Ordering number: EN 930C

SANYO

No.930C

2SB892/2SD1207

PNP/ NPN Epitaxial Planar Silicon Transistors

Large-Current Switching Applications

APPLICATIONS

- Power supplies, relay drivers, lamp drivers, and automotive wiring

FEATURES

- FBET and MBIT processed (Original process of SANYO)
- Low saturation voltage
- Large current capacity and wide ASO

Values for 2SB892 shown in ( )

ABSOLUTE MAXIMUM RATINGS/Ta=25°C

			unit
Collector to base voltage	V_{CBO}	(−)60	V
Collector to emitter voltage	V_{CEO}	(−)50	V
Emitter to base voltage	V_{EBO}	(−)6	V
Collector current	I_C	(−)2	A
Collector Current(Pulse)	I_{CP}	(−)4	A
Allowable collector dissipation	P_C	1	W
Junction temperature	T_j	150	°C
Storage ambient temperature	T_{stg}	−55~+150	°C

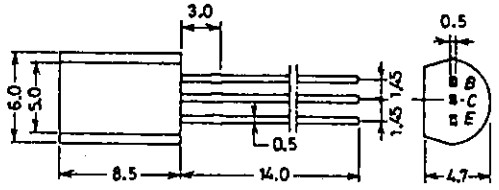
ELECTRICAL CHARACTERISTICS/Ta=25°C

			min	typ	max	unit
Collector cut-off current	I_{CBO}	V_{CB}=(−)50V, I_E=0			(−)0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=(−)4V, I_C=0			(−)0.1	μA
DC current gain	$h_{FE}(1)$*	V_{CE}=(−)2V, I_C=(−)100mA	100		560	
	$h_{FE}(2)$	V_{CE}=(−)2V, I_C=(−)1.5A	40			
Gain-bandwidth product	f_T	V_{CE}=(−)10V, I_C=(−)50mA		150		MHz
Output capacitance	C_{ob}	V_{CB}=(−)10V, f=1MHz		12		pF
				(22)		pF
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=(−)1A, I_B=(−)50mA		0.15	0.4	V
				(−0.3)	(−0.7)	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=(−)1A, I_B=(−)50mA		(−)0.9	(−)1.2	V
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=(−)10μA, I_E=0	(−)60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=(−)1mA, R_{BE}=∞	(−)50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=(−)10μA, I_C=0	(−)6			V

* 2SB892 and 2SD1207 are graded as follows by h_{FE} at 100mA:

100	R	200	140	S	280	200	T	400	280	U	560

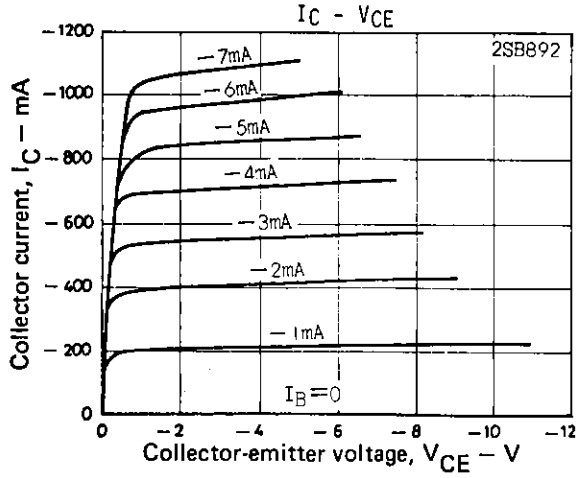
Package Dimensions 2006A
(unit: mm)

