

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

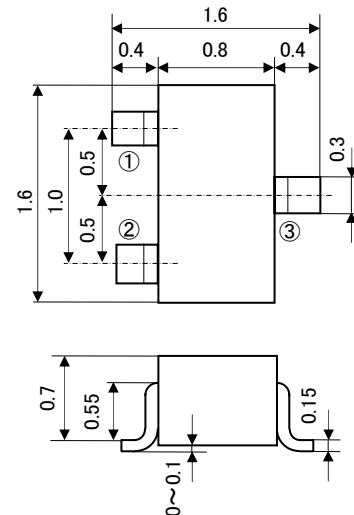
- Small collector to emitter saturation voltage.
 $V_{CE(sat)}=0.3V$ max (@ $I_C=100mA, I_B=10mA$)
- Excellent linearity of DC forward gain.
- Ultra super mini package for easy mounting

APPLICATION

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

OUTLINE DRAWING

Unit: mm



JEITA: SC-75A

JEDEC: -

TERMINAL CONNECTER

- ①: BASE
- ②: EMITTER
- ③: COLLECTOR

MAXIMUM RATINGS ($T_a=25^{\circ}C$)

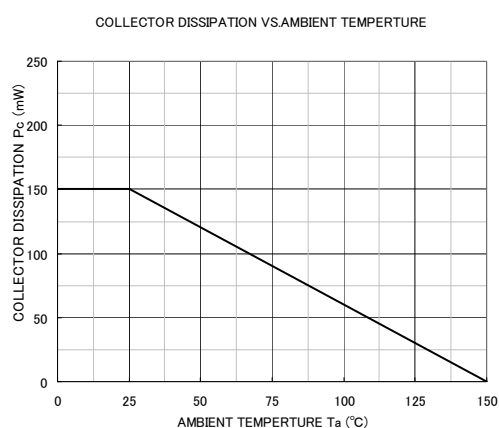
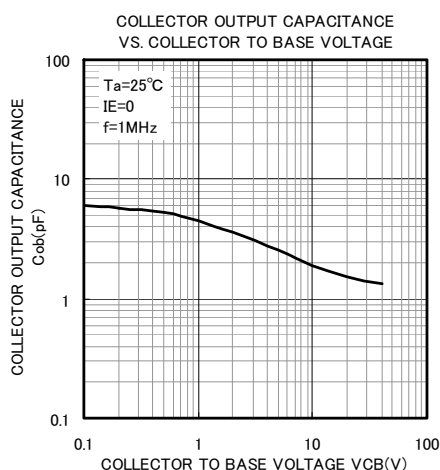
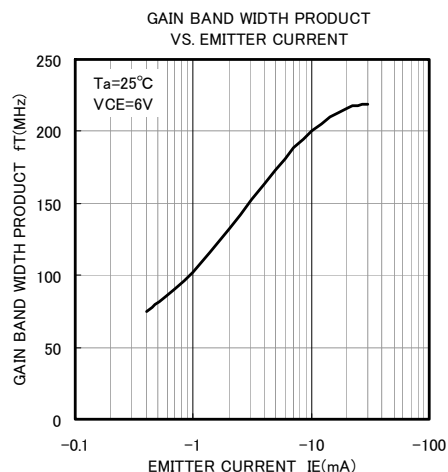
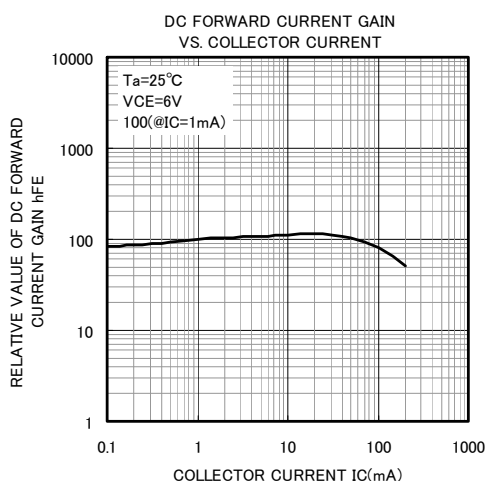
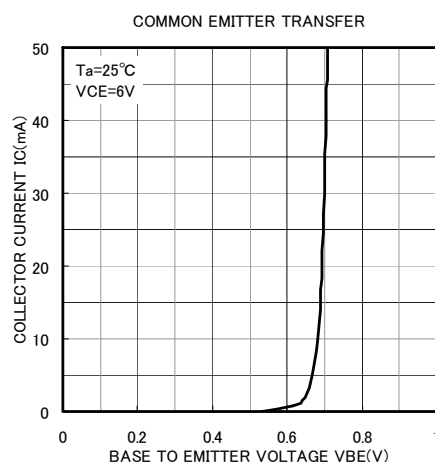
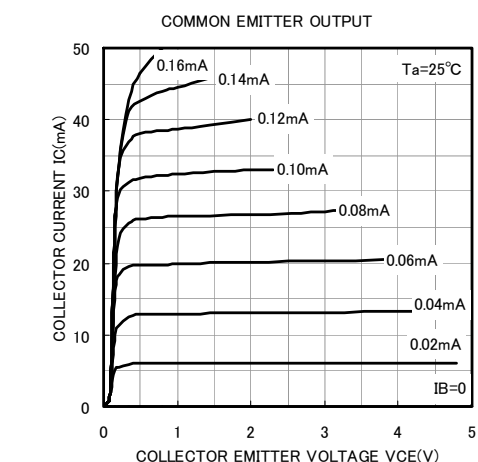
Symbol	Parameter	Ratings	Unit
V_{CBO}	Collector to Base voltage	50	V
V_{CEO}	Collector to Emitter voltage	50	V
V_{EBO}	Emitter to Base voltage	6	V
I_O	Collector current	200	mA
P_c	Collector dissipation	150	mW
T_j	Junction temperature	+150	$^{\circ}C$
T_{stg}	Storage temperature	-55 ~ +150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}C$)

