



2SB1234/2SD1851

Driver Applications

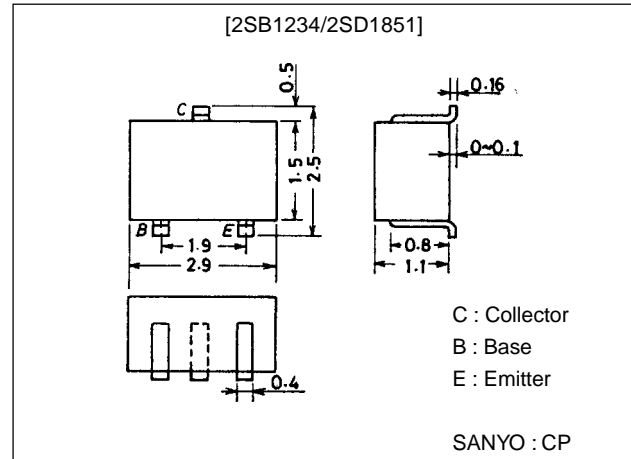
Features

- AF amplifier, solenoid drivers, LED drivers.
- Darlington connection.
- High DC current gain.
- Very small-sized package permitting sets to be made smaller and slimer.

Package Dimensions

unit:mm

2018A



() : 2SB1234

Specifications

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		(-)80	V
Collector-to-Emitter Voltage	V_{CE0}		(-)50	V
Emitter-to-Base Voltage	V_{EB0}		(-)10	V
Collector Current	I_C		(-)200	mA
Collector Current (Pulse)	I_{CP}		(-)400	mA
Collector Dissipation	P_C		200	mW
Junction Temperature	T_j		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)60\text{V}, I_E = 0$			(-)100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)8\text{V}, I_C = 0$			(-)100	nA
DC Current Gain	h_{FE1}	$V_{CE} = (-)2\text{V}, I_C = (-)10\text{mA}$	5000			
	h_{FE2}	$V_{CE} = (-)2\text{V}, I_C = (-)100\mu\text{A}$	4000 (3000)			
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)100\text{mA}, I_B = (-)100\mu\text{A}$		(-)0.9	(-)1.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)100\text{mA}, I_B = (-)100\mu\text{A}$		(-)1.5	(-)2.0	V

Marking : 2SB1234 : PL
2SD1851 : XY

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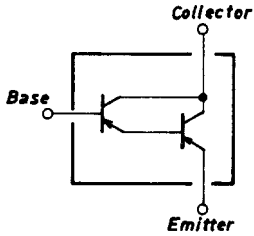
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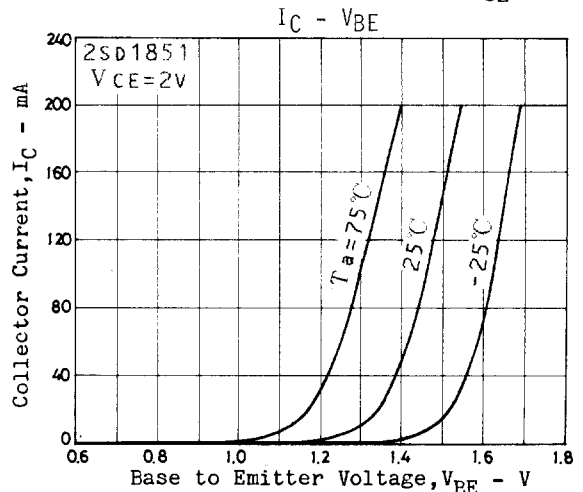
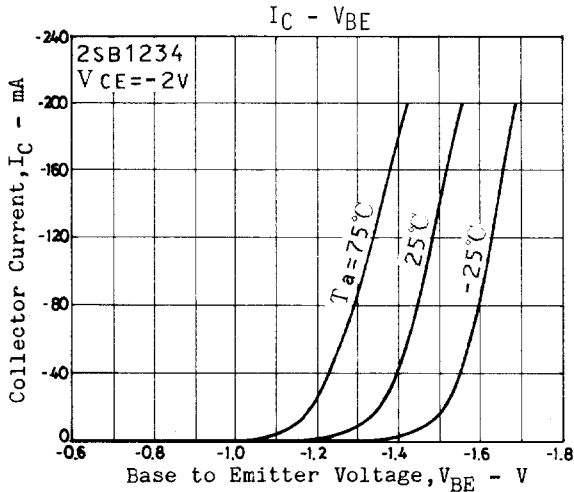
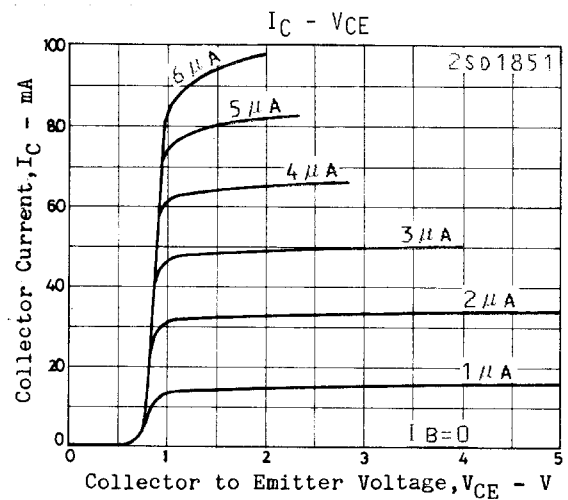
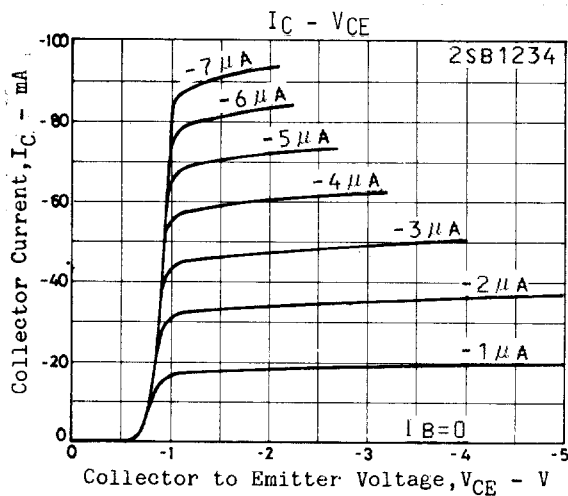
2SB1234/2SD1851

