# 2SC1383, 2SC1384

## Silicon NPN epitaxial planar type

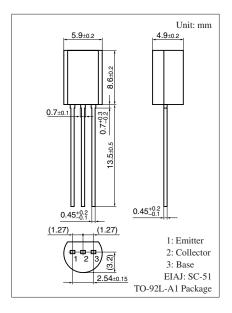
For low-frequency power amplification and driver amplification Complementary to 2SA0683, 2SA0684

#### ■ Features

- Low collector-emitter saturation voltage V<sub>CE(sat)</sub>
- Complementary pair with 2SA0683, 2SA0684

## ■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit	
Collector-base voltage	2SC1383	$V_{CBO}$	30	V
(Emitter open)	2SC1384		60	
Collector-emitter voltage	2SC1383	V <sub>CEO</sub>	25	V
(Base open)	2SC1384		50	
Emitter-base voltage (Coll	V <sub>EBO</sub>	5	V	
Collector current	$I_C$	1	A	
Peak collector current	$I_{CP}$	1.5	A	
Collector power dissipation	P <sub>C</sub>	1	W	
Junction temperature	T <sub>j</sub>	150	°C	
Storage temperature	$T_{stg}$	-55 to +150	°C	



## ■ Electrical Characteristics $T_a = 25$ °C $\pm 3$ °C

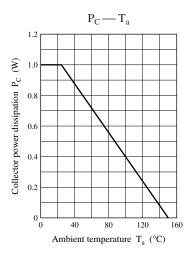
Parameter		Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage	2SC1383	V <sub>CBO</sub>	$I_C = 10 \mu\text{A},  I_E = 0$	30			V
(Emitter open)	2SC1384			60			
Collector-emitter voltage	2SC1383	V <sub>CEO</sub>	$I_C = 2 \text{ mA}, I_B = 0$	25			V
(Base open)	2SC1384			50			
Emitter-base voltage (Collector open)		$V_{EBO}$	$I_E = 10 \ \mu A, I_C = 0$	5			V
Collector-base cutoff current (Emitter open)		$I_{CBO}$	$V_{CB} = 20 \text{ V}, I_E = 0$			0.1	μΑ
Forward current transfer ratio *1		h <sub>FE1</sub> *2	$V_{CE} = 10 \text{ V}, I_{C} = 500 \text{ mA}$	85		340	_
		h <sub>FE2</sub>	$V_{CE} = 5 \text{ V}, I_{C} = 1 \text{ A}$	50			_
Collector-emitter saturation voltage		V <sub>CE(sat)</sub>	$I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$		0.2	0.4	V
Base-emitter saturation voltage		V <sub>BE(sat)</sub>	$I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$		0.85	1.20	V
Transition frequency		$f_T$	$V_{CB} = 10 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$		200		MHz
Collector output capacitance		C <sub>ob</sub>	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		11	20	pF
(Common base, input open circuited)							

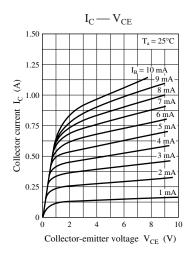
 $Note) \ 1. \ Measuring \ methods \ are \ based \ on \ JAPANESE \ INDUSTRIAL \ STANDARD \ JIS \ C \ 7030 \ measuring \ methods \ for \ transistors.$ 

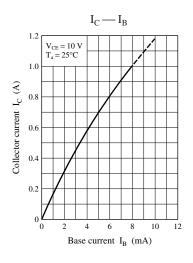
### 2. \*1: Pulse measurement

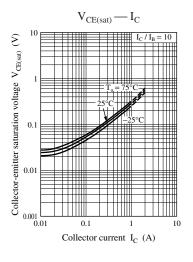
#### \*2: Rank classification

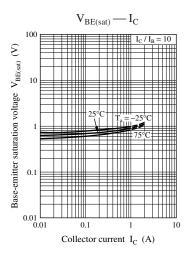
Rank	Q	R	S	
$h_{FE1}$	85 to 170	120 to 240	170 to 340	

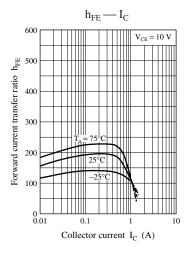


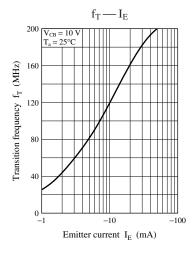


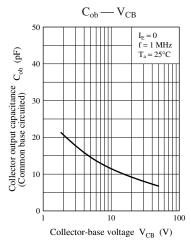


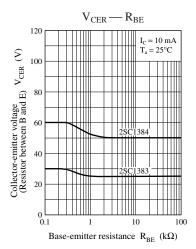


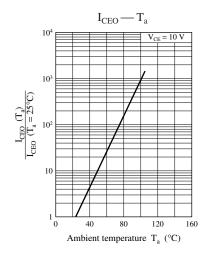


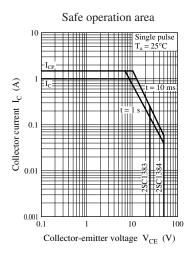












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