

2SB1231 : PNP Epitaxial Planar Silicon Transistor
2SD1841 : NPN Triple Diffused Planar Silicon Transistor



2SB1231/2SD1841

100V/25A Switching Applications

Applications

- Motor drivers, relay drivers, converters, and other general high-current switching applications.

Features

- Large current capacity and wide ASO.
- Low saturation voltage.

() : 2SB1231

Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		(-110	V
Collector-to-Emitter Voltage	V_{CE0}		(-100	V
Emitter-to-Base Voltage	V_{EB0}		(-6	V
Collector Current	I_C		(-25	A
Collector Current (Pulse)	I_{CP}		(-40	A
Base Current	I_B		(-8	A
Collector Dissipation	P_C		3.0	W
		$T_C=25^\circ\text{C}$	120	W
Junction Temperature	T_J		150	°C
Storage Temperature	T_{stg}		-55 to +150	°C

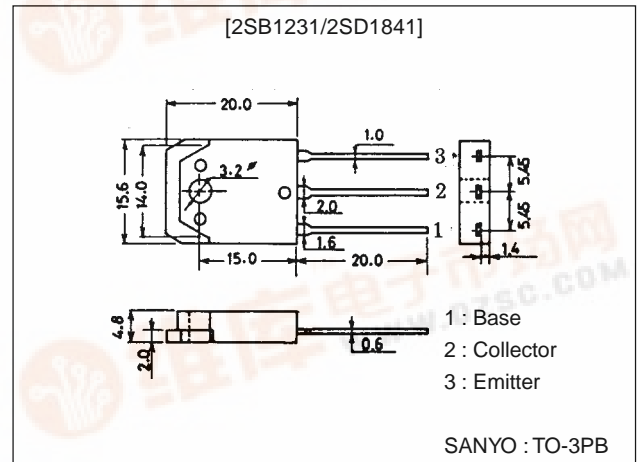
Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CB0}	$V_{CB}=-100\text{V}, I_E=0$			(-0.1	mA
Emitter Cutoff Current	I_{EB0}	$V_{EB}=-5\text{V}, I_C=0$			(-0.1	mA
DC Current Gain	h_{FE1}	$V_{CE}=-2\text{V}, I_C=-2.5\text{A}$	50*		140*	
	h_{FE2}	$V_{CE}=-2\text{V}, I_C=-10\text{A}$	20			
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-10\text{A}, I_B=-1\text{A}$			(-0.8	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-10\text{A}, I_B=-1\text{A}$			(-1.5	V

