PNP/NPN Epitaxial Planar Silicon Transistor



# 2SA1881/2SC4983

# Low-Frequency General-Purpose Amplifier Applications

## Features

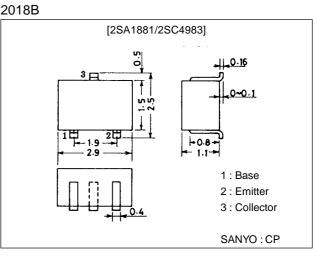
• AF power amplifier, medium-speed switching, smallsized motor drivers and LED drivers.

## **Features**

- · Large current capacity.
- $\cdot$  Low collector-to-emitter saturation voltage.
- · Very small-sized pakage permitting 2SA1881/
  - 2SC4983-appied set to be made smaller and slimmer.

## Package Dimensions

unit:mm



():2SA1881

## **Specifications**

#### Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CBO</sub>		(–)15	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>		(–)15	V
Emitter-to-Base Voltage	V <sub>EBO</sub>		(–)5	V
Collector Current	IC		(–)1	A
Collector Current (Pulse)	I <sub>CP</sub>		(–)3	Α
Base Current	IB		(–)200	mA
Collector Dissipation	PC		250	mW
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

#### Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
Falanielei			min	typ	max	
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> =(-)12V, I <sub>E</sub> =0			(–)100	nA
Emitter Cutoff Current	IEBO	V <sub>EB</sub> =(-)4V, I <sub>C</sub> =0			(–)100	nA
DC Current Gain	h <sub>FE</sub> 1	V <sub>CE</sub> =(-)2V, I <sub>C</sub> =(-)50mA	135*		600*	
	h <sub>FE</sub> 2	V <sub>CE</sub> =(-)2V, I <sub>C</sub> =(-)800mA	80			
Gain-Bandwidth Product	fT	V <sub>CE</sub> =(-)2V, I <sub>C</sub> =(-)50mA		(300)		MHz
				200		MHz
Output Capacitance	Cob	V <sub>CB</sub> =(-)10V, f=1MHz		(15)10		pF

