Ordering number: EN 781F

SANYO

No.781F

2SA1208/2SC2910

PNP/NPN Epitaxial Planar Silicon Transistors

High-Voltage Switching, Audio 80W Output Predriver Applications

Features

- Adoption of FBET process.
- High breakdown voltage.
- Excellent linearity of h_{FE} and small c_{ob}.
- Fast switching speed.

( ): 2SA1208

Absolute Maximum Ratings at Ta = 25°C

			unit
Collector to Base Voltage	V_{CBO}	(−)180	V
Collector to Emitter Voltage	V_{CEO}	(−)160	V
Emitter to Base Voltage	V_{EBO}	(−)5	V
Collector Current	I_C	(−)70	mA
Collector Current(Pulse)	I_{CP}	(−)140	mA
Collector Dissipation	P_C	900	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	−55 to +150	°C

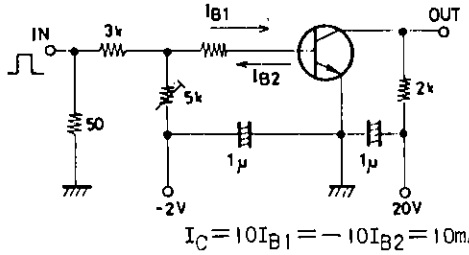
Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB}=(−)80V, I_E=0			(−)0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(−)4V, I_C=0			(−)0.1	μA
DC Current Gain	h_{FE}	V_{CE}=(−)5V, I_C=(−)10mA	100※		400※	
Gain-Bandwidth Product	f_T	V_{CE}=(−)10V, I_C=(−)10mA		150		MHz
Output Capacitance	c_{ob}	V_{CB}=(−)10V, f=1MHz		(2.5)2.0		pF
C-E Saturation Voltage	$V_{CE(sat)}$	I_C=(−)30mA, I_B=(−)3mA		(−0.14)	(−0.4)	V
				0.08	0.3	V
Turn-ON Time	t_{on}	See specified Test Circuit.		0.1		μs
Fall Time	t_f	〃		0.2		μs
Storage Time	t_{stg}	〃		1.0		μs

※: The 2SA1208/2SC2910 are classified by 10mA h_{FE} as follows:

100 R 200	140 S 280	200 T 400

Switching Time Test Circuit



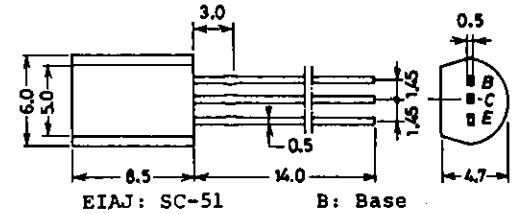
$I_C = 10I_{B1} = -10I_{B2} = 10mA$

(For PNP, the polarity is reversed.)

Unit(Resistance: Ω, Capacitance: F)

