

### DESCRIPTION

2SC5395 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 (@  $I_C=100mA, I_B=10mA$ )
- Excellent linearity of DC forward current gain
- Small package for easy mounting

### APPLICATION

For small machine low frequency voltage amplify application.

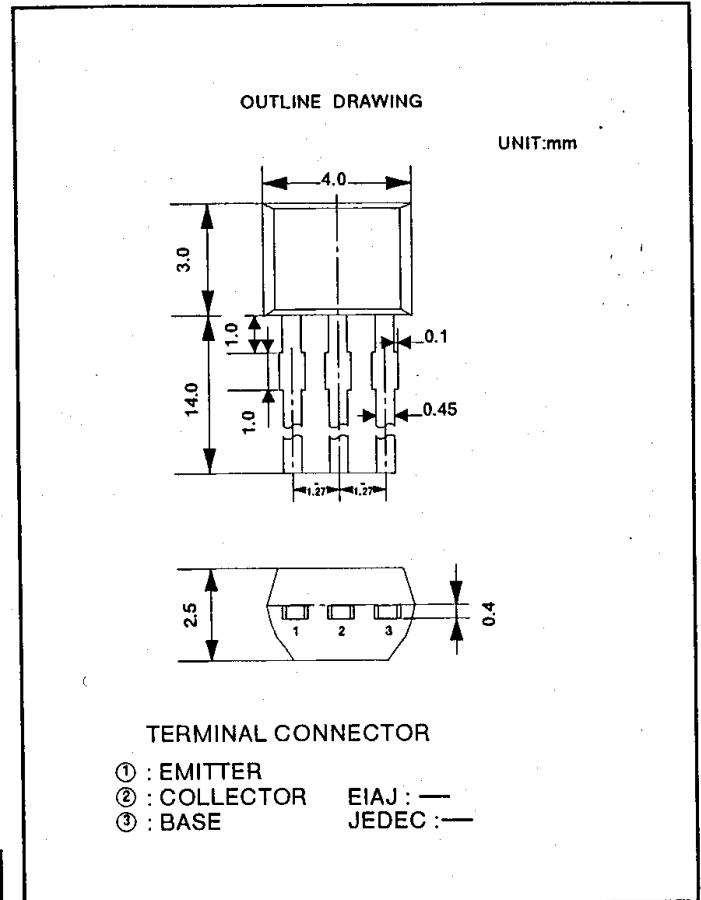
### MAXIMUM RATINGS (Ta=25°C)

SYMBOL	PARAMETER	RATINGS	UNIT
V <sub>CB0</sub>	Collector to Base voltage	50	V
V <sub>EB0</sub>	Emitter to Base voltage	6	V
V <sub>CE0</sub>	Collector to Emitter voltage	50	V
I <sub>C</sub>	Collector current	200	mA
P <sub>C</sub>	Collector dissipation (Ta=25°C)	450	mW
T <sub>J</sub>	Junction temperature	+125	°C
T <sub>stg</sub>	Storage temperature	-55to+125	°C

