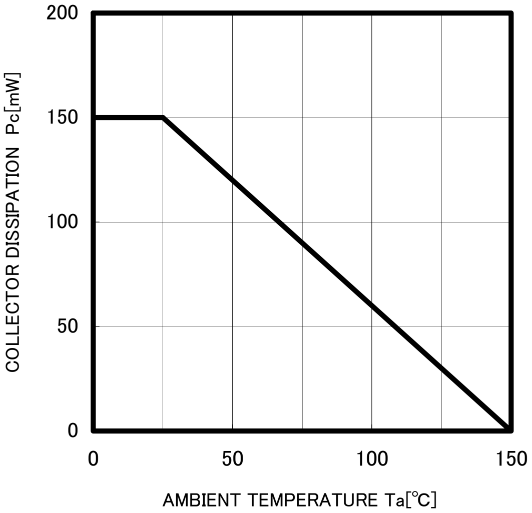
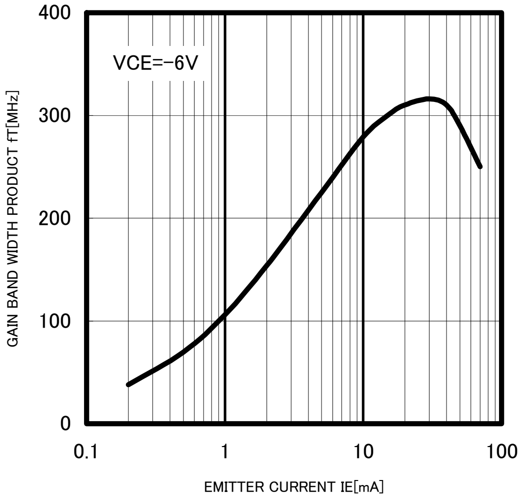
TYPICAL CHARACTERISTICS

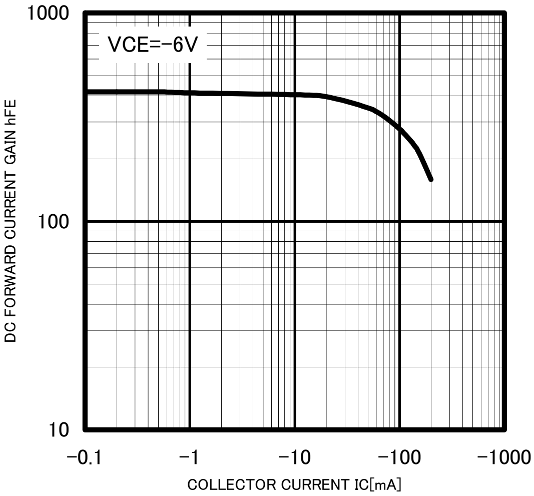
COLLECTOR DISSIPATION VS AMBIENT TEMPERATURE



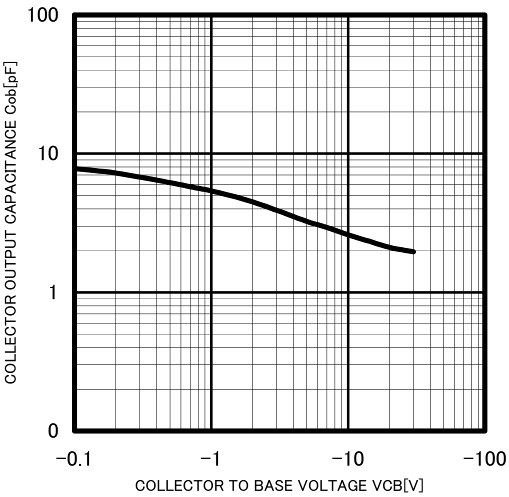
GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT



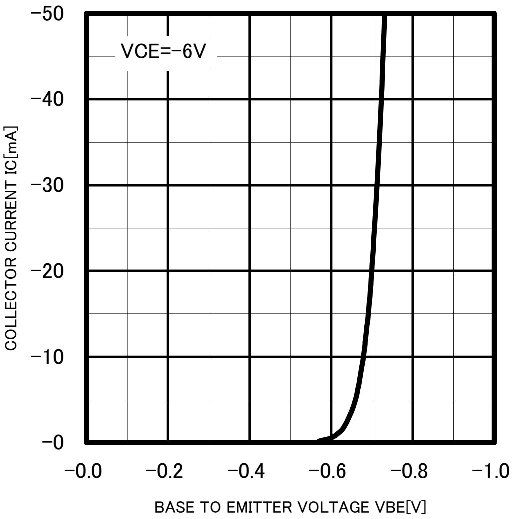
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT



COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE



COMMON EMITTER TRANSFER



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