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu A, I_E = 0$	(-)80			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{BE} = \infty$	(-)50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_C = (-)10\mu A, I_C = 0$	(-)10			V

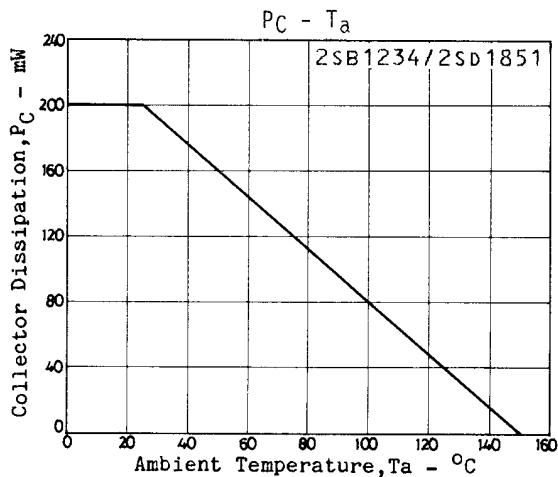
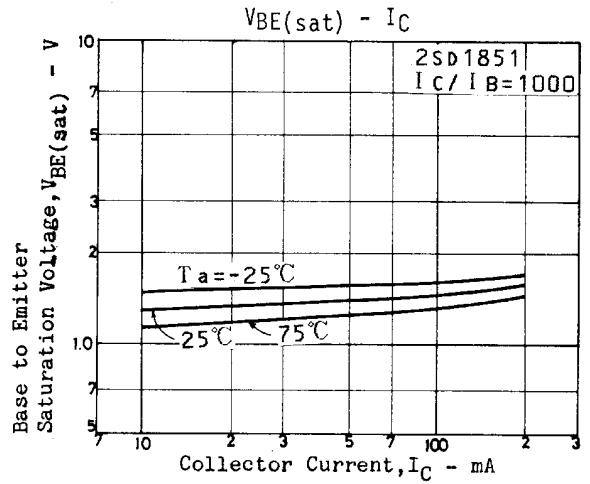
