Ordering number:ENN4633A

PNP/NPN Epitaxial Planar Silicon Transistors

2SA1882/2SC4984

Low-Frequency General-Purpose Amplifier Applications

Applcations

- Low-frequency power amplifier applications.
- Medium-speed switching.
- Small-sized motor drivers.

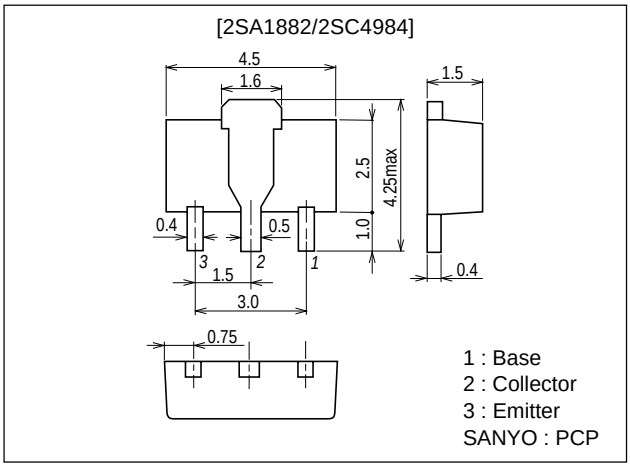
Features

- Large current capacity.
- Low collector-to-emitter saturation voltage.

Package Dimensions

unit:mm

2038A



Specifications

( ) : 2SA1882

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(–)15	V
Collector-to-Emitter Voltage	V_{CEO}		(–)15	V
Emitter-to-Base Voltage	V_{EBO}		(–)5	V
Collector Current	I_C		(–)1.5	A
Collector Current (Pulse)	I_{CP}		(–)3	A
Base Current	I_B		(–)300	mA
Collector Dissipation	P_C	Mounted on a ceramic board (250mm^2×0.8mm)	1.3	W
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

Electrical Characteristics at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=(–)12V, I_E=0			(–)100	nA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(–)4V, I_C=0			(–)100	nA
DC Current Gain	$h_{FE}1$	V_{CE}=(–)2V, I_C=(–)50mA	140*		560*	
	$h_{FE}2$	V_{CE}=(–)2V, I_C=(–)1A	70			
Gain-Bandwidth Product	f_T	V_{CE}=(–)2V, I_C=(–)50mA		(300)		MHz
				200		MHz
Output Capacitance	C_{ob}	V_{CB}=(–)10V, f=1MHz		(15)10		pF

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SANYO Electric Co.,Ltd. Semiconductor Company
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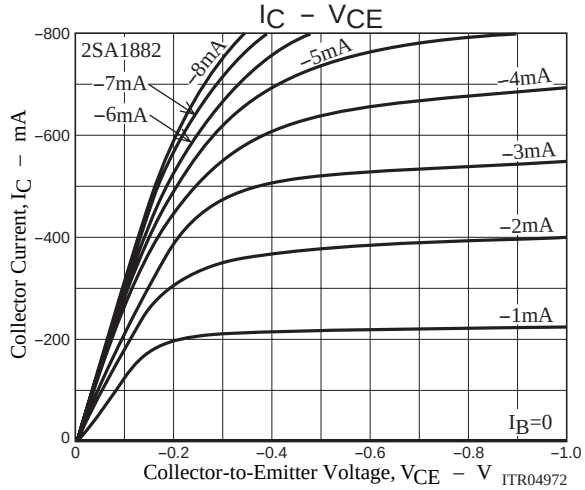
Continued from preceding page.

