

# 2SC5383

FOR LOW FREQUENCY AMPLIFY APPLICATION  
SILICON NPN EPITAXIAL TYPE(Ultra super mini type)

## DESCRIPTION

2SC5383 is a ultra super mini package resin sealed silicon NPN epitaxial transistor, It is designed for low frequency voltage application.

## FEATURE

- Small collector to emitter saturation voltage.  
VCE(sat)=0.3V max(@Ic=100mA,IB=10mA)
- Excellent linearity of DC forward gain.
- Ultra super mini package for easy mounting

## APPLICATION

For Hybrid IC,small type machine low frequency voltage Amplify application.

## MAXIMUM RATINGS (Ta=25°C)

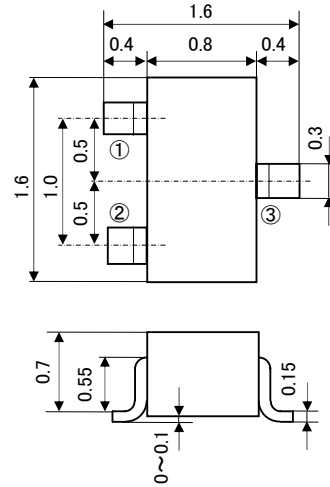
Symbol	Parameter	Ratings	Unit
V <sub>CB0</sub>	Collector to Base voltage	50	V
V <sub>CE0</sub>	Collector to Emitter voltage	50	V
V <sub>EB0</sub>	Emitter to Base voltage	6	V
I <sub>o</sub>	Collector current	200	mA
P <sub>c</sub>	Collector dissipation	150	mW
T <sub>j</sub>	Junction temperature	+150	°C
T <sub>stg</sub>	Storage temperature	-55~+150	°C

## ELECTRICAL CHARACTERISTICS (Ta=25°C)

Parameter	Symbol	Test conditions	Limits			Unit
			Min	Typ	Max	
C to E break down voltage	V(BR) <sub>CEO</sub>	I <sub>C</sub> =100 μA, R <sub>BE</sub> =∞	50	-	-	V
Collector cut off current	ICBO	V <sub>CB</sub> =50V, I <sub>E</sub> =0mA	-	-	0.1	μA
Emitter cut off current	IEBO	V <sub>EB</sub> =6V, I <sub>C</sub> =0mA	-	-	0.1	μA
DC forward current gain	hFE	V <sub>CE</sub> =6V, I <sub>C</sub> =1mA ※	150	-	800	
DC forward current gain	hFE	V <sub>CE</sub> =6V, I <sub>C</sub> =0.1mA	90	-	-	
C to E Saturation Vlotage	VCE(sat)	I <sub>C</sub> =100mA, I <sub>B</sub> =10mA	-	-	0.3	V
Gain bandwidth product	fT	V <sub>CE</sub> =6V, I <sub>E</sub> =-10mA	-	200	-	MHz
Collector output capacitance	Cob	V <sub>CB</sub> =6V, I <sub>E</sub> =0,f=1MHz	-	2.5	-	pF
Noise figure	NF	V <sub>CE</sub> =6V, I <sub>E</sub> =-0.1mA,f=1kHz,RG=2kΩ	-	-	15	dB