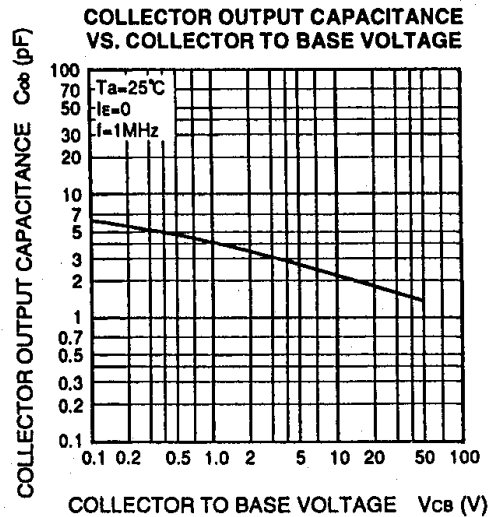
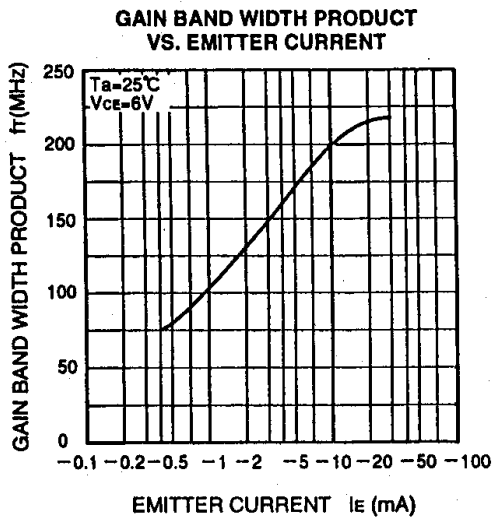
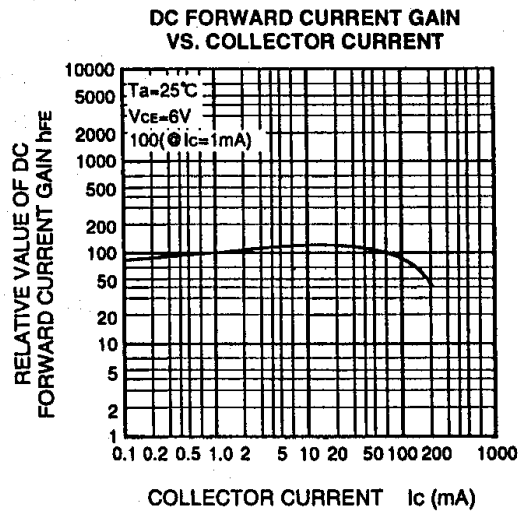
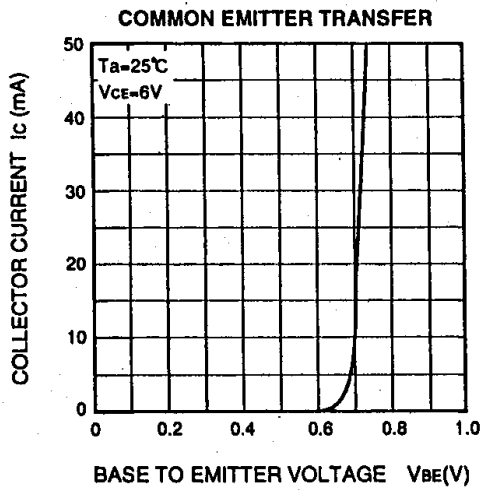
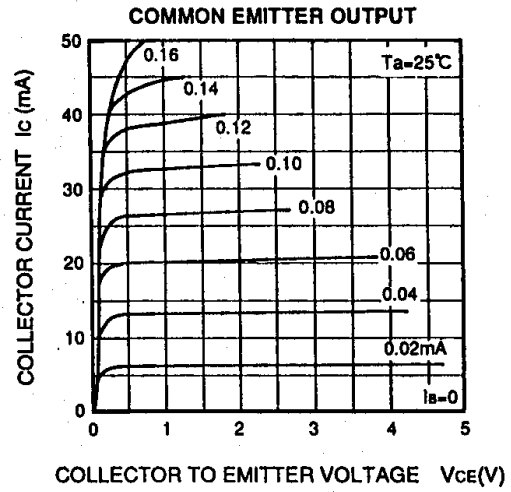
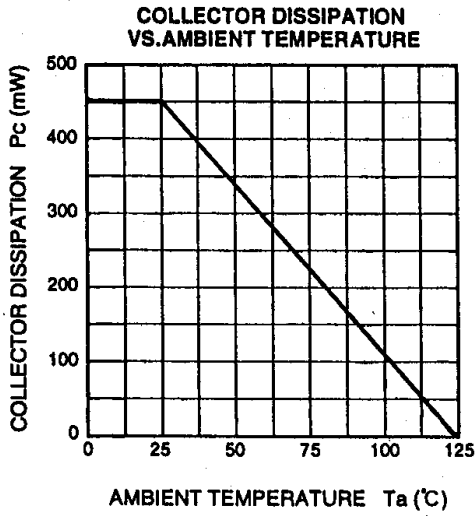
### ELECTRICAL CHARACTERISTICS (Ta=25°C)