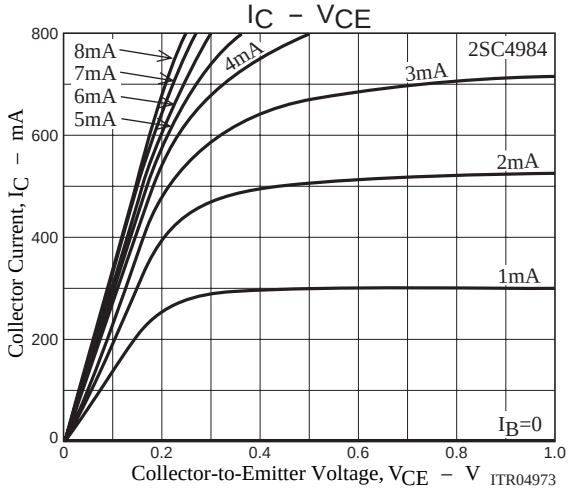
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}1$	I_C=(–)5mA, I_B=(–)0.5mA		(–)10	(–)25	mV
	$V_{CE(sat)}2$	I_C=(–)500mA, I_B=(–)25mA		(–)120	(–)240	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=(–)500mA, I_B=(–)25mA		(–)0.9	(–)1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=–10μA, I_E=0	(–)15			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=–1mA, R_{BE}=∞	(–)15			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=–10μA, I_C=0	(–)5			V

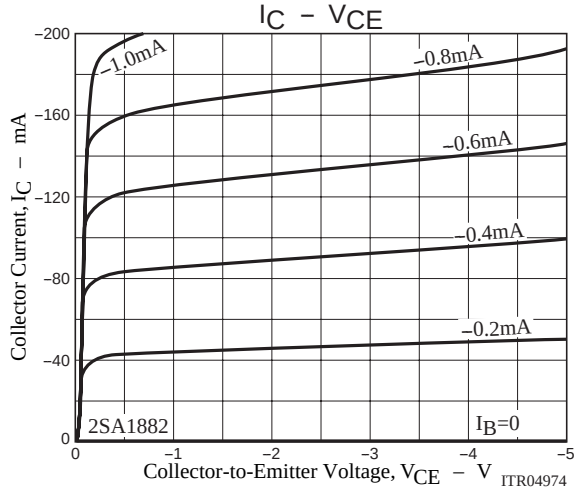
* : The 2SA1882/2SC4984 are classified by h_{FE} values at I_C=50mA as follows :

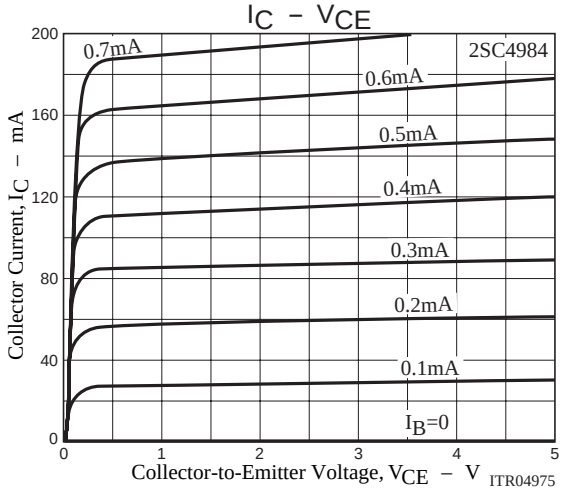
Rank	S	T	U
h_{FE}	140 to 280	200 to 400	280 to 560

