Ordering number:1244C

PNP/NPN Epitaxial Planar Silicon Transistors

2SB985/2SD1347

Large-Current Driving Applications

Applcations

· Power supplies, relay drivers, lamp drivers, electrical equipment.

Features

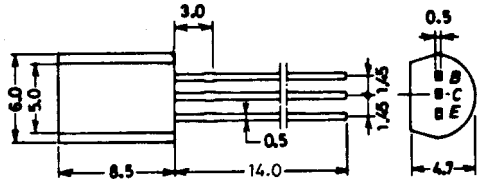
· Adoption of FBET, MBIT processes.
· Low saturation voltage.
· Large current capacity and wide ASO.

Package Dimensions

unit:mm

2006A

[2SB985/2SD1347]



EIAJ : SC-51
SANYO : MP

B : Base
C : Collector
E : Emitter

( ) : 2SB985

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		(–)3	A
Collector Current (Pulse)	I_{CP}		(–)6	A
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}=(–)40V, I_E=0			(–)1.0	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(–)4V, I_C=0			(–)1.0	μA
DC Current Gain	$h_{FE}1$	V_{CE}=(–)2V, I_C=(–)100mA	100*		560*	
	$h_{FE}2$	V_{CE}=(–)2V, I_C=(–)3A	40			
Gain-Bandwidth Product	f_T	V_{CE}=(–)10V, I_C=(–)50mA		150		MHz
Common Base Output Capacitance	C_{ob}	V_{CB}=(–)10V, f=1MHz		25(39)		pF

* : The 2SB985/2SD1347 are classified by 100mA h_{FE} as follows :

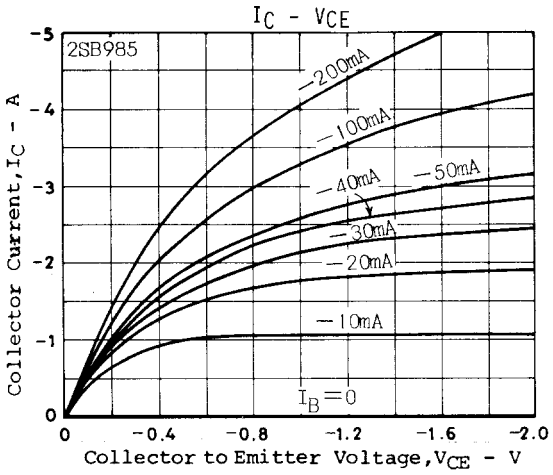
100	R	200	140	S	280	200	T	400	280	U	560

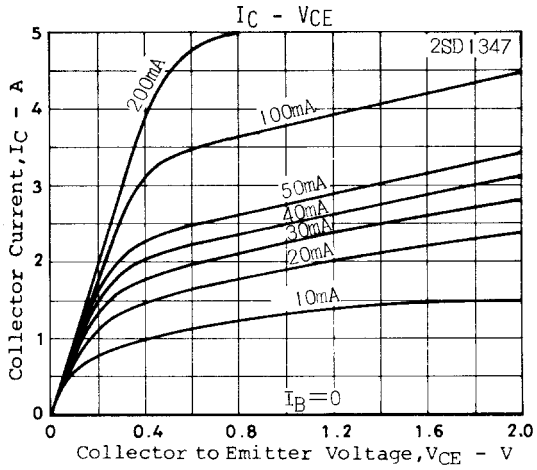
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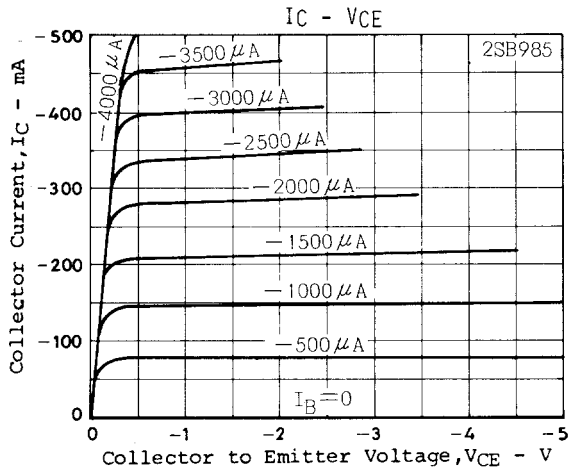
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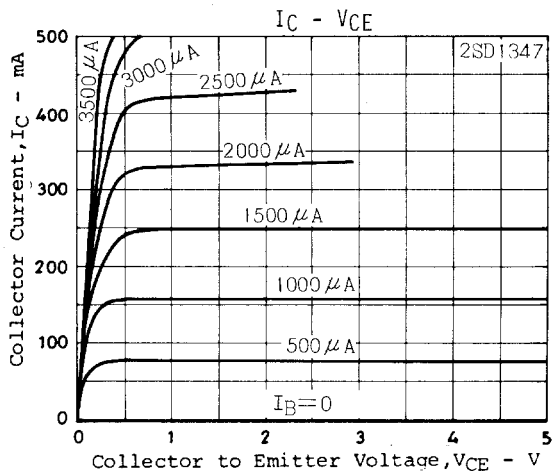
SANYO Electric Co.,Ltd. Semiconductor Bussiness Headquaters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