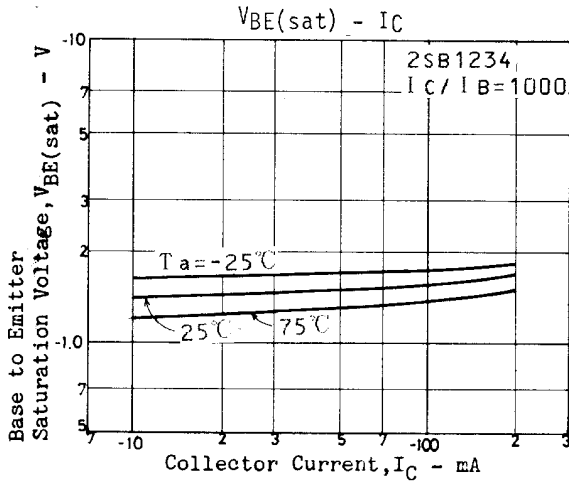
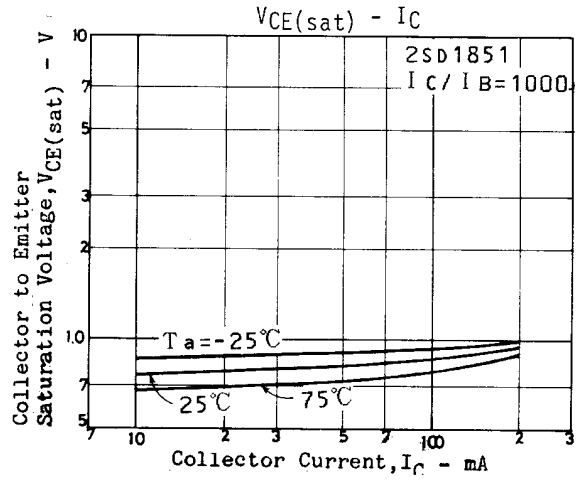
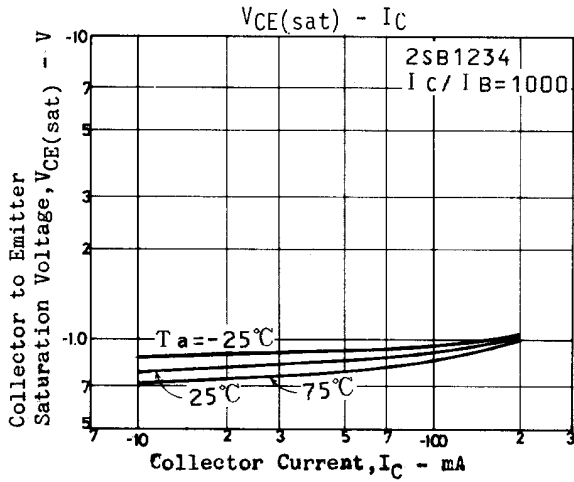
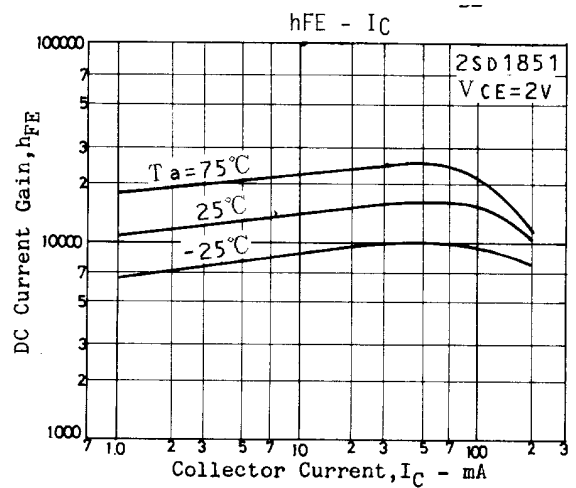
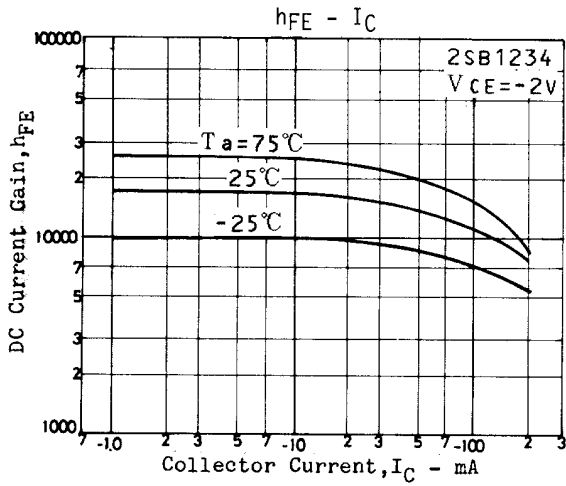
Electrical Connection



(For NPN, the polarity is reversed.)



2SB1234/2SD1851



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