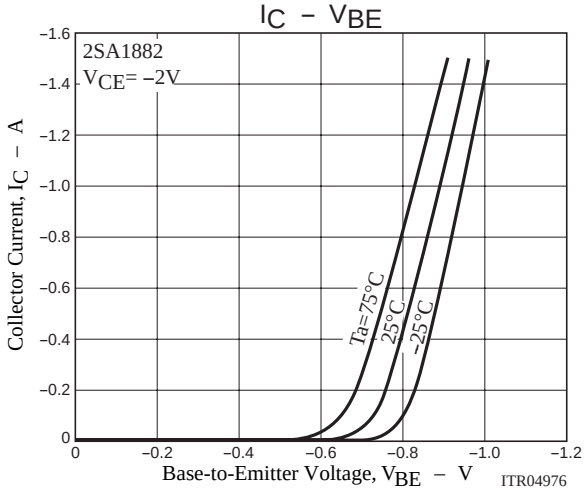
Marking : 2SA1882 : AI
2SC4984 : CT

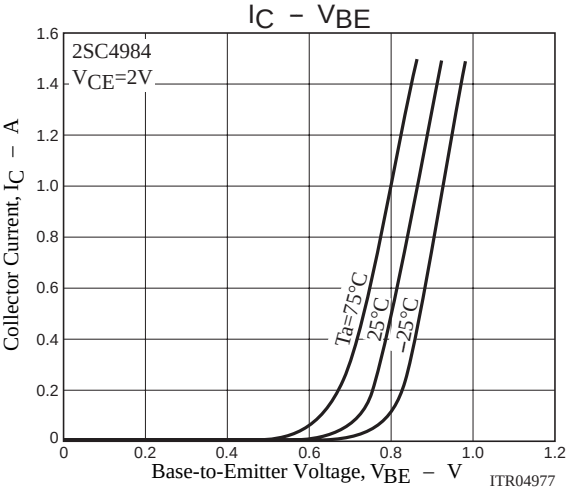


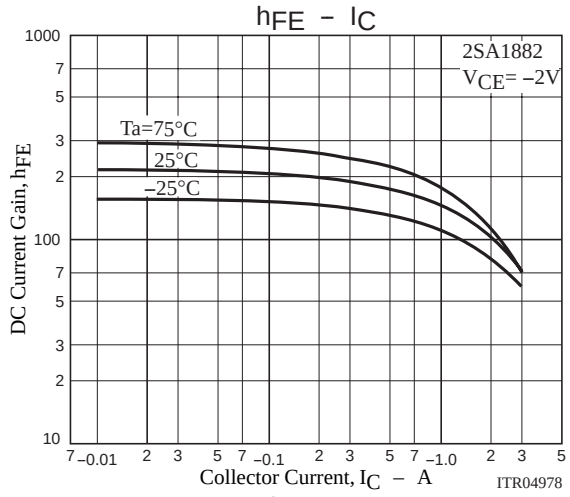


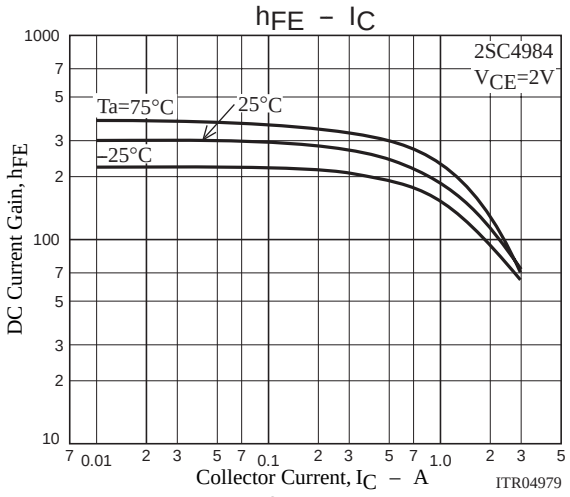


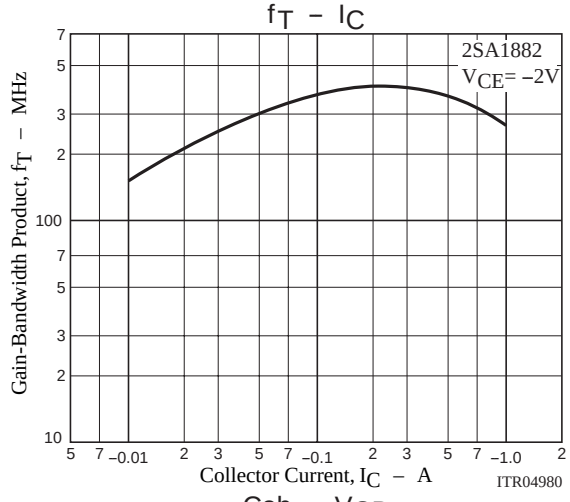


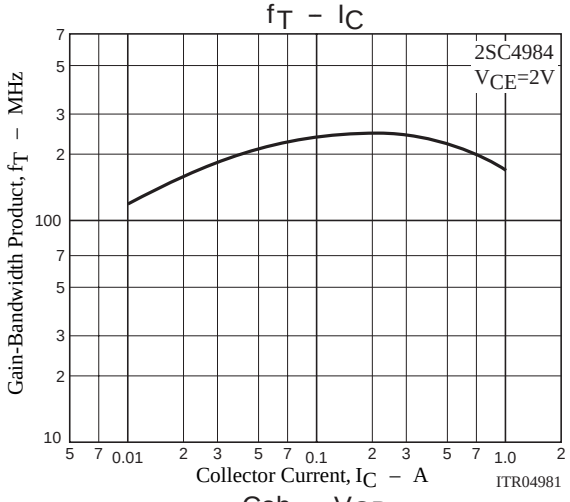


