Ordering number:EN2554A

PNP/NPN Epitaxial Planar Silicon Transistors

2SB1235/2SD1852

Driver Applications

Features

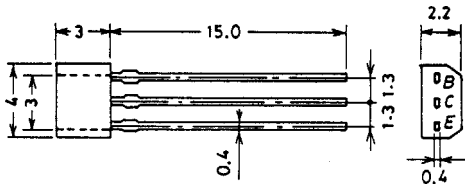
- AF amplifier, solenoid drivers, LED drivers.
- Darlington connection.
- High DC current gain.

Package Dimensions

unit:mm

2033

[2SB1235/2SD1852]



B : Base
C : Collector
E : Emitter

SANYO : SPA

( ) : 2SB1235

Specifications

Absolute Maximum Ratings at Ta = 25˚C

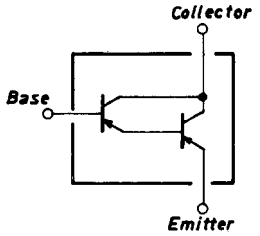
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(–)80	V
Collector-to-Emitter Voltage	V_{CEO}		(–)50	V
Emitter-to-Base Voltage	V_{EBO}		(–)10	V
Collector Current	I_C		(–)200	mA
Collector Current (Pulse)	I_{CP}		(–)400	mA
Collector Dissipation	P_C		300	mW
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

Electrical Characteristics at Ta = 25˚C

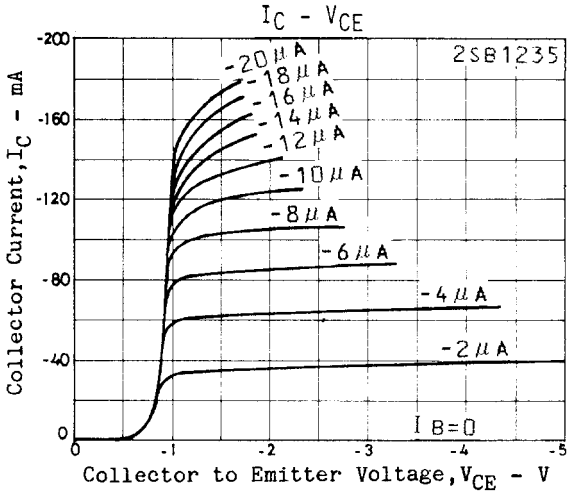
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=(–)60V, I_E=0			(–)100	nA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(–)8V, I_C=0			(–)100	nA
DC Current Gain	$h_{FE}1$	V_{CE}=(–)2V, I_C=(–)10mA	5000			
	$h_{FE}2$	V_{CE}=(–)2V, I_C=(–)100mA	4000			
			(3000)			
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=(–)100mA, I_B=(–)100µA		(–)0.9	(–)1.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=(–)100mA, I_B=(–)100µA		(–)1.5	(–)2.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=(–)10µA, I_E=0	(–)80			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_C=(–)10µA, I_C=0	(–)10			V

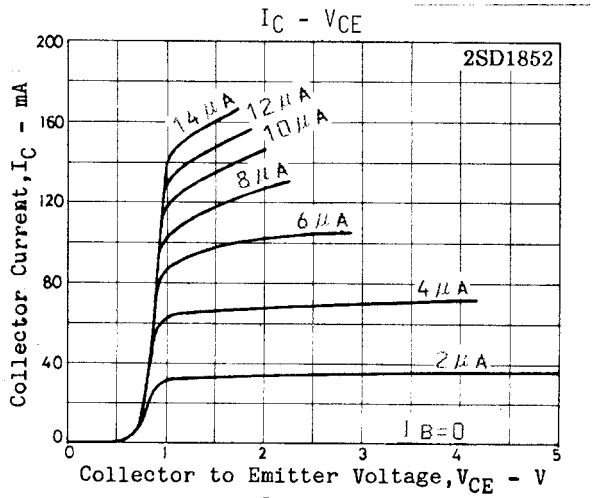
SANYO Electric Co.,Ltd. Semiconductor Bussiness Headquaters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

