Ordering number:930C

PNP/NPN Epitaxial Planar Silicon Darlington Transistors

2SB892/2SD1207

Large-Current Switching Applications

Features

· Power supplies, relay drivers, lamp drivers, and automotive wiring.

Features

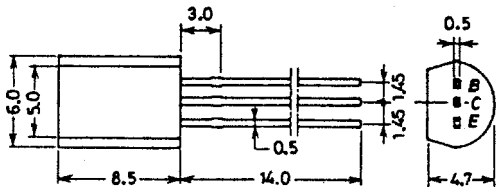
· FBET and MBIT processed (Original process of SANYO).
· Low saturation voltage.
· Large current capacity and wide ASO.

Package Dimensions

unit:mm

2006A

[2SB892/2SD1207]



EIAJ : SC-51
SANYO : MP

B : Base
C : Collector
E : Emitter

( ) : 2SB892

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	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	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

Electrical Characteristics at Ta = 25˚C

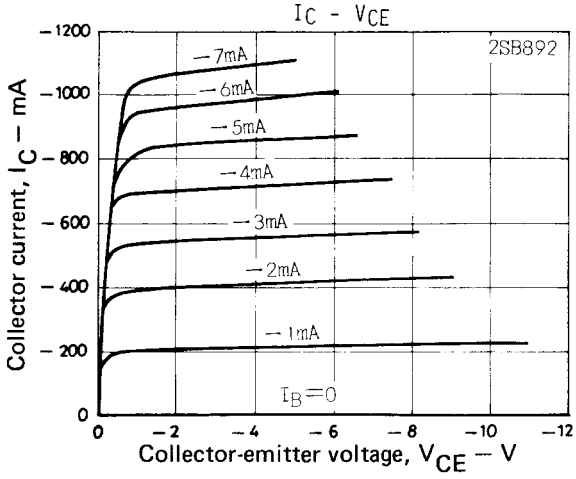
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=(–)50V, I_E=0			(–)0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(–)4V, I_C=0			(–)0.1	μA
DC Current Gain	$h_{FE}1$	V_{CE}=(–)2V, I_C=(–)100mA	100		560	
	$h_{FE}2$	V_{CE}=(–)2V, I_C=(–)1.5A	40			
Gain-Bandwidth Product	f_T	V_{CE}=(–)10V, I_C=(–)50mA		150		MHz
Output Capacitance	C_{ob}	V_{CB}=(–)10V, f=1MHz		12		pF
				(22)		pF

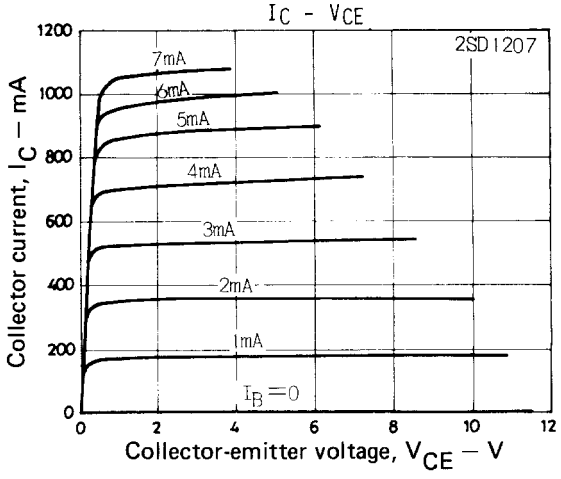
* : The 2SB892/2SD1207 are graded as follows by h_{FE} at 100mA :

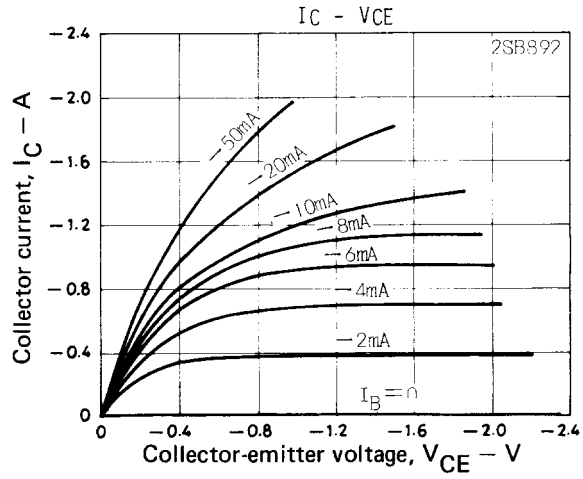
100	R	200	140	S	280	200	T	400	280	U	560

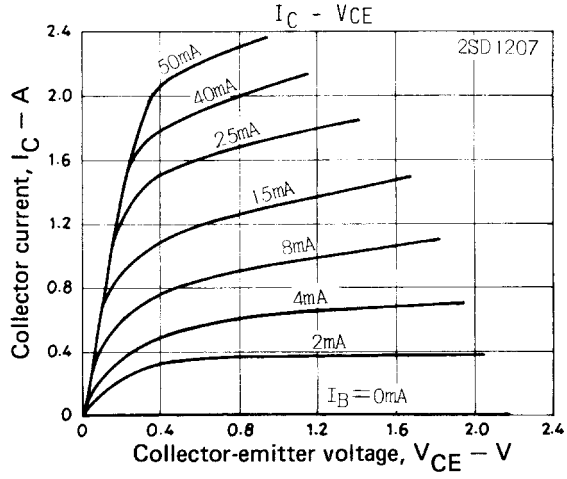
SANYO Electric Co.,Ltd. Semiconductor Bussiness Headquaters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