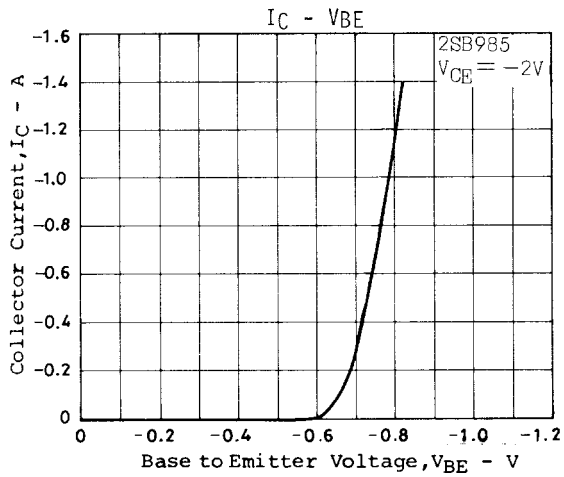
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=(–)2A, I_B=(–)100mA		0.19	0.5	V
				(–0.35)	(–0.7)	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=(–)2A, I_B=(–)100mA		(–)0.94	(–)1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	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

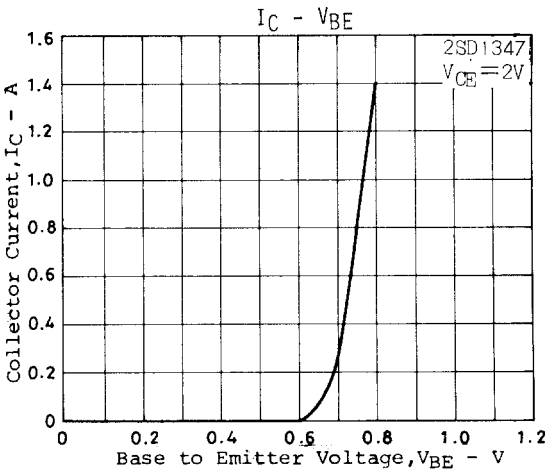


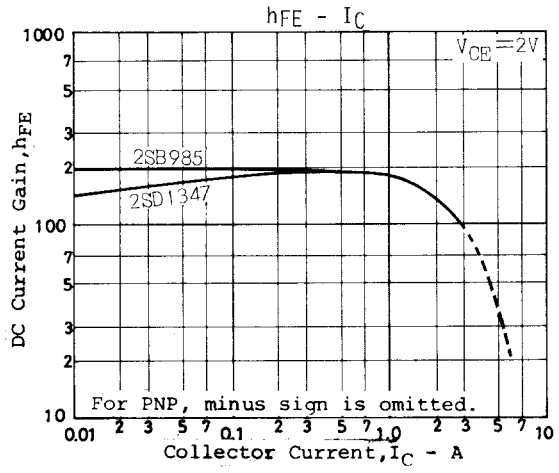


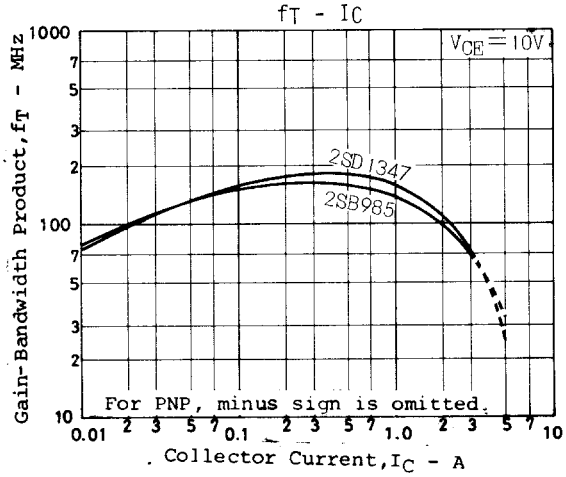


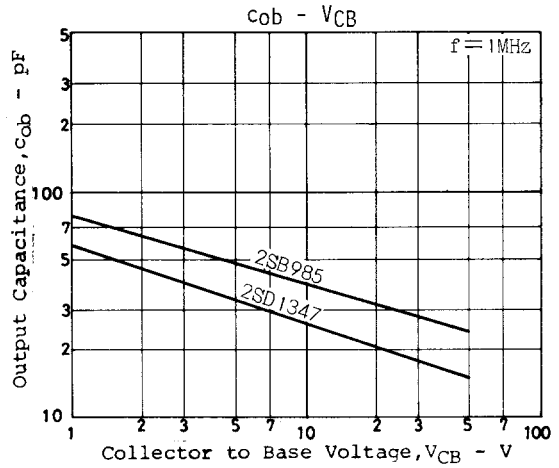


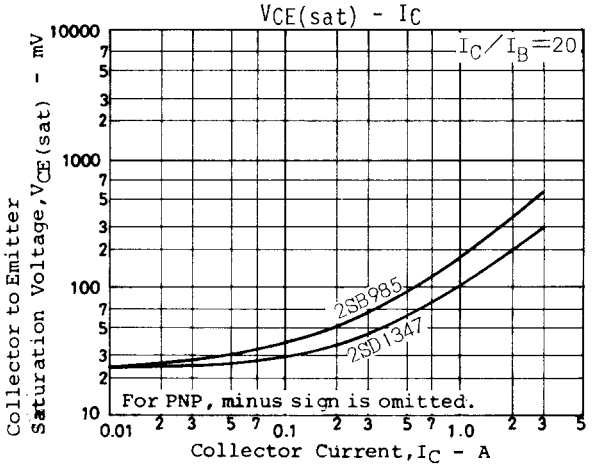


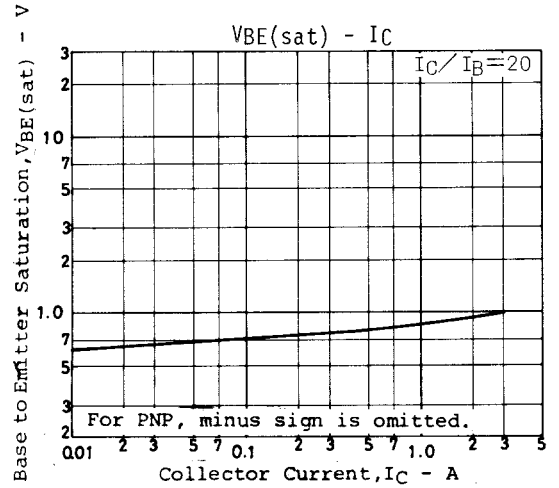


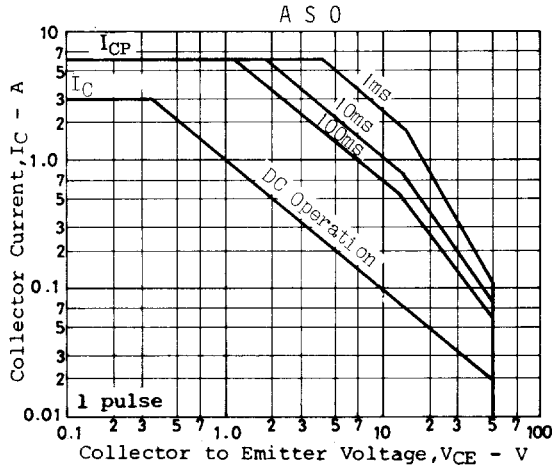

hFE - IC
VCE=2V
2SB985
2SD1347
For PNP, minus sign is omitted.
DC Current Gain,hFE
Collector Current,IC - A