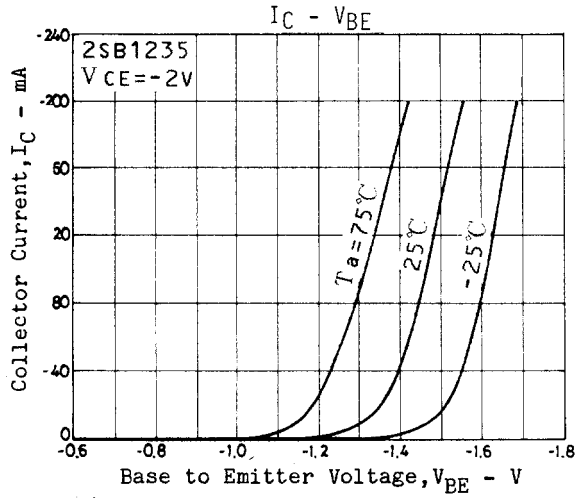
Electrical Connection

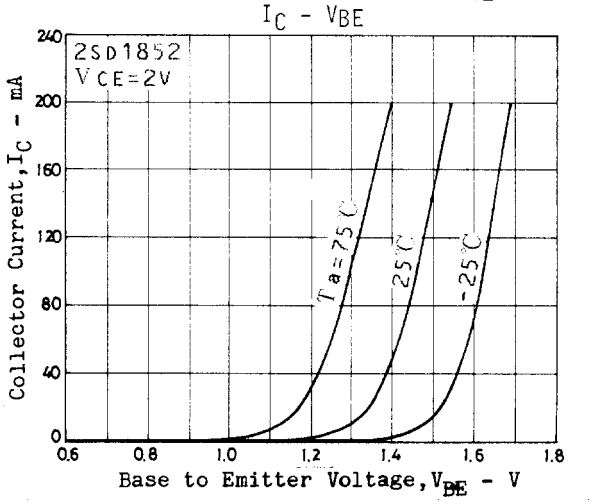


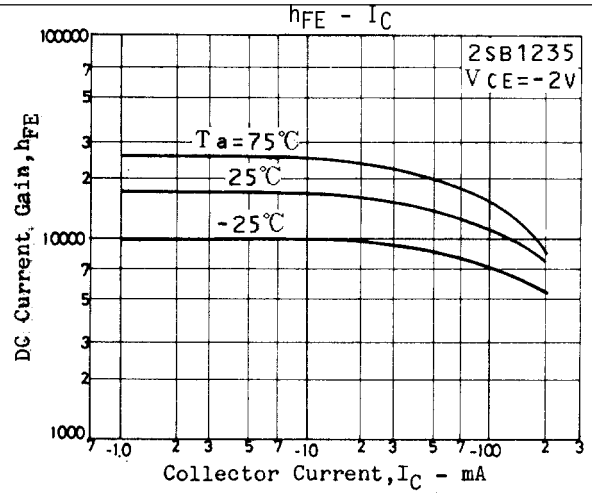
(For NPN, the polarity is reversed.)

