



2SB1232/2SD1842

100V/40A 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.

() : 2SB1232

Specifications

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

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		(-)40	A
Collector Current (Pulse)	I_{CP}		(-)65	A
Base Current	I_B		(-)12	A
Collector Dissipation	P_C		3.0	W
		$T_c=25^\circ\text{C}$	150	W
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}	$V_{CB}=(-)100\text{V}, I_E=0$			(-)0.1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)5\text{V}, I_C=0$			(-)0.1	mA
DC Current Gain	h_{FE1}	$V_{CE}=(-)2\text{V}, I_C=(-)4\text{A}$	50*		140*	
	h_{FE2}	$V_{CE}=(-)2\text{V}, I_C=(-)16\text{A}$	20			
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)16\text{A}, I_B=(-)1.6\text{A}$			(-)0.8	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)16\text{A}, I_B=(-)1.6\text{A}$			(-)1.5	V

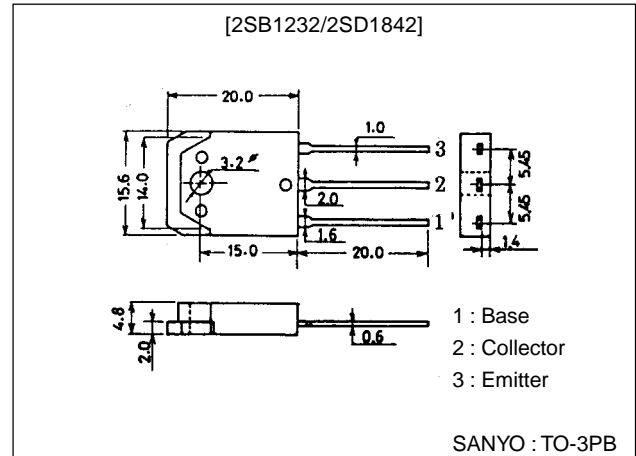
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Package Dimensions

unit:mm

2022A

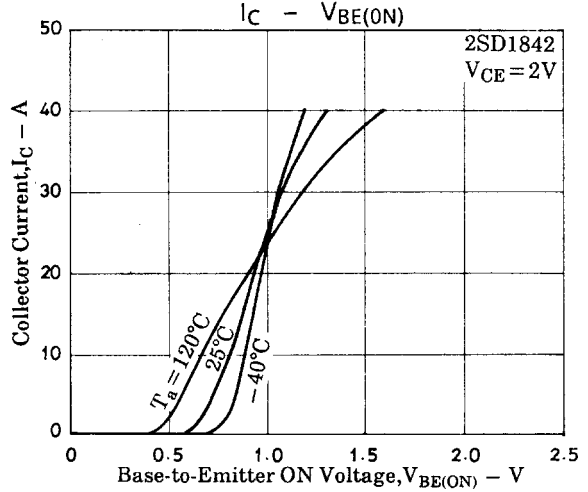
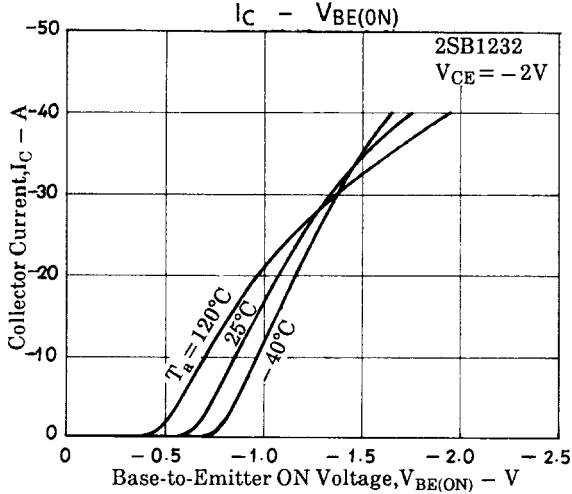
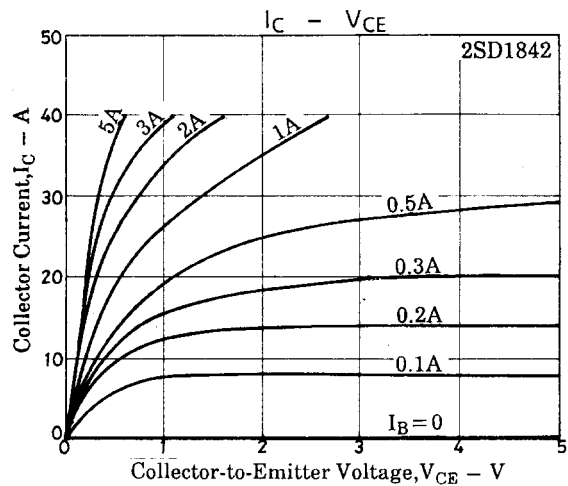
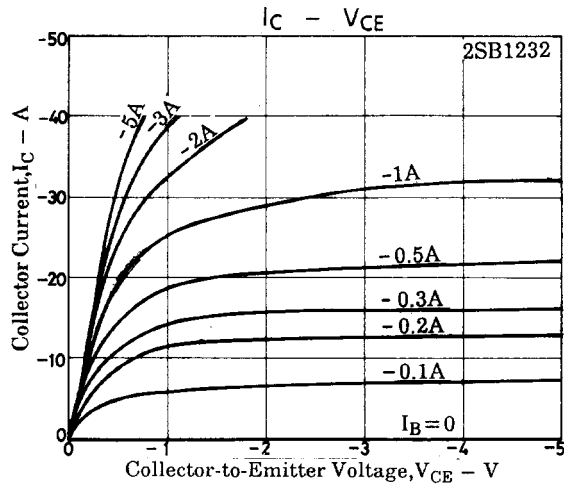