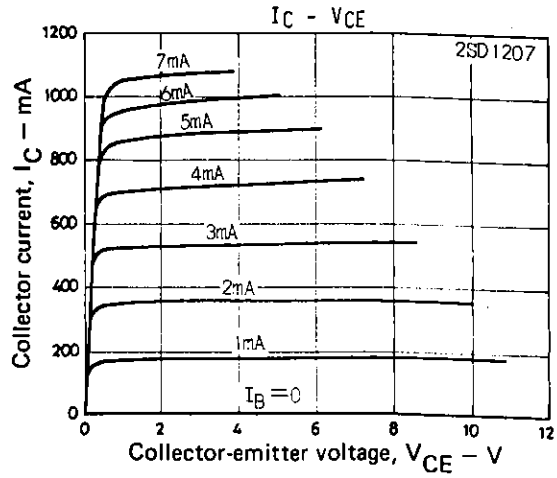


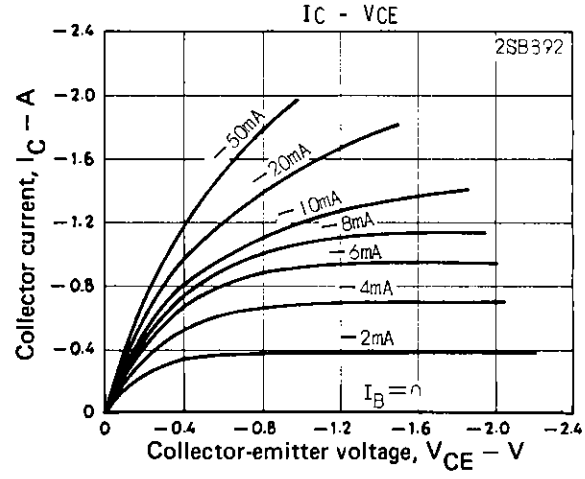
EIAJ: SC-51
SANYO: MP

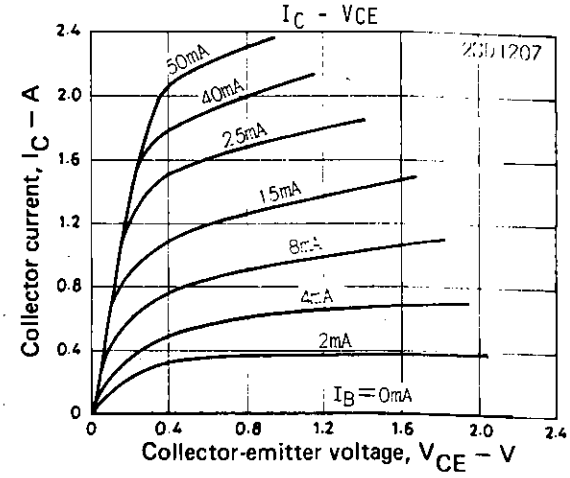
B: Base
C: Collector
E: Emitter

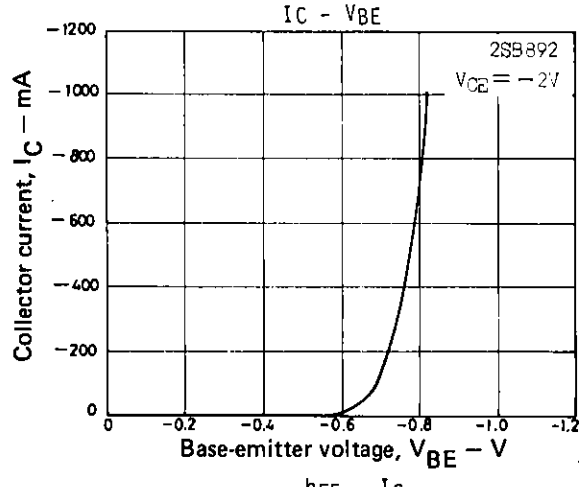
SANYO Electric Co.,Ltd. Semiconductor Business Headquarters
TOKYO OFFICE Tokyo Bldg., 1-10,1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