Package Dimensions

unit:mm

2022A



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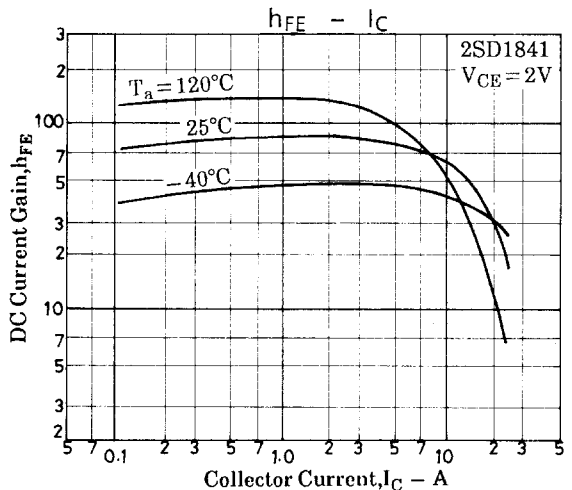
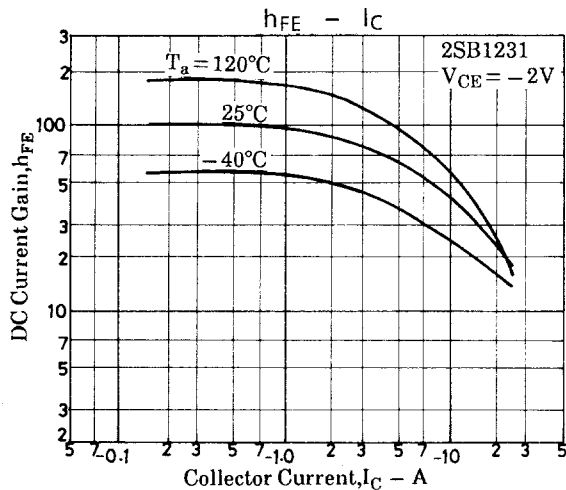
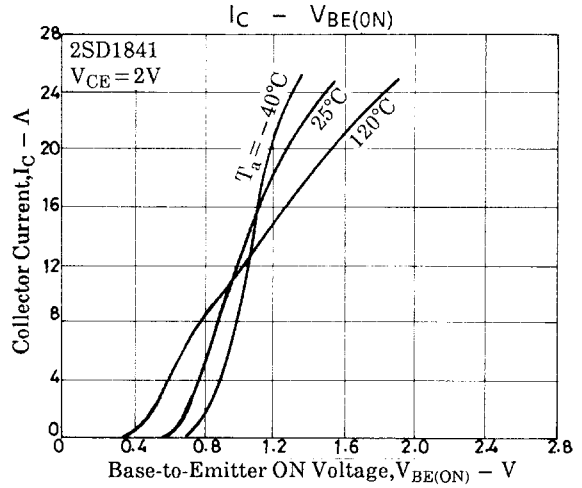
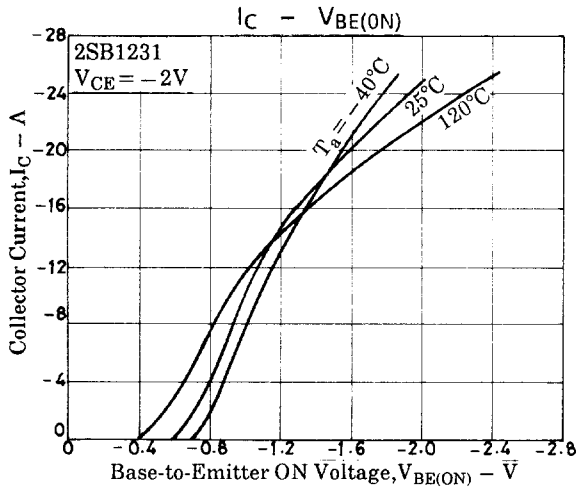
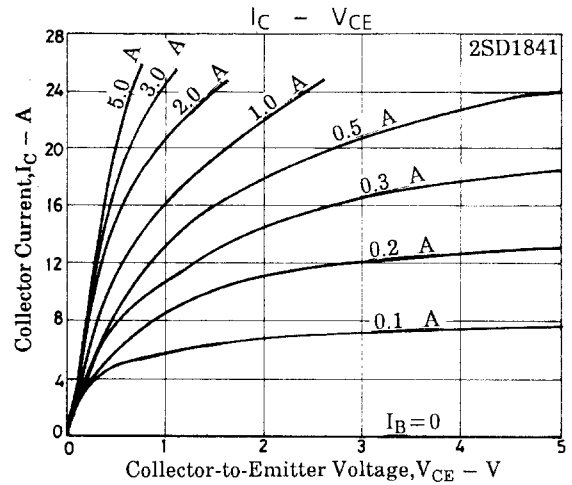
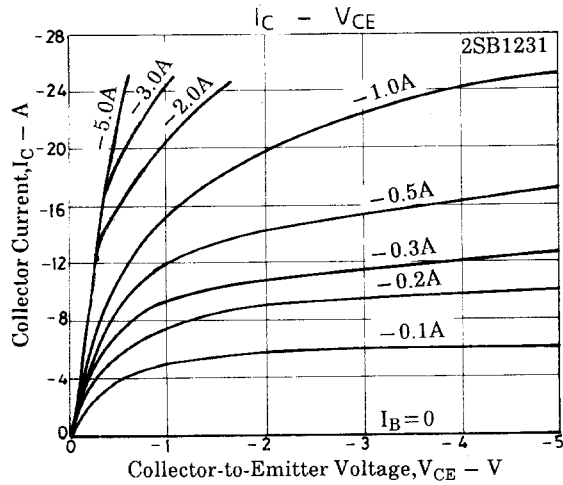