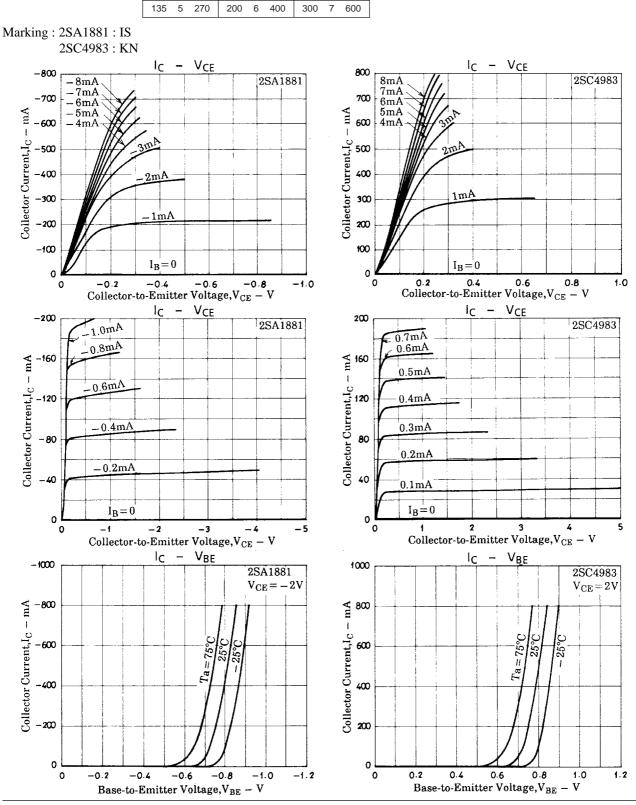
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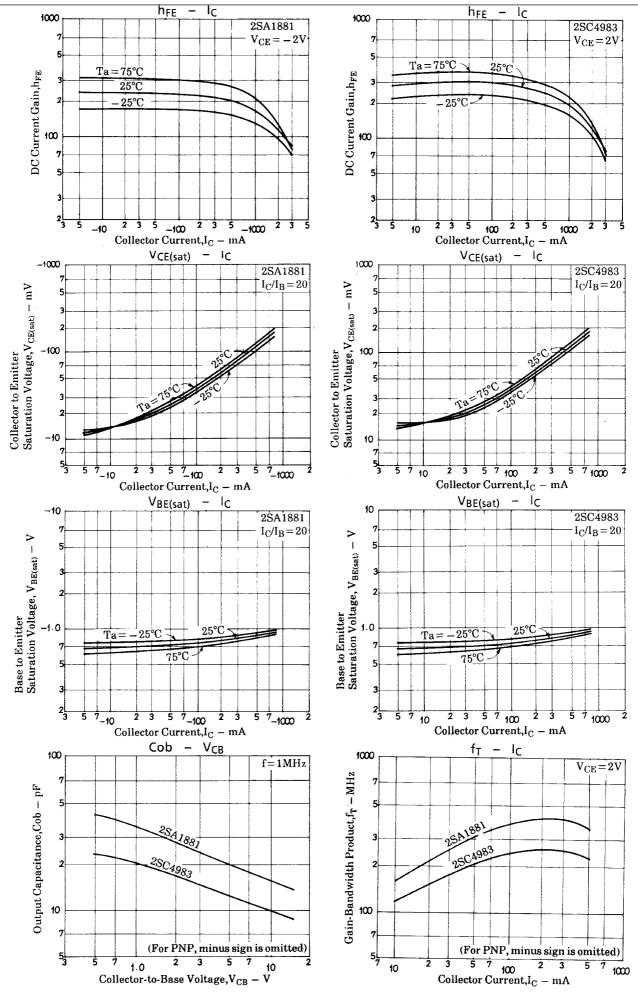
## 2SA1881/2SC4983

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Onit
Collector-to-Emitter Saturation Voltage	V <sub>CE(sat)</sub> 1	I <sub>C</sub> =(-)5mA, I <sub>B</sub> =(-)0.5mA		(–)10	(–)25	mV
	V <sub>CE(sat)</sub> <sup>2</sup>	I <sub>C</sub> =(–)500mA, I <sub>B</sub> =(–)25mA		(–)120	(–)240	mV
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =(-)500mA, I <sub>B</sub> =(-)25mA		(–)0.9	(–)1.2	V
Collector-to-Base Breakdown Voltage	V(BR)CBO	I <sub>C</sub> =-10μA, I <sub>E</sub> =0	(–)15			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I <sub>C</sub> =−1mA, R <sub>BE</sub> =∞	(–)15			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	I <sub>E</sub> =-10μΑ, I <sub>C</sub> =0	(–)5			V

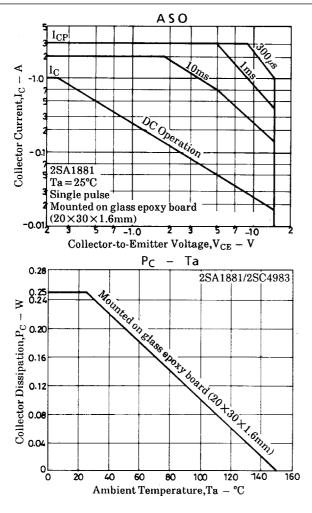
\* : The 2SA1881/2SC4983 are classified by 50mA  $h_{FE}$  as follows :

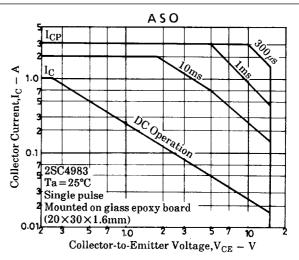


## 2SA1881/2SC4983



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