

<Transistor>

2SA1989

For Low Frequency Amplify Application
Silicon PNP Epitaxial Type Ultra Super Mini

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DESCRIPTION

2SA1989 is a super mini resin sealed silicon PNP epitaxial type transistor. It is designed for low frequency voltage amplify application.

FEATURE

- Small collector to emitter saturation voltage.
 $V_{CE(sat)} = -0.3V \text{ max (@ } I_C = -30mA, I_B = -1.5mA)$
- Excellent linearity of DC forward current gain
- Super mini package for easy mounting

APPLICATION

For hybrid IC, small type machine low frequency voltage amplify application.

MAXIMUM RATINGS (Ta=25°C)

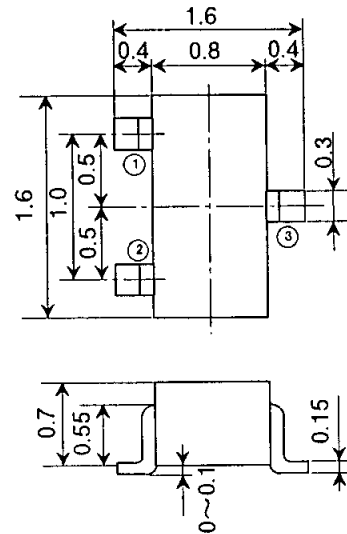
SYMBOL	PARAMETER	RATINGS	UNIT
V _{CB0}	Collector to Base voltage	-50	V
V _{EB0}	Emitter to Base voltage	-6	V
V _{CE0}	Collector to Emitter voltage	-50	V
I _C	Collector current	-100	mA
P _C	Collector dissipation (Ta=25°C)	125	mW
T _J	Junction temperature	+125	°C
T _{stg}	Storage temperature	-55 to +125	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
V _{(BR)CEO}	C to E break down voltage	I _C = -100 μA, R _{BE} = ∞	-50			V
I _{CB0}	Collector cut off current	V _{CB} = -50V, I _E = 0			-0.5	μA
I _{EB0}	Emitter cut off current	V _{EB} = -4V, I _C = 0			-0.5	μA
h _{FE} *	DC forward current gain	V _{CE} = -6V, I _C = -1mA	120		820	—
h _{FE}	DC forward current gain	V _{CE} = -6V, I _C = -0.1mA	70			—
V _{CE(sat)}	C to E saturation voltage	I _C = -30mA, I _B = -1.5mA			-0.3	V
f _r	Gain band width product	V _{CE} = -6V, I _E = 10mA		200		MHz
C _{ob}	Collector output capacitance	V _{CB} = -6V, I _E = 0, f = 1MHz		2.5		pF

OUTLINE DRAWING

UNIT:mm



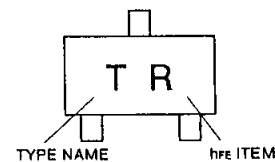
Terminal Connector

- ① : Base
 - ② : Emitter
 - ③ : Collector
- EIAJ : —
JEDEC : —

Note)

The dimension without tolerance represent central value.