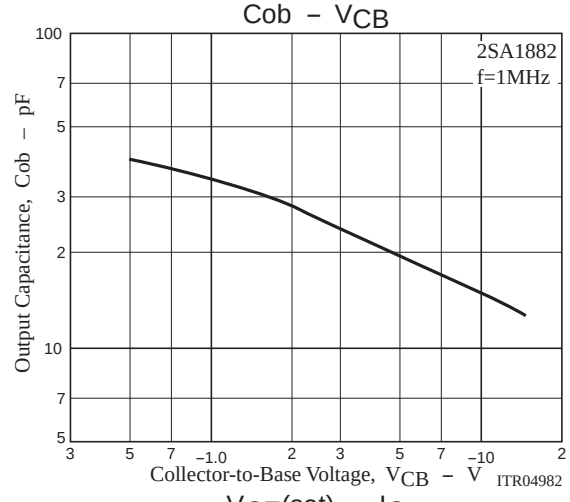


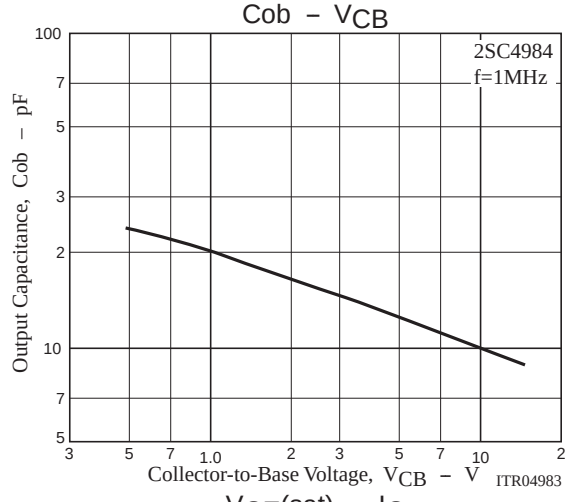

hFE – IC
2SA1882
VCE= –2V
Ta=75°C
25°C
–25°C
DC Current Gain, hFE
Collector Current, IC – A
ITR04978

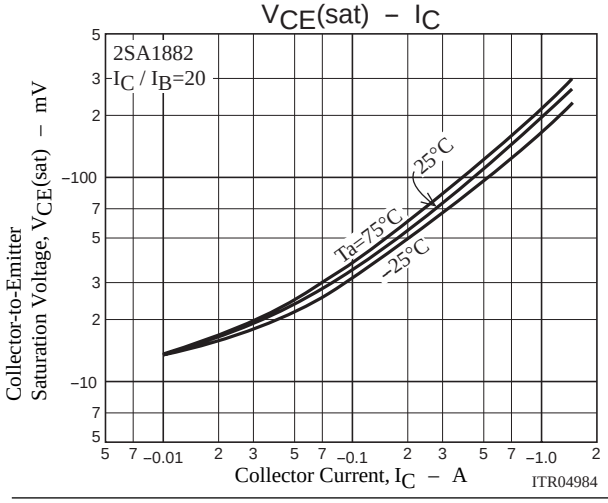

hFE – IC
2SC4984
VCE=2V
Ta=75°C
25°C
–25°C
DC Current Gain, hFE
Collector Current, IC – A
ITR04979

