

〈Transistor〉

2SC3928A

For Low Frequency Amplify Application
Silicon NPN Epitaxial Type (Mini type)

DESCRIPTION

2SC3928A is a super mini package resin sealed silicon NPN epitaxial type transistor. It is designed for low frequency voltage amplify application.

FEATURE

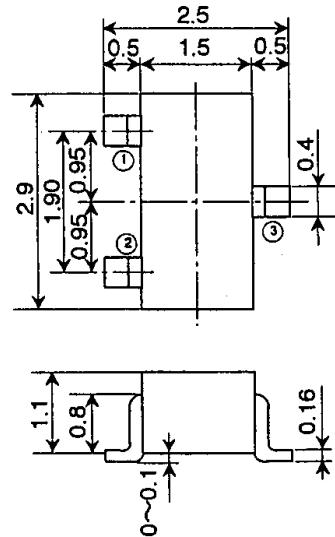
- Small collector to emitter saturation voltage
 $V_{CE(sat)}=0.3V$ max
- Excellent lineality of DC forward current gain
- Supper mini package for easy mounting

APPLICATION

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

OUTLINE DRAWING

Unit:mm



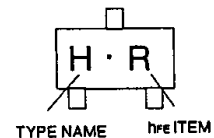
TERMINAL CONNECTOR

- ① : BASE
② : EMITTER
③ : COLLECTOR
- EIAJ : SC-59
JEDEC : TO-236 resemblance

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	200	mA
P _C	Collector dissipation(Ta=25°C)	200	mW
T _J	Junction temperature	+125	°C
T _{stg}	Storage temprature	-55to+125	°C

MARKING



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 =100μA, R _{BE} =∞	50			V
I _{CB0}	Collector cut off current	V _{CB} =50V, I _E =0			0.1	μA
I _{EB0}	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		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 =100mA, I _B =10mA			0.3	V
f _T	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
NF	Noise figure	V _{CE} =6V, I _E =-0.1mA, f=1kHz, R _g =2kΩ			15	dB

*: It shows h_{FE} claccification in right table.

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

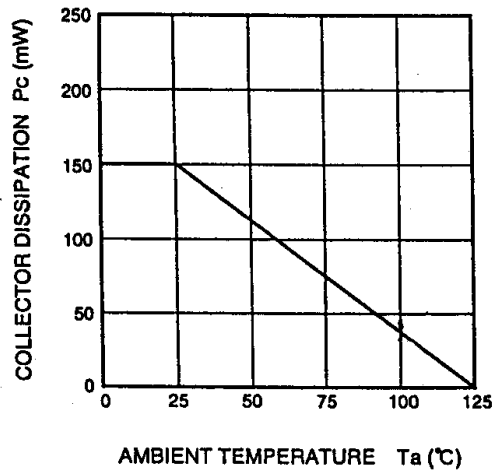
(Transistor)

2SC3928A

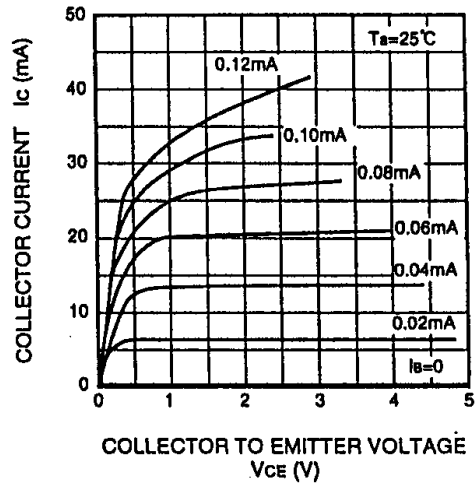
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TYPICAL CHARACTERISTICS

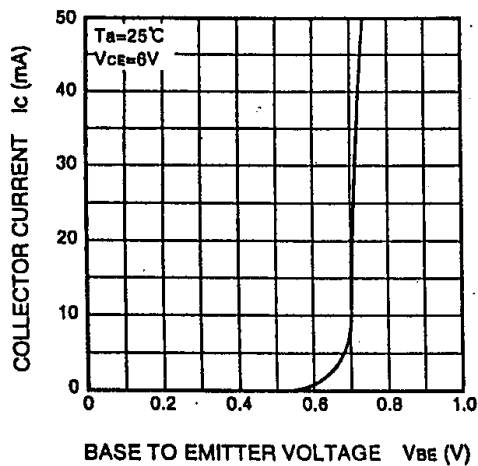
COLLECTOR DISSIPATION
VS. AMBIENT TEMPERATURE



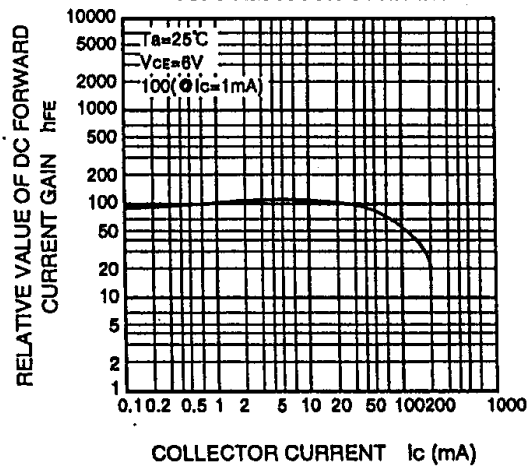
COMMON EMITTER OUTPUT



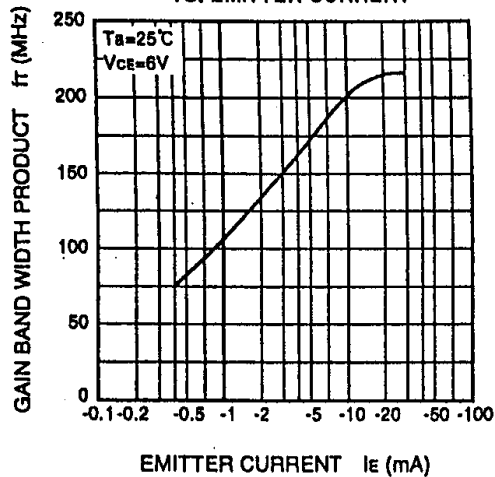
COMMON EMITTER TRANSFER



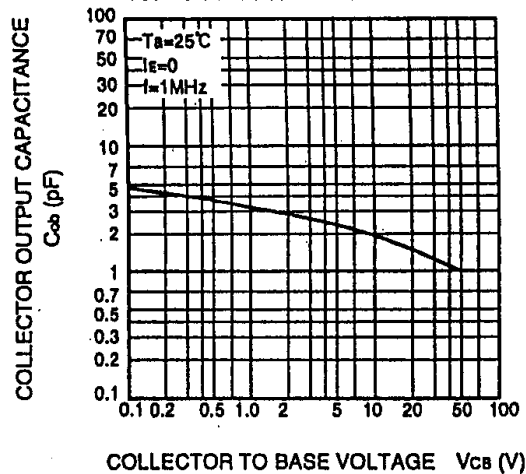
DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT



GAIN BAND WIDTH PRODUCT
VS. EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE
VS. COLLECTOR TO BASE VOLTAGE





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