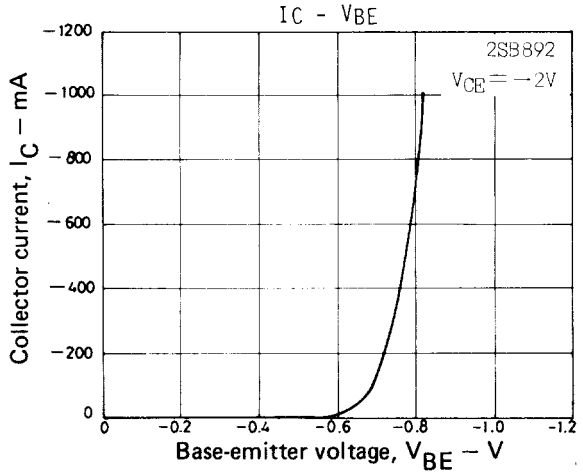
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=(–)1A, I_B=(–)50mA		0.15	0.4	V
				(–0.3)	(–0.7)	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=(–)1A, I_B=(–)50mA		(–)0.9	(–)1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=(–)10μA, I_E=0	(–)60			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=(–)1mA, R_{BE}=∞	(–)50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=(–)10μA, I_C=0	(–)6			V

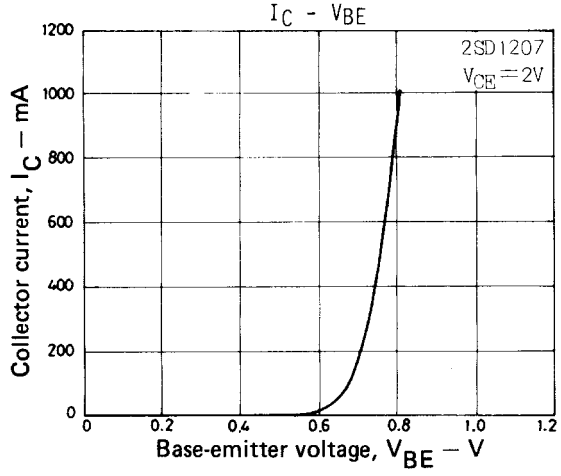


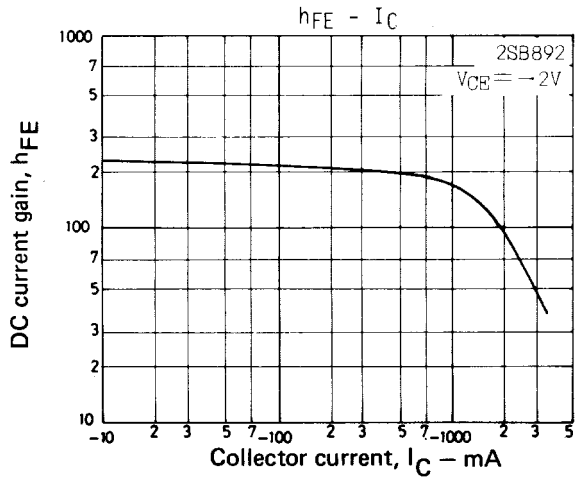