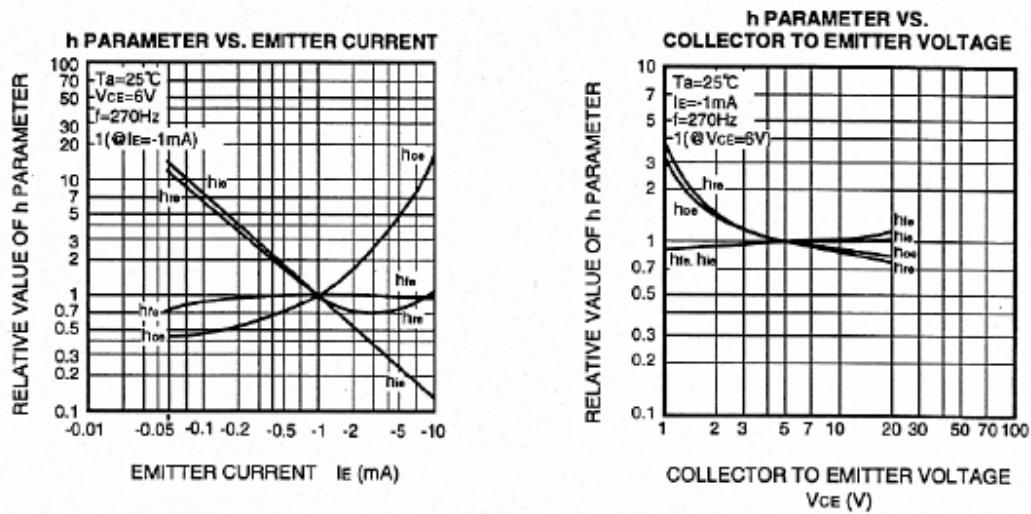
Parameter	Symbol	Test conditions	Limits			Unit
			Min	Typ	Max	
C to E break down voltage	$V(BR)_{CEO}$	$I_C=100\mu A, R_{BE}=\infty$	50	-	-	V
Collector cut off current	I_{CBO}	$V_{CB}=50V, I_E=0mA$	-	-	0.1	μA
Emitter cut off current	I_{EBO}	$V_{EB}=6V, I_C=0mA$	-	-	0.1	μA
DC forward current gain	hFE	$V_{CE}=6V, I_C=1mA$ ※	150	-	800	
DC forward current gain	hFE	$V_{CE}=6V, I_C=0.1mA$	90	-	-	
C to E Saturation Voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=10mA$	-	-	0.3	V
Gain bandwidth product	fT	$V_{CE}=6V, I_E=-10mA$	-	200	-	MHz
Collector output capacitance	Cob	$V_{CB}=6V, I_E=0, f=1MHz$	-	2.5	-	pF
Noise figure	NF	$V_{CE}=6V, I_E=-0.1mA, f=1kHz, R_G=2k\Omega$	-	-	15	dB

※) It shows hFE classification in below table.

Item	E	F	G
h F E 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	$k\Omega$
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	μS