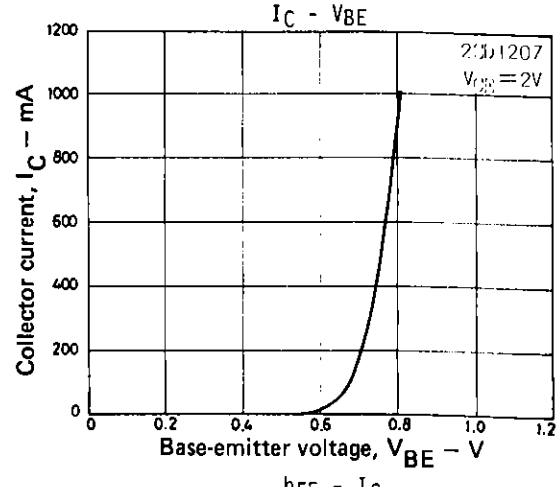

IC - VCE
2SB892
−7mA
−6mA
−5mA
−4mA
−3mA
−2mA
−1mA
IB=0
Collector current, IC − mA
Collector-emitter voltage, VCE − V

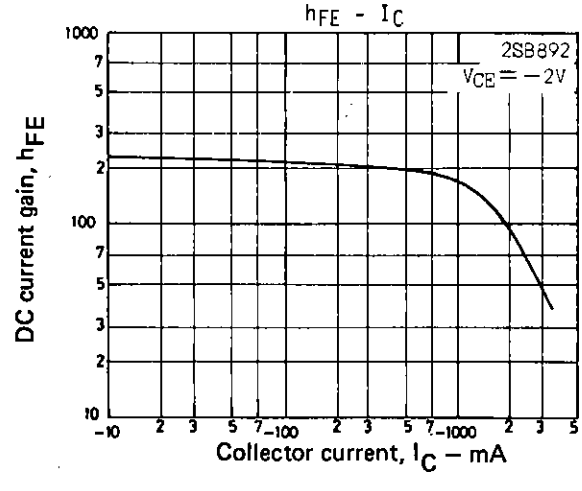

IC - VCE
2SD1207
7mA
6mA
5mA
4mA
3mA
2mA
1mA
IB=0
Collector current, IC − mA
Collector-emitter voltage, VCE − V

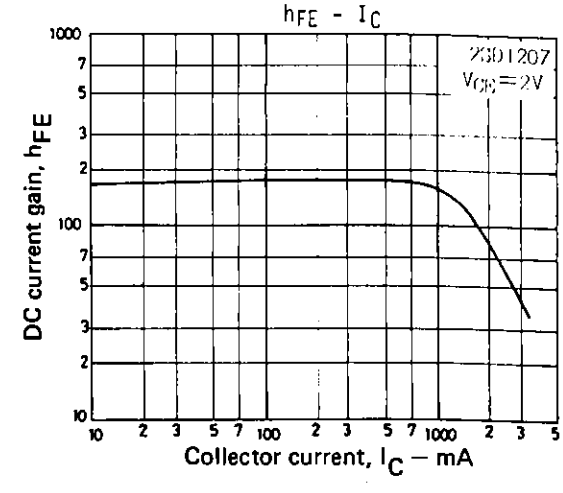

IC - VCE
2SB892
−50mA
−20mA
−10mA
−8mA
−6mA
−4mA
−2mA
Collector current, IC − A
Collector-emitter voltage, VCE − V

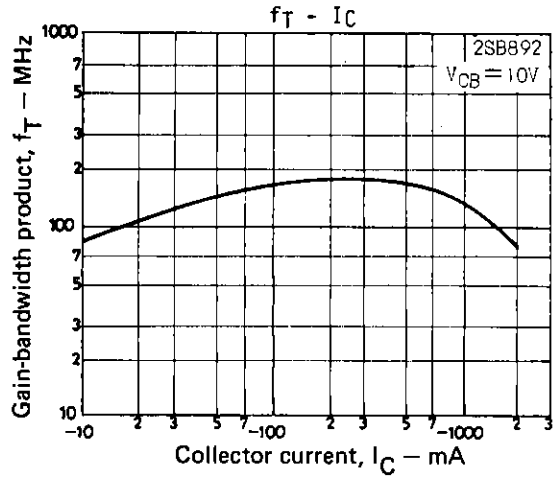

IC - VCE
50mA
40mA
25mA
15mA
8mA
4mA
2mA
IB=0mA
Collector current, IC − A
Collector-emitter voltage, VCE − V