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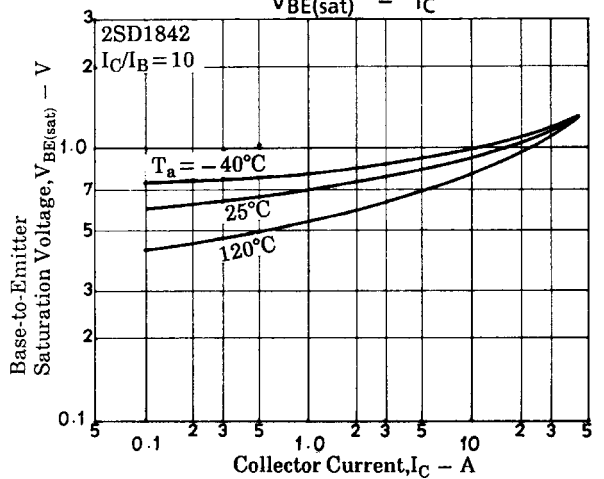
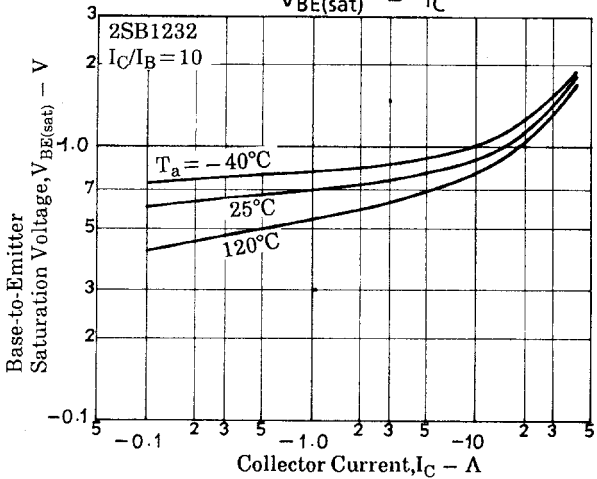
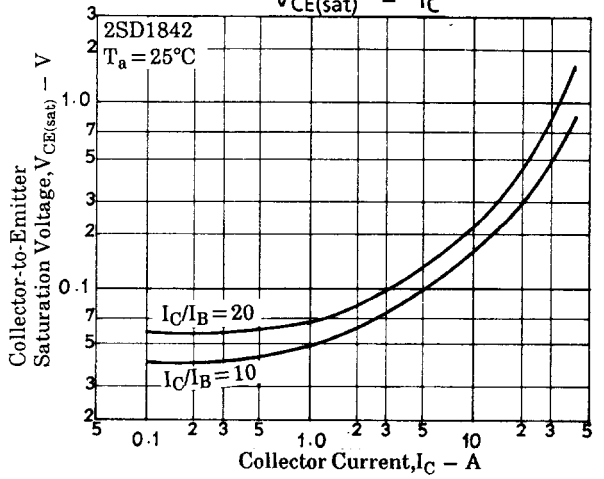
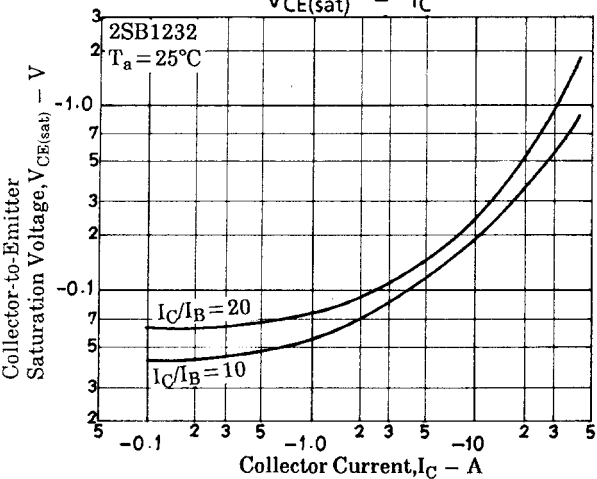