MARKING



ITEM	Q	R	S	T
h _{FE}	120~270	180~390	270~560	390~820

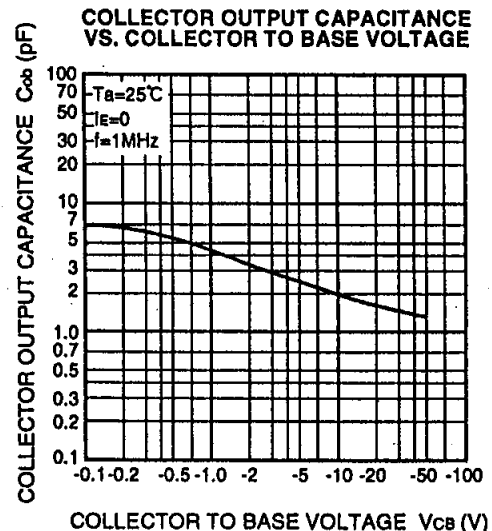
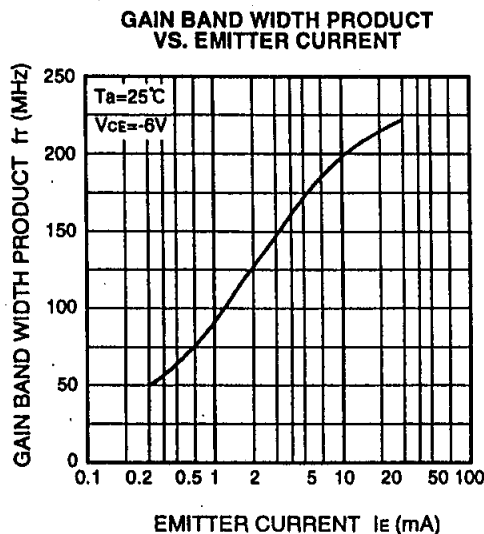
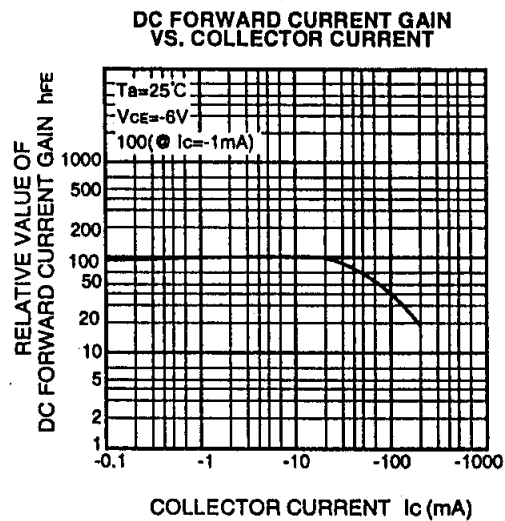
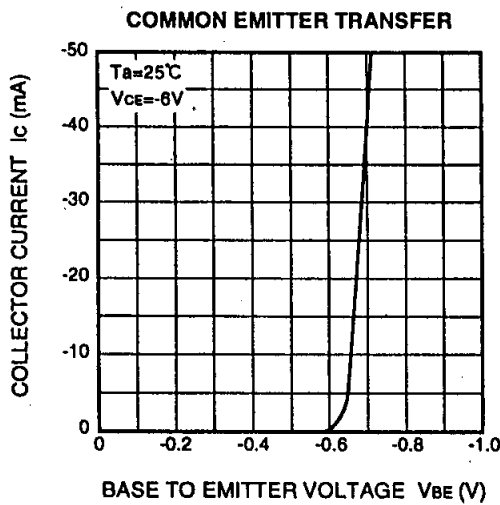
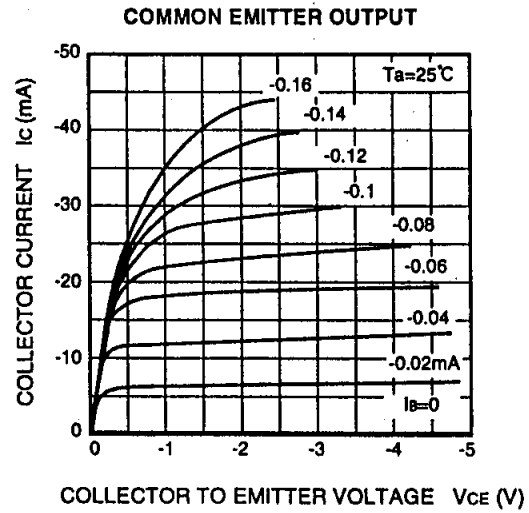
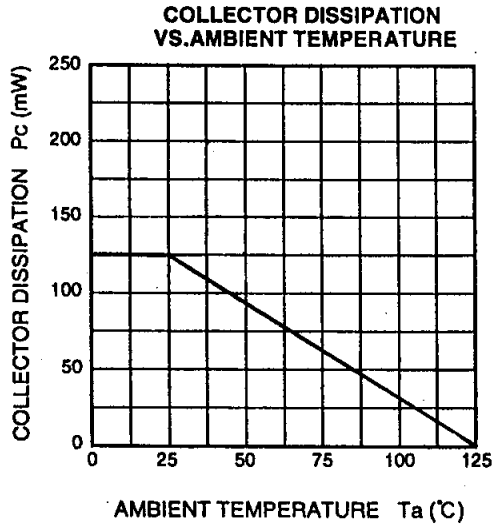
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TYPICAL CHARACTERISTICS



 **ISAHAYA ELECTRONICS CORPORATION**

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