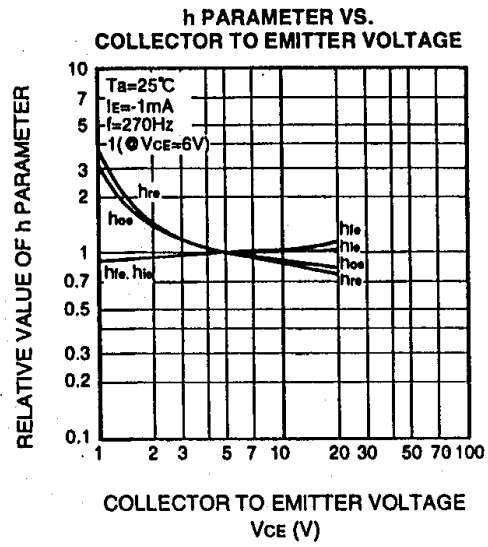
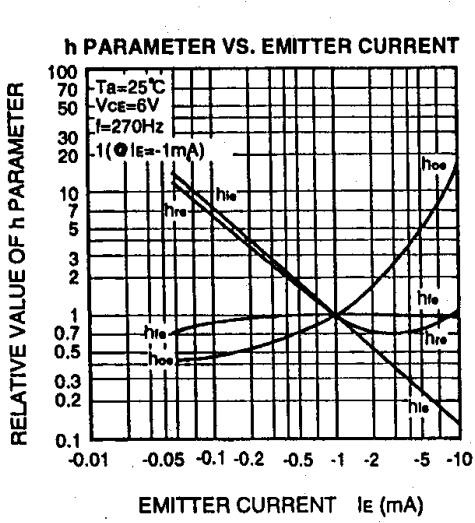
SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
V <sub>(BR)CEO</sub>	C to E break down voltage	I <sub>C</sub> =100 μA, R <sub>BE</sub> =∞	50			V
I <sub>CB0</sub>	Collector cut off current	V <sub>CB</sub> =50V, I <sub>E</sub> =0			0.1	μA
I <sub>EB0</sub>	Emitter cut off current	V <sub>EB</sub> =6V, I <sub>C</sub> =0			0.1	μA
h <sub>FE</sub> *	DC forward current gain	V <sub>CE</sub> =6V, I <sub>C</sub> =1mA	150		800	—
h <sub>FE</sub>	DC forward current gain	V <sub>CE</sub> =6V, I <sub>C</sub> =0.1mA	50			—
V <sub>CE(sat)</sub>	C to E saturation voltage	I <sub>C</sub> =100mA, I <sub>B</sub> =10mA			0.3	V
f <sub>T</sub>	Gain band width product	V <sub>CE</sub> =6V, I <sub>E</sub> =-10mA		200		MHz
C <sub>ob</sub>	Collector output capacitance	V <sub>CB</sub> =6V, I <sub>E</sub> =0, f=1MHz		2.5		pF
NF	Noise figure	V <sub>CE</sub> =6V, I <sub>E</sub> =-0.1mA, f=1kHz, R <sub>G</sub> =2kΩ			15	dB

ITEM	E	F	G
h <sub>FE</sub>	150~300	250~500	400~800



## TYPICAL CHARACTERISTICS





**COMMON EMITTER h PARAMETER (TYPICAL VALUE)**

Symbol	Parameter	Test conditions	Limits	Unit
$h_{ie}$	Closed loop small signal input impedance	$T_a=25^\circ\text{C}$ $V_{CE}=6\text{V}$ $I_E=1\text{mA}$ $f=270\text{Hz}$	8.5	k $\Omega$
$h_{re}$	Open loop small signal reverse voltage amplification factor		0.1	$\times 10^{-3}$
$h_{fe}$	Closed loop small signal forward current amplification factor		300	—
$h_{oe}$	Open loop small signal output admittance		5.5	$\mu\text{S}$



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