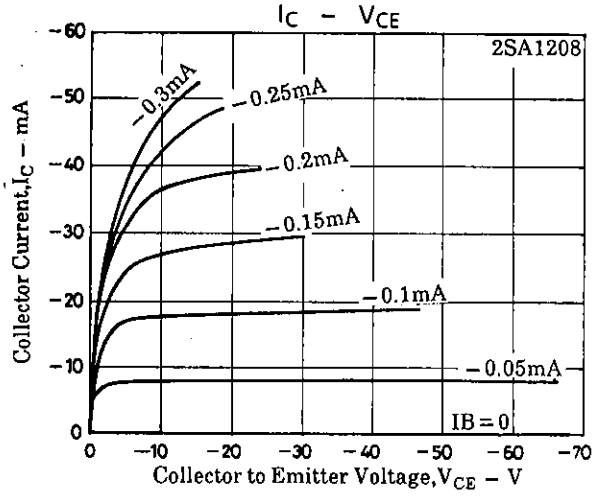
Package Dimensions 2006A

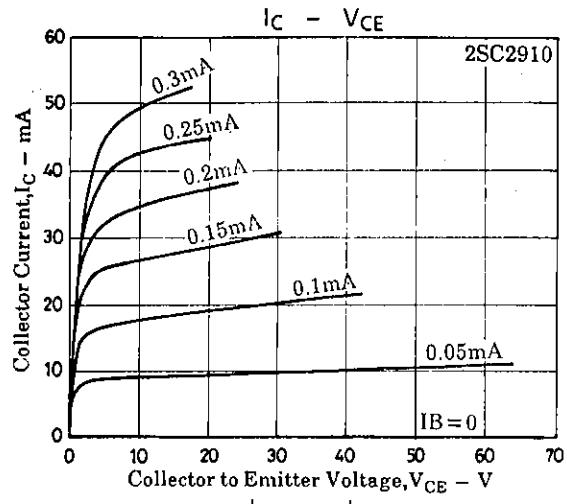
(unit: mm)