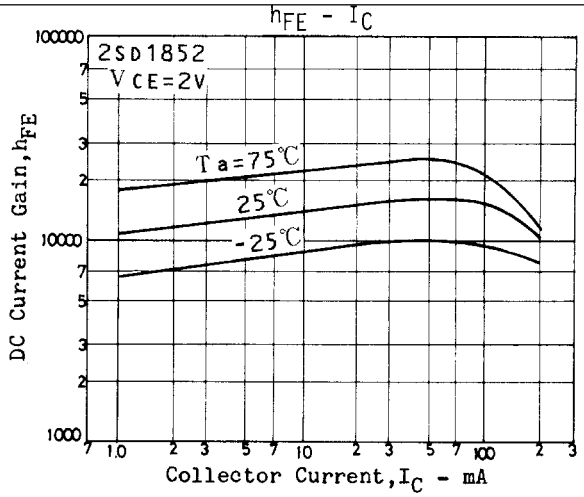


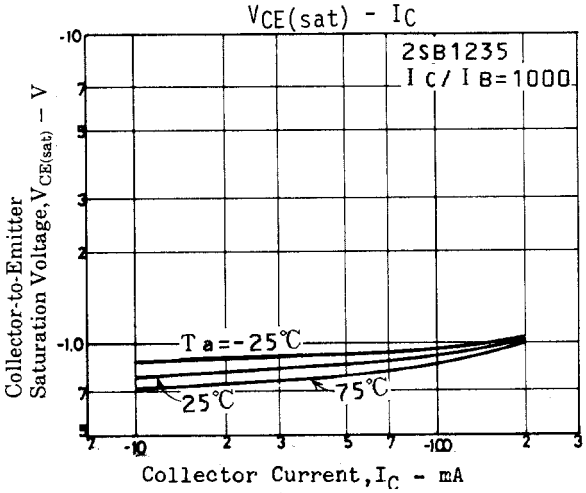


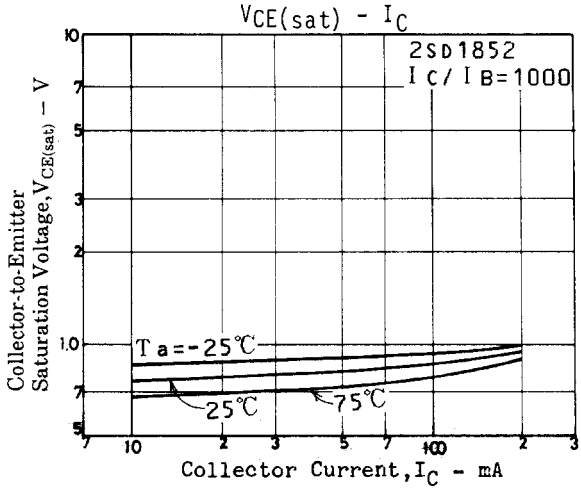


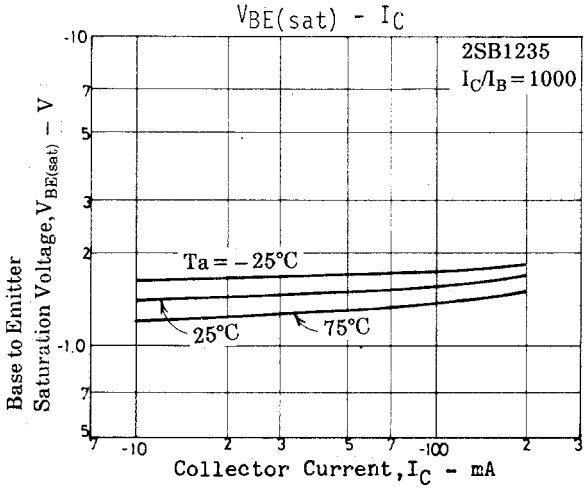


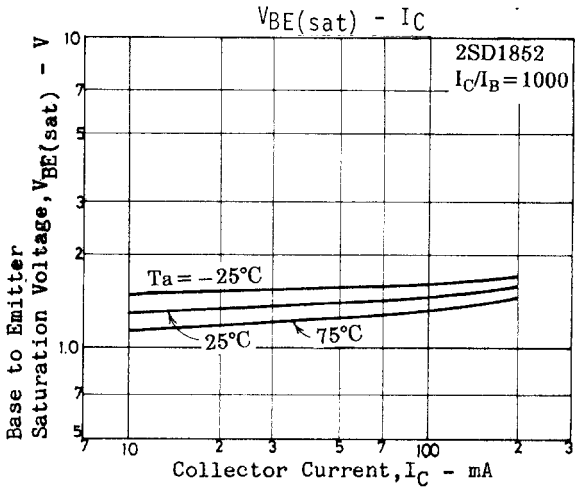

hFE - IC
2SB1235
VCE=-2V
Ta=75℃
25℃
-25℃
DC Current Gain, hFE
Collector Current, IC - mA

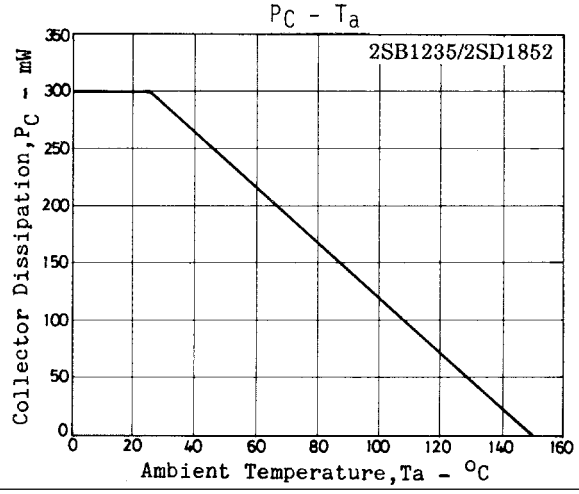

hFE - IC
2SD1852
VCE=2V
Ta=75℃
25℃
-25℃
DC Current Gain, hFE
Collector Current, IC - mA


VCE(sat) - IC
2SB1235
IC/IB=1000
Ta=-25℃
25℃
75℃
Collector-to-Emitter Saturation Voltage, VCE(sat) - V
Collector Current, IC - mA


VCE(sat) - IC
2SD1852
IC/IB=1000
Ta=-25℃
25℃
75℃
Collector-to-Emitter Saturation Voltage, VCE(sat) - V
Collector Current, IC - mA


VBE(sat) - IC
2SB1235
IC/IB=1000
Ta=-25℃
25℃
75℃
Base to Emitter Saturation Voltage, VBE(sat) - V
Collector Current, IC - mA


VBE(sat) - IC
2SD1852
IC/IB=1000
Ta=-25℃
25℃
75℃
Base to Emitter Saturation Voltage, VBE(sat) - V
Collector Current, IC - mA


PC - Ta
2SB1235/2SD1852
Collector Dissipation, PC - mW
Ambient Temperature, Ta - °C