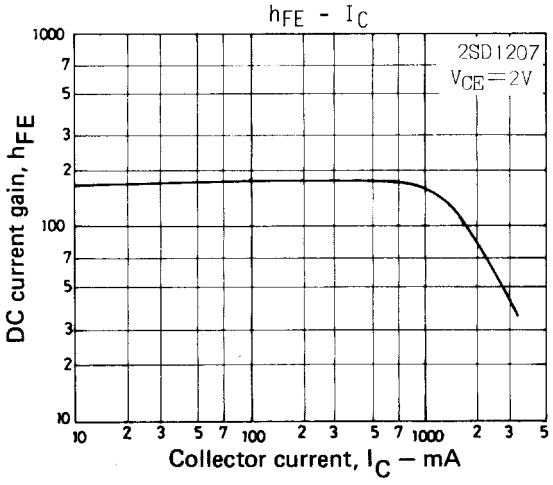


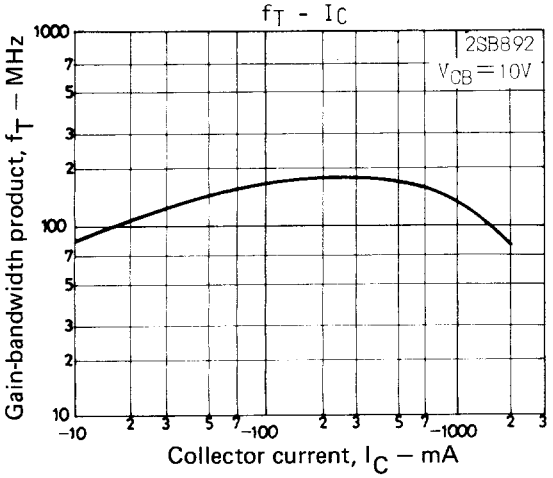


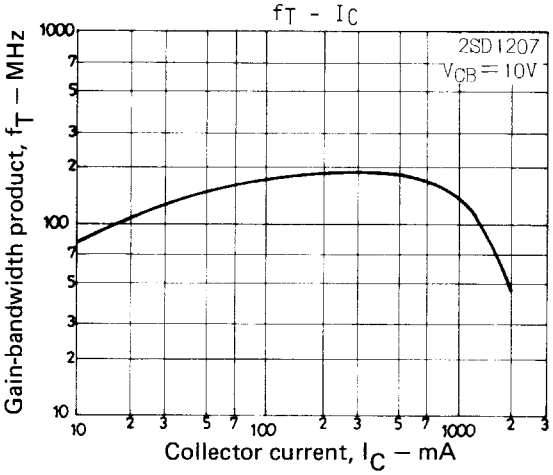


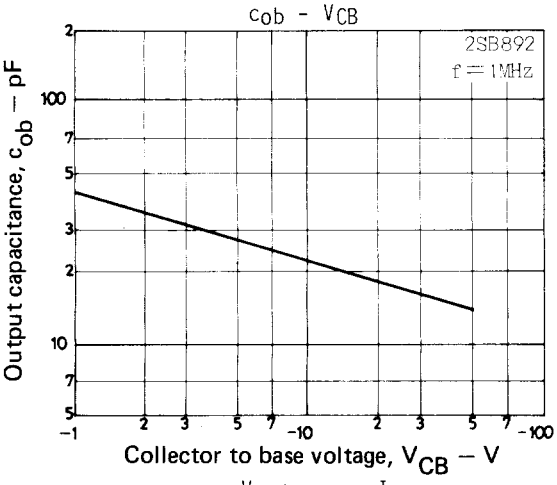


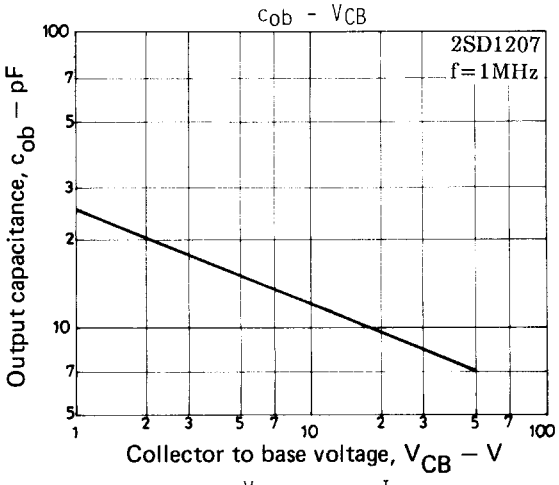

hFE - IC
2SB892
VCE=−2V
DC current gain, hFE
Collector current, IC − mA

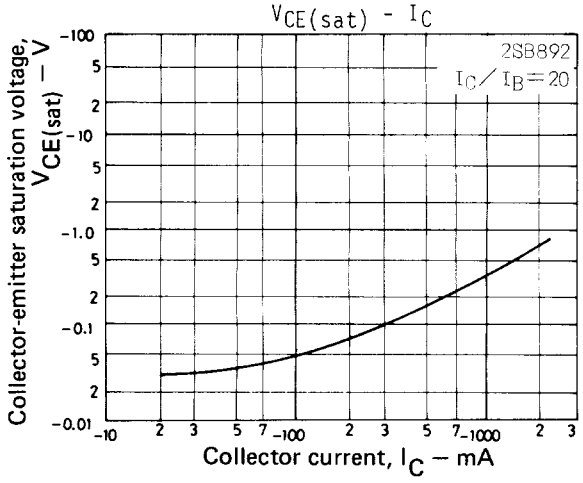

hFE - IC
2SD1207
VCE=2V
DC current gain, hFE
Collector current, IC − mA

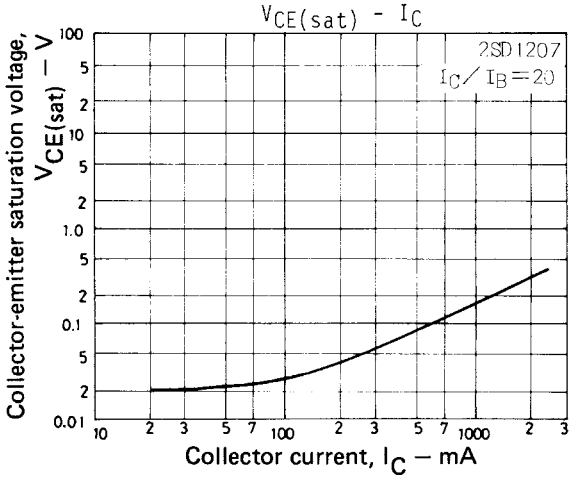

fT - IC
2SB892
VCB=10V
Gain-bandwidth product, fT − MHz
Collector current, IC − mA


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