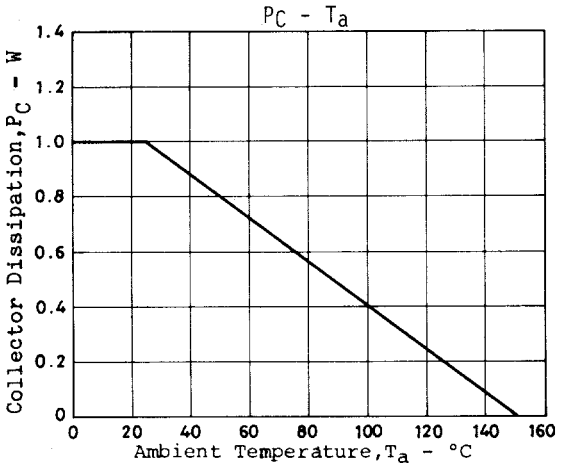

fT - IC
VCE=10V
2SD1347
2SB985
For PNP, minus sign is omitted.
Gain-Bandwidth Product,fT - MHz
Collector Current,IC - A


Cob - VCB
f=1MHz
2SB985
2SD1347
Output Capacitance,Cob - pF
Collector to Base Voltage,VCB - V


VCE(sat) - IC
IC/IB=20
2SB985
2SD1347
For PNP, minus sign is omitted.
Collector to Emitter Saturation Voltage,VCE(sat) - mV
Collector Current,IC - A


VBE(sat) - IC
IC/IB=20
For PNP, minus sign is omitted.
Base to Emitter Saturation,VBE(sat) - V
Collector Current,IC - A


A S O
ICP
IC
1ms
10ms
100ms
DC Operation
1 pulse
Collector Current,IC - A
Collector to Emitter Voltage,VCE - V


PC - Ta
Collector Dissipation,PC - W
Ambient Temperature,Ta - °C

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