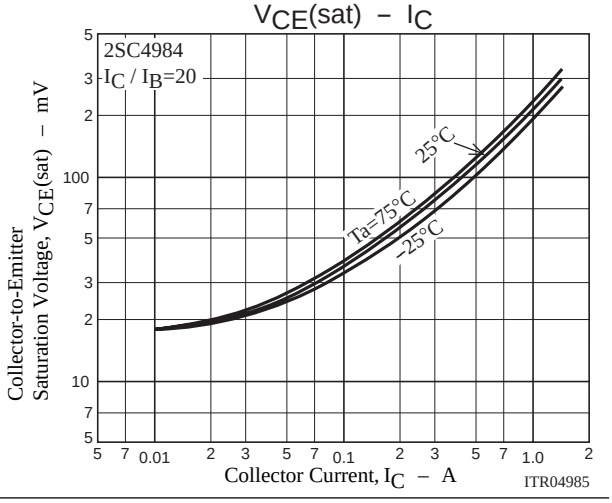

fT – IC
2SA1882
VCE= –2V
Gain-Bandwidth Product, fT – MHz
Collector Current, IC – A
ITR04980

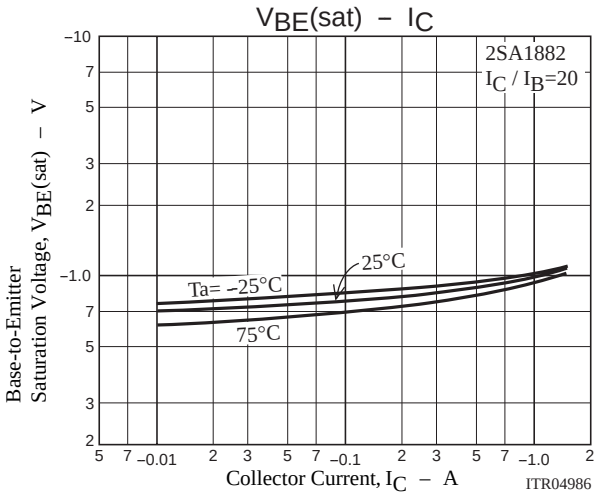

fT – IC
2SC4984
VCE=2V
Gain-Bandwidth Product, fT – MHz
Collector Current, IC – A
ITR04981

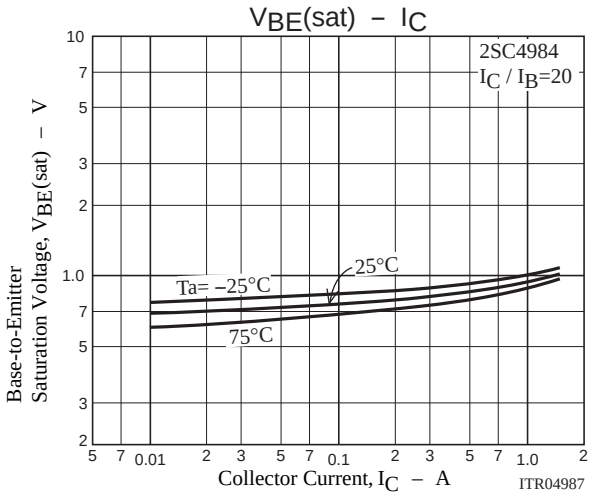

Cob – VCB
2SA1882
f=1MHz
Output Capacitance, Cob – pF
Collector-to-Base Voltage, VCB – V
ITR04982

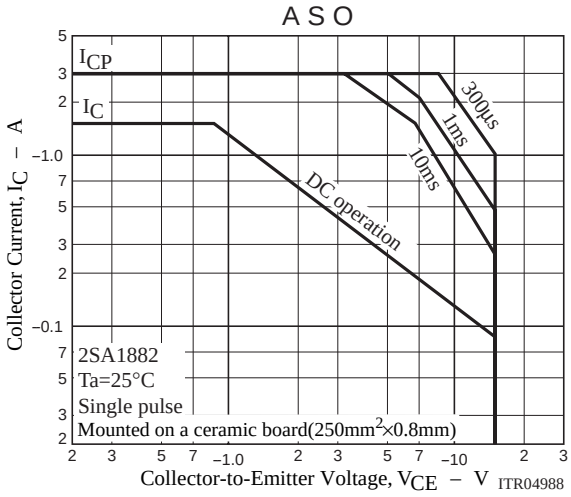

Cob – VCB
2SC4984
f=1MHz
Output Capacitance, Cob – pF
Collector-to-Base Voltage, VCB – V
ITR04983