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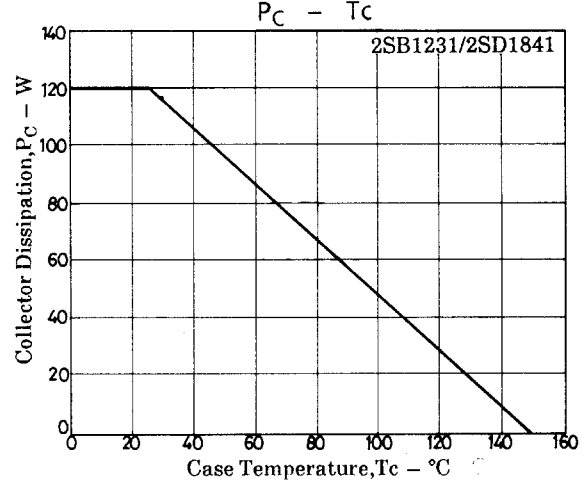
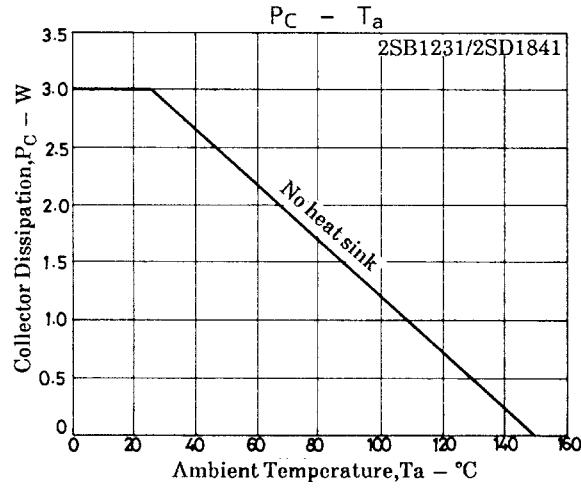
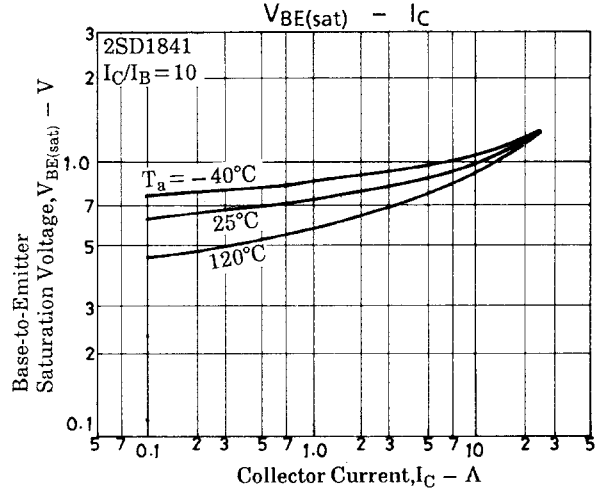
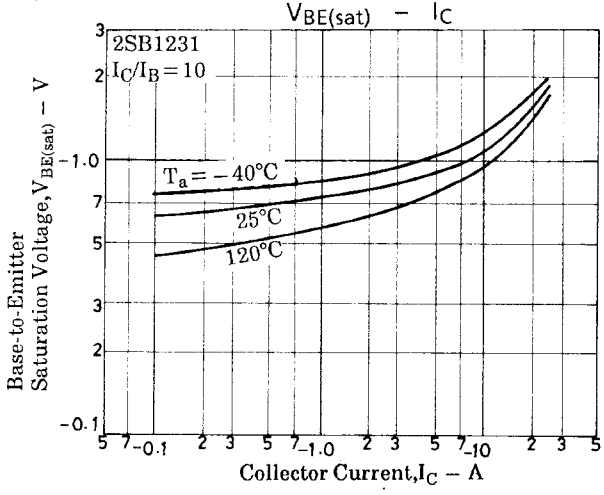
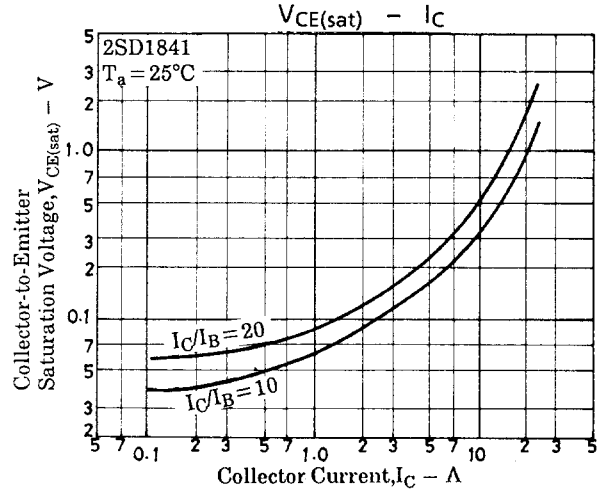
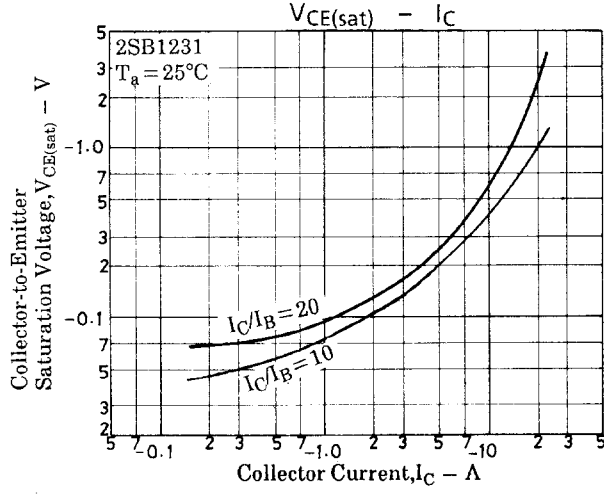
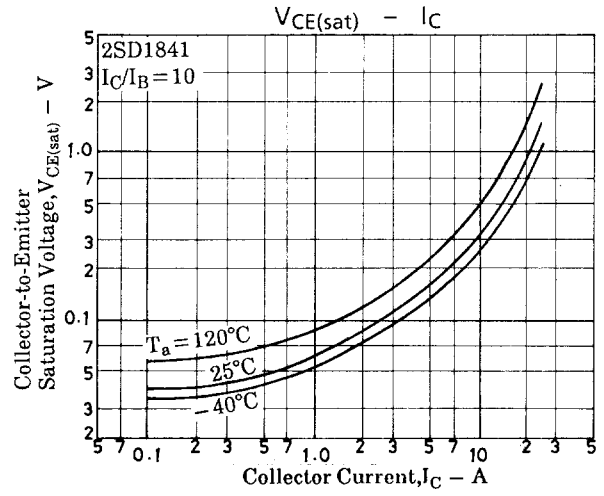
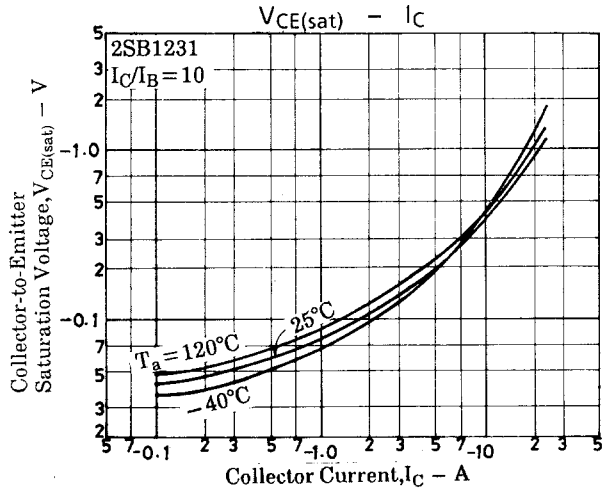
