〈Transistor〉

2SC5398

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

DESCRIPTION

2SC5398 is a silicon NPN epitaxial type transistor. It is designed for low frequency voltage amplify application.

FEATURE

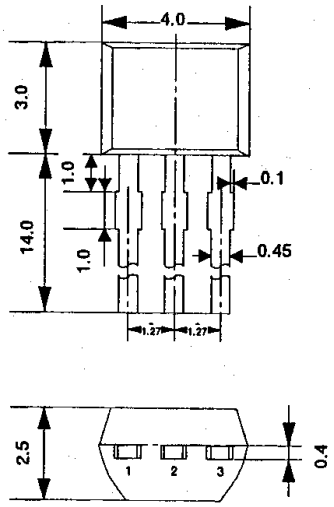
- Small collector to emitter saturation voltage.
  $V_{CE(sat)}$=0.3V max (@ I_C=30mA, I_B=1.5mA)
- Excellent linearity of DC forward current gain
- Small package for easy mounting

APPLICATION

For small machine low frequency voltage amplify application.

OUTLINE DRAWING

UNIT:mm



TERMINAL CONNECTOR

① : EMITTER
② : COLLECTOR
③ : BASE

EIAJ : —
JEDEC :—

MAXIMUM RATINGS (Ta=25℃)

SYMBOL	PARAMETER	RATINGS	UNIT
V_{CBO}	Collector to Base voltage	50	V
V_{EBO}	Emitter to Base voltage	6	V
V_{CEO}	Collector to Emitter voltage	50	V
I_C	Collector current	100	mA
P_C	Collector dissipation (Ta=25℃)	450	mW
T_j	Junction temperature	+125	℃
T_{stg}	Storage temperature	-55to+125	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

SYMBOL	PARAMETER	TESTCONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
$V_{(BR)CEO}$	C to E break down voltage	I_C=100 μA, R_{BE}=∞	50			V
I_{CBO}	Collector cut off current	V_{CB}=50V, I_E=0			0.5	μA
I_{EBO}	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_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		2.0		pF

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

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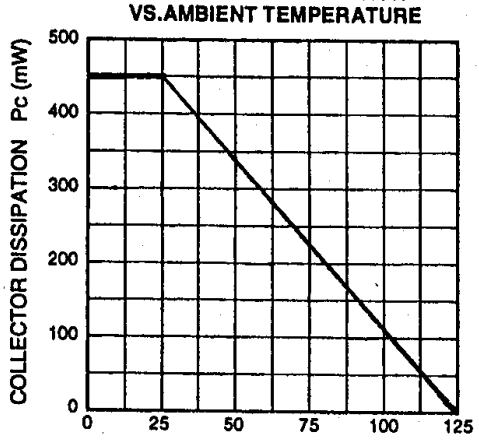
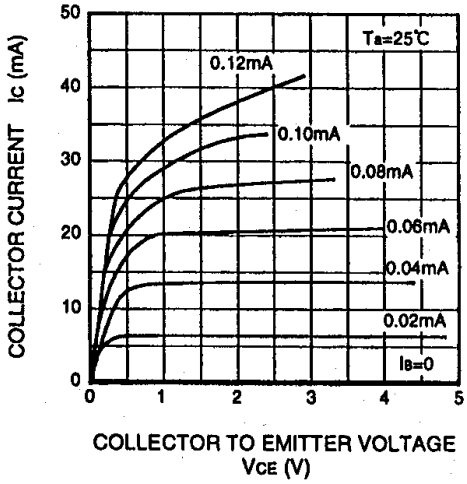
TYPICAL CHARACTERISTICS

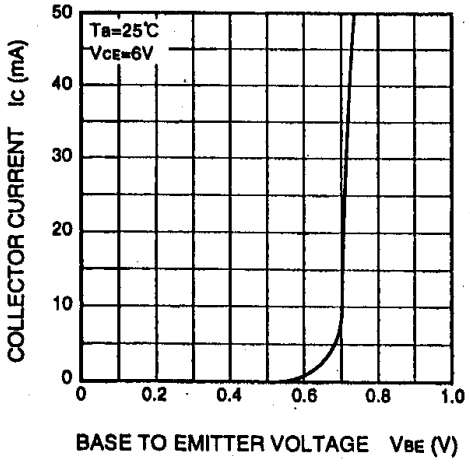
COLLECTOR DISSIPATION VS.AMBIENT TEMPERATURE



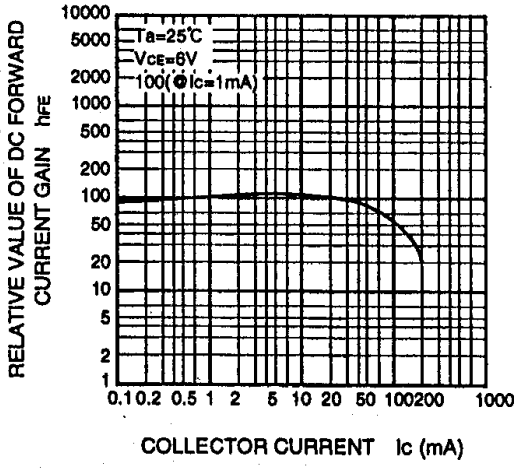
COMMON EMITTER OUTPUT



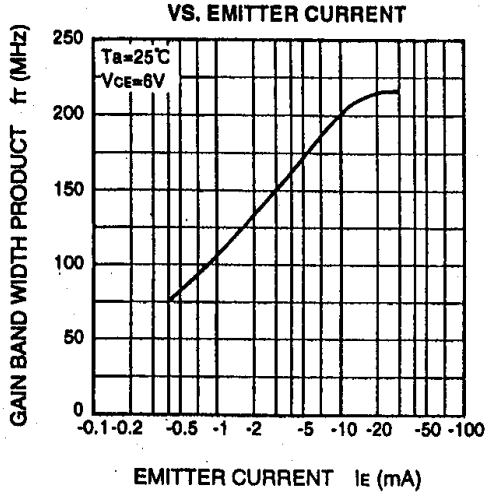
COMMON EMITTER TRANSFER



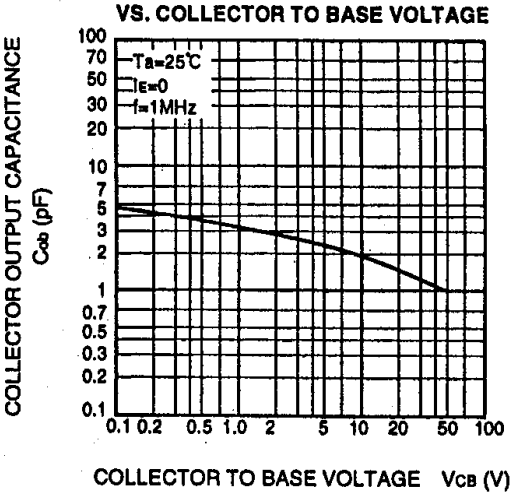
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT



GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE



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http://www.idc-com.co.jp
6-41, TSUKUBA, ISAHAYA, NAGASAKI, 854-0065, JAPAN

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