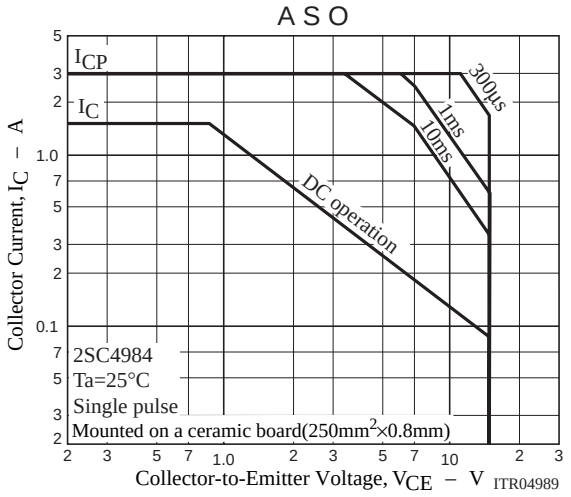

VCE(sat) – IC
2SA1882
IC / IB=20
25°C
Ta=75°C
–25°C
Collector-to-Emitter Saturation Voltage, VCE(sat) – mV
Collector Current, IC – A
ITR04984

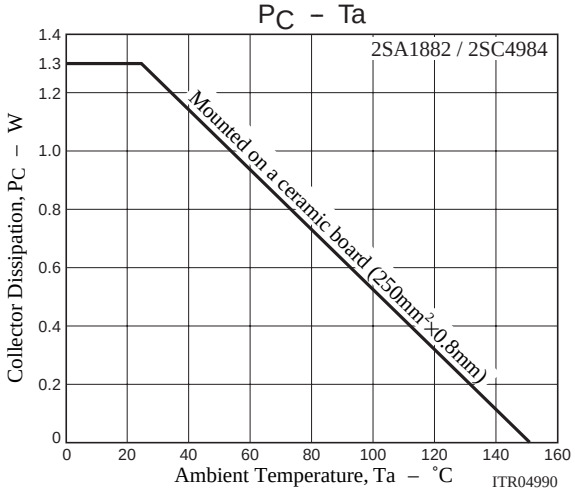

VCE(sat) – IC
2SC4984
IC / IB=20
25°C
Ta=75°C
–25°C
Collector-to-Emitter Saturation Voltage, VCE(sat) – mV
Collector Current, IC – A
ITR04985


VBE(sat) – IC
2SA1882
IC / IB=20
Ta= –25°C
25°C
75°C
Base-to-Emitter Saturation Voltage, VBE(sat) – V
Collector Current, IC – A
ITR04986


VBE(sat) – IC
2SC4984
IC / IB=20
Ta= –25°C
25°C
75°C
Base-to-Emitter Saturation Voltage, VBE(sat) – V
Collector Current, IC – A
ITR04987


A S O
ICP
IC
300µs
1ms
10ms
DC operation
2SA1882
Ta=25°C
Single pulse
Mounted on a ceramic board(250mm2×0.8mm)
Collector Current, IC – A
Collector-to-Emitter Voltage, VCE – V
ITR04988


A S O
ICP
IC
300µs
1ms
10ms
DC operation
2SC4984
Ta=25°C
Single pulse
Mounted on a ceramic board(250mm2×0.8mm)
Collector Current, IC – A
Collector-to-Emitter Voltage, VCE – V
ITR04989


PC – Ta
2SA1882 / 2SC4984
Mounted on a ceramic board (250mm2×0.8mm)
Collector Dissipation, PC – W
Ambient Temperature, Ta – °C
ITR04990