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)1\text{mA}, I_E = 0$	(-)110			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)5\text{mA}, R_{BE} = \infty$	(-)100			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_C = (-)1\text{mA}, I_C = 0$	(-)6			V

* : For the h_{FE1} of the 2SB1231/2SD1841, specify at least two ranks in principle.

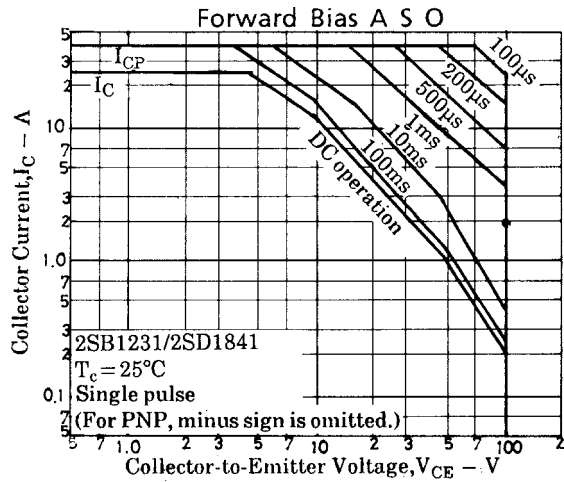
50	P	100	70	Q	140
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