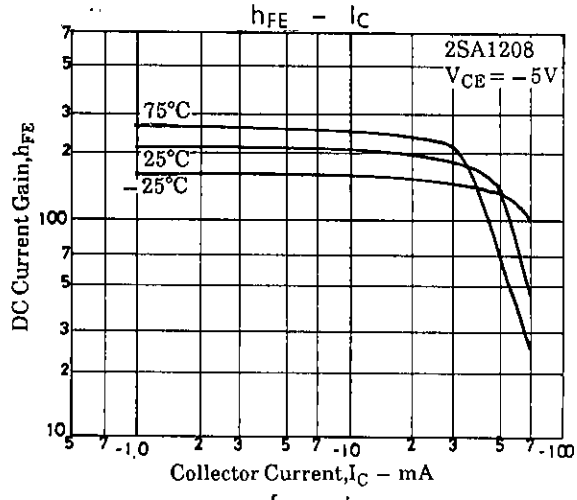


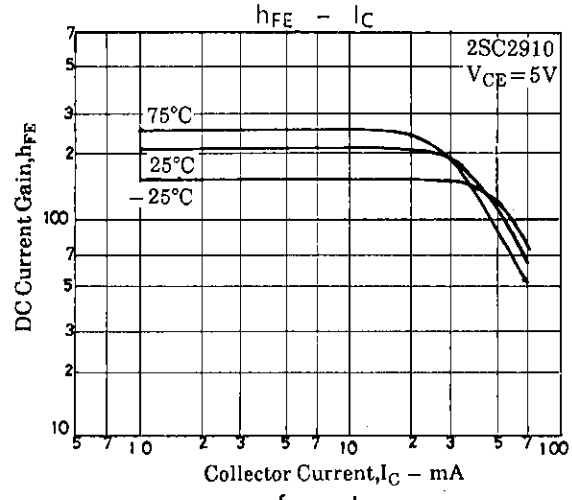
EIAJ: SC-51
SANYO: MP

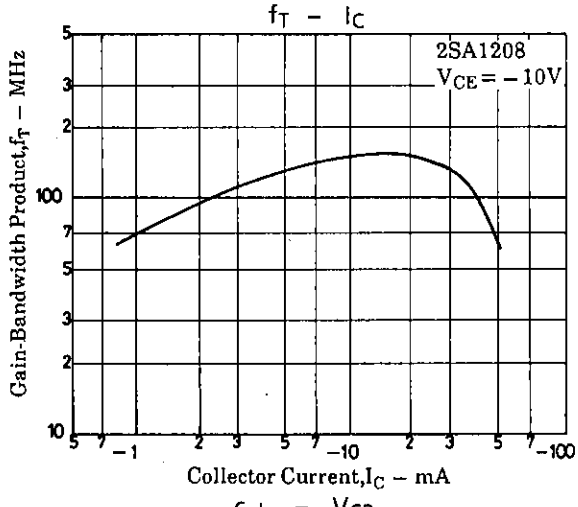
B: Base
C: Collector
E: Emitter

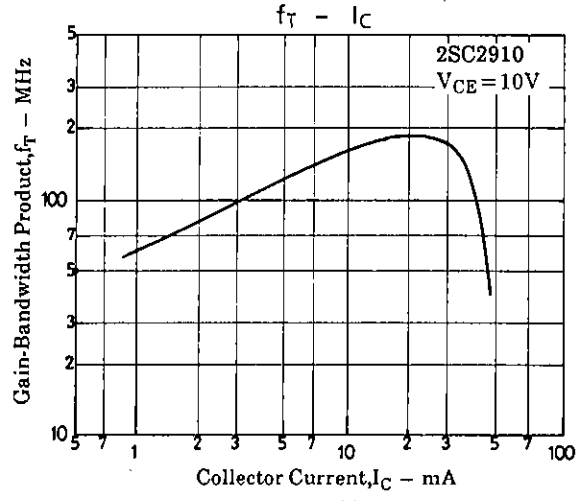

I_C – V_{CE}
2SA1208
−0.3mA
−0.25mA
−0.2mA
−0.15mA
−0.1mA
−0.05mA
IB=0
Collector Current,I_C – mA
Collector to Emitter Voltage,V_{CE} – V

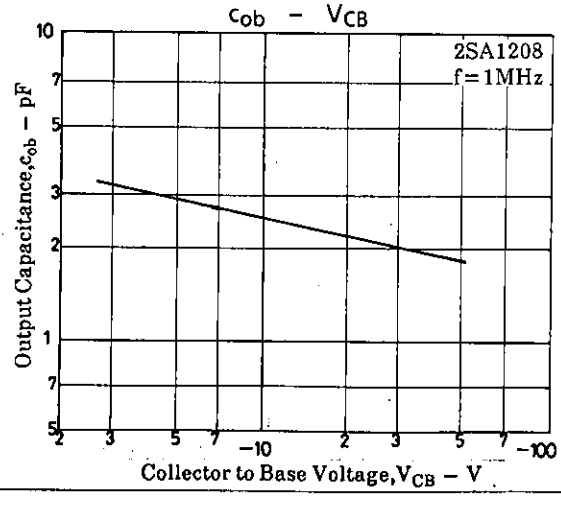

I_C – V_{CE}
2SC2910
0.3mA
0.25mA
0.2mA
0.15mA
0.1mA
0.05mA
IB=0
Collector Current,I_C – mA
Collector to Emitter Voltage,V_{CE} – V

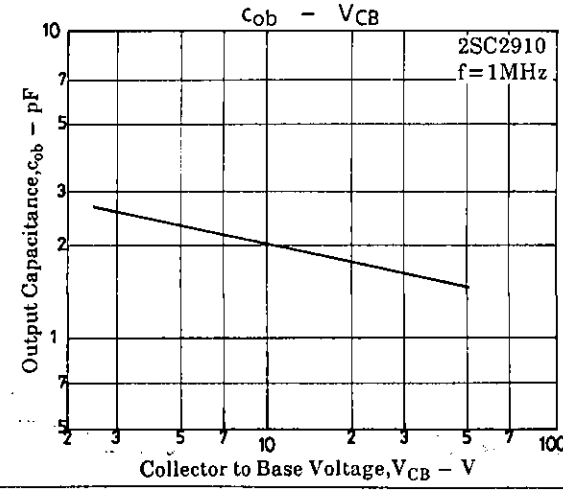

h_{FE} – I_C
2SA1208
V_{CE}=−5V
75°C
25°C
−25°C
DC Current Gain,h_{FE}
Collector Current,I_C – mA


h_{FE} – I_C
2SC2910
V_{CE}=5V
75°C
25°C
−25°C
DC Current Gain,h_{FE}
Collector Current,I_C – mA

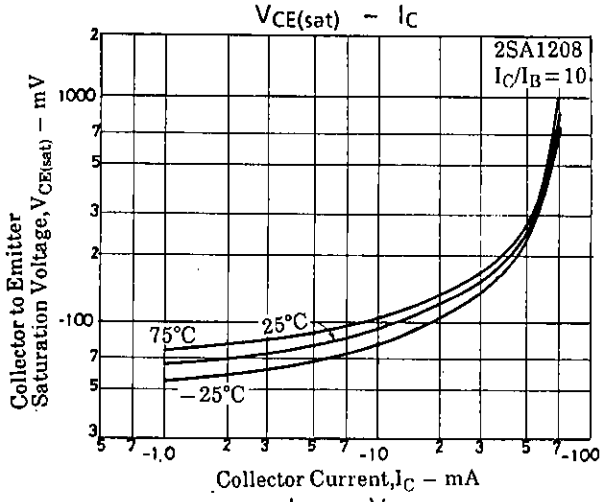

f_T – I_C
2SA1208
V_{CE}=−10V
Gain-Bandwidth Product,f_T – MHz
Collector Current,I_C – mA