## OUTLINE DRAWING

Unit: mm



JEITA: SC-75A

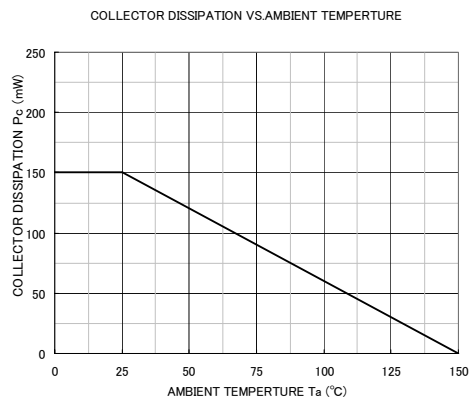
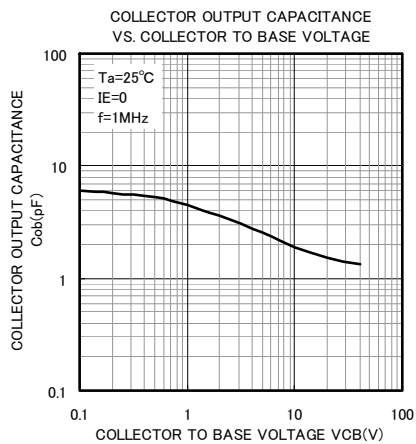
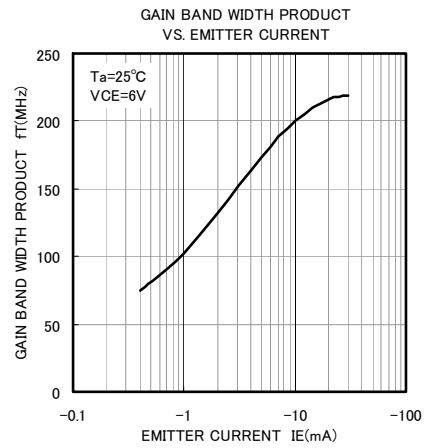
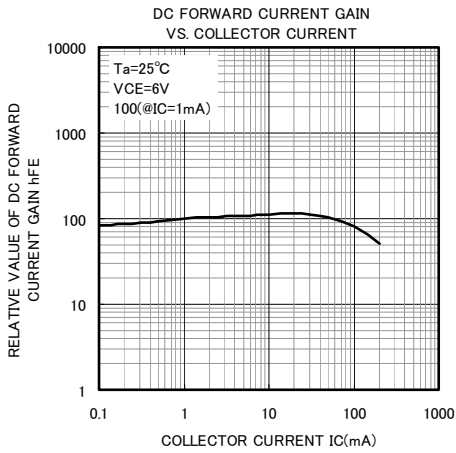
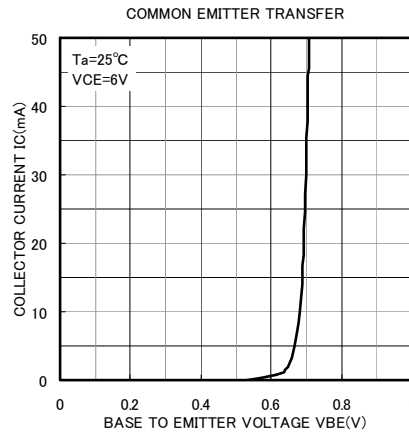
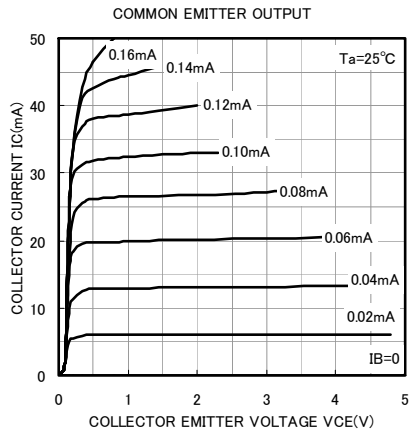
JEDEC: -

## TERMINAL CONNECTER

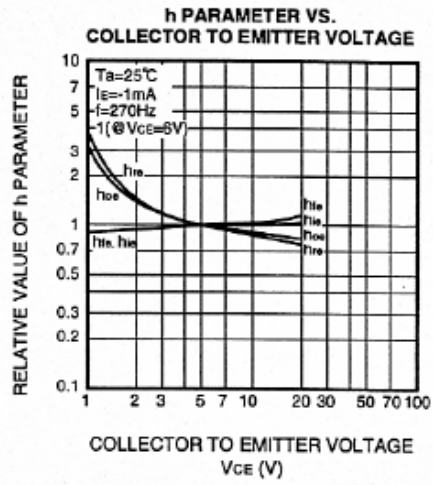
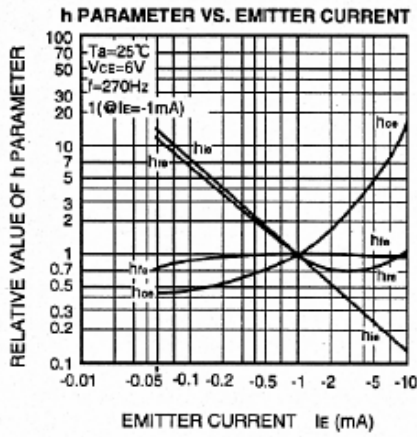
- ①: BASE
- ②: EMITTER
- ③: COLLECTOR

※) It shows hFE classification in below table.

Item	E	F	G
hFE Item	150~300	250~500	400~800



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**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	$\text{k}\Omega$
$h_{re}$	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	$\mu\text{S}$