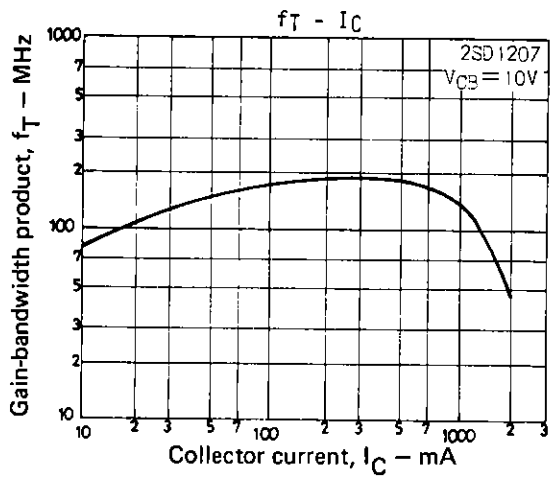

IC - VBE
2SB892
VCE=−2V
Collector current, IC − mA
Base-emitter voltage, VBE − V

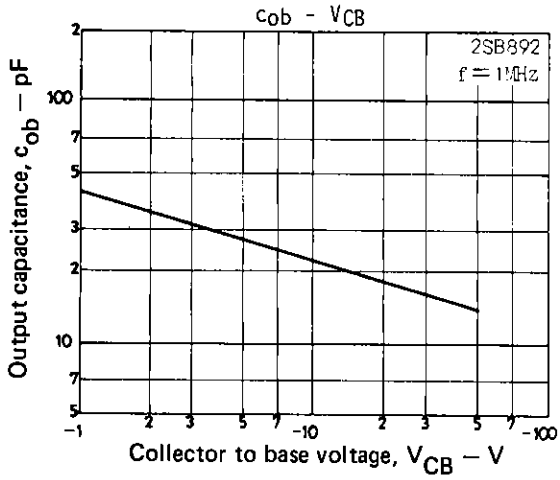

IC - VBE
2SD1207
VCE=2V
Collector current, IC − mA
Base-emitter voltage, VBE − V

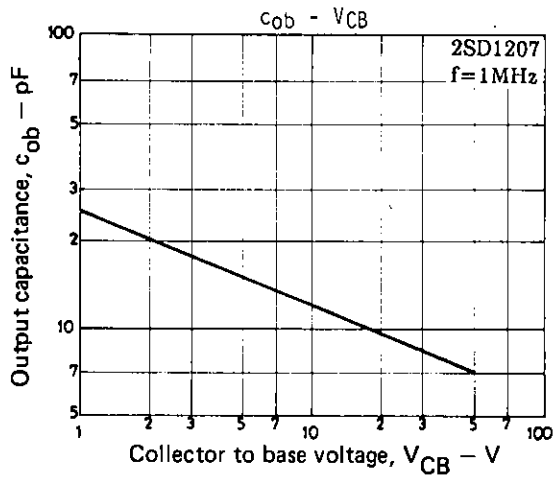

hFE - IC
2SB892
VCE=−2V
DC current gain, hFE
Collector current, IC − mA

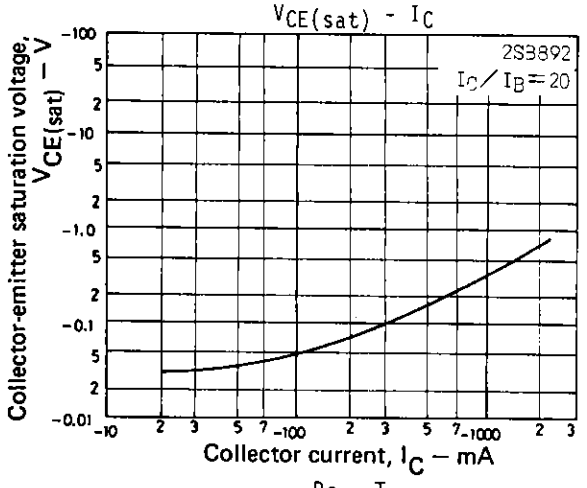

hFE - IC
2SD1207
VCE=2V
DC current gain, hFE
Collector current, IC − mA

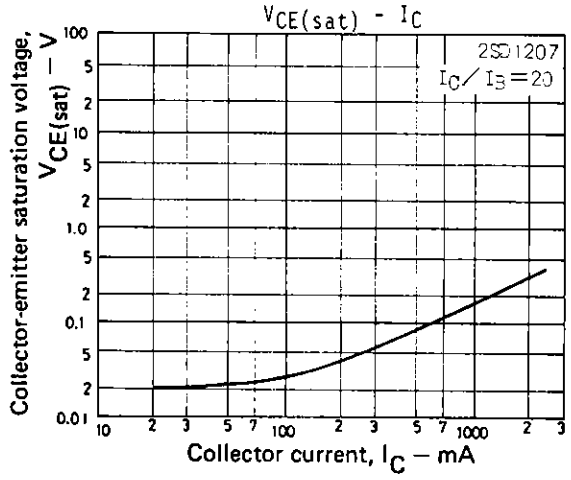

fT - IC
2SB892
VCB=10V
Gain-bandwidth product, fT – MHz
Collector current, IC – mA

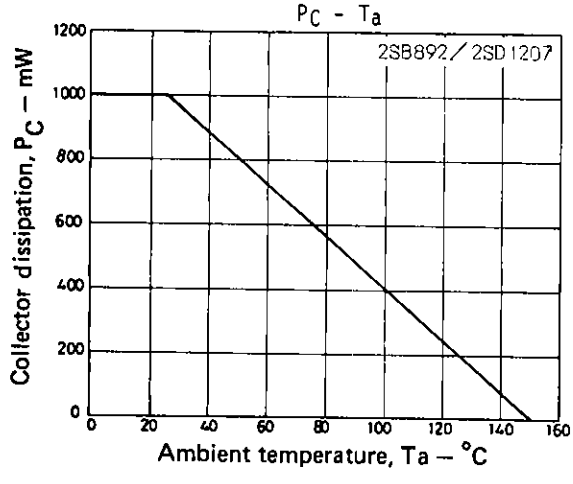

fT - IC
2SD1207
VCB=10V
Gain-bandwidth product, fT – MHz