f_T – I_C
2SC2910
V_{CE}=10V
Gain-Bandwidth Product,f_T – MHz
Collector Current,I_C – mA

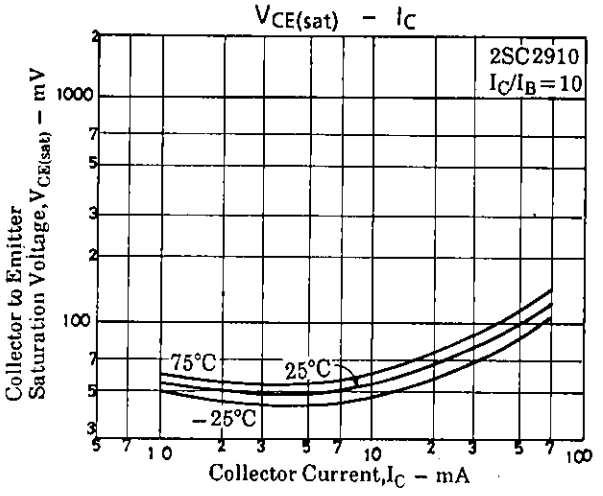

C_{ob} – V_{CB}
2SA1208
f=1MHz
Output Capacitance,C_{ob} – pF
Collector to Base Voltage,V_{CB} – V


C_{ob} – V_{CB}
2SC2910
f=1MHz
Output Capacitance,C_{ob} – pF
Collector to Base Voltage,V_{CB} – V