Collector current, IC – mA

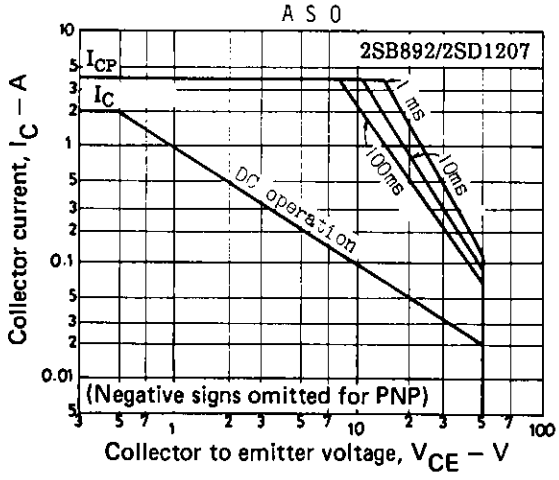

Cob - VCB
2SB892
f=1MHz
Output capacitance, Cob – pF
Collector to base voltage, VCB – V


Cob - VCB
2SD1207
f=1MHz
Output capacitance, Cob – pF
Collector to base voltage, VCB – V


VCE(sat) - IC
2SB892
IC/IB=20
Collector-emitter saturation voltage, VCE(sat) – V
Collector current, IC – mA


VCE(sat) - IC
2SD1207
IC/IB=20
Collector-emitter saturation voltage, VCE(sat) – V
Collector current, IC – mA


PC - Ta
2SB892/2SD1207
Collector dissipation, PC – mW
Ambient temperature, Ta – °C


A S O
2SB892/2SD1207
ICP
IC
1ms
10ms
100ms
DC operation
(Negative signs omitted for PNP)
Collector current, IC – A
Collector to emitter voltage, VCE – V