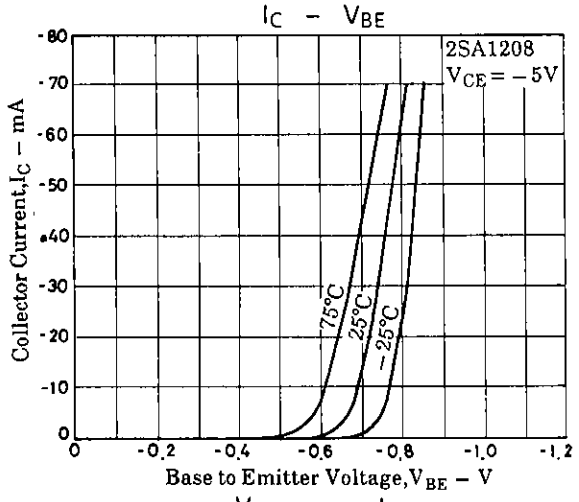
$V_{CE(sat)}$ – I_C



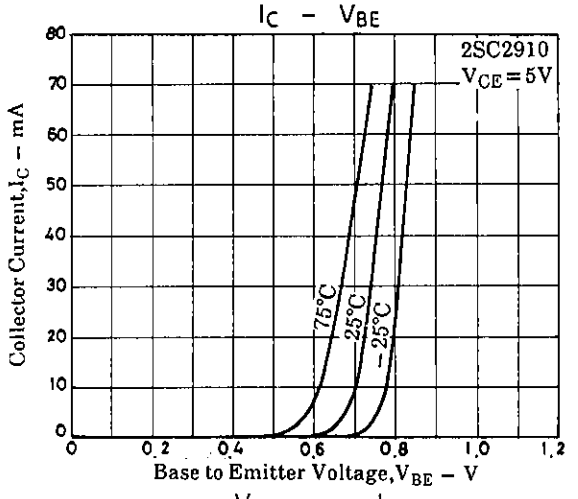
$V_{CE(sat)}$ – I_C



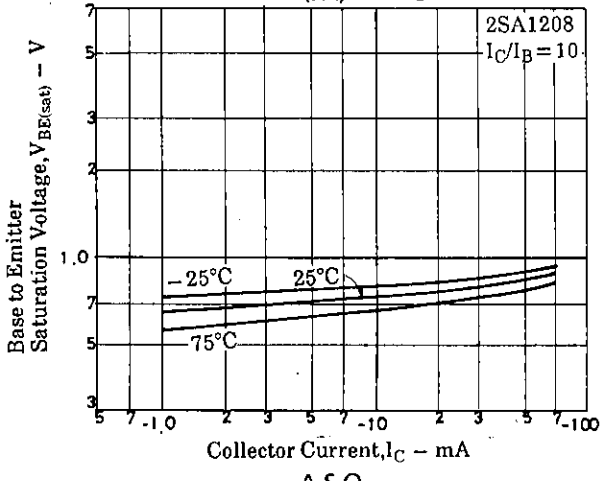
I_C – V_{BE}



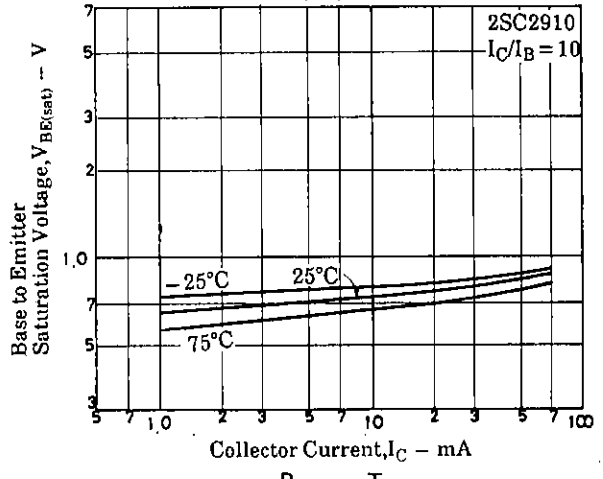
I_C – V_{BE}



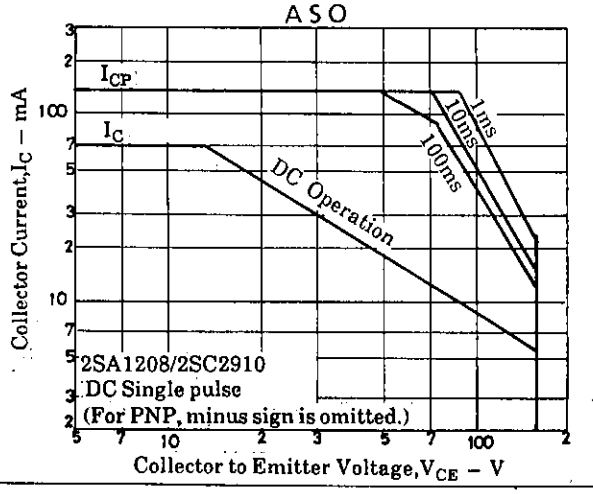
$V_{BE(sat)}$ – I_C



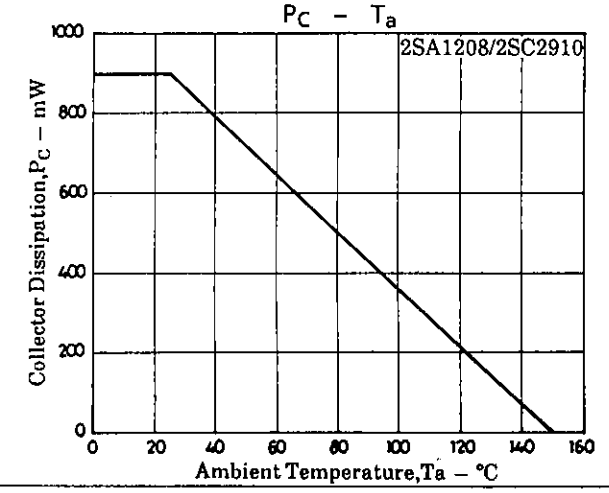
$V_{BE(sat)}$ – I_C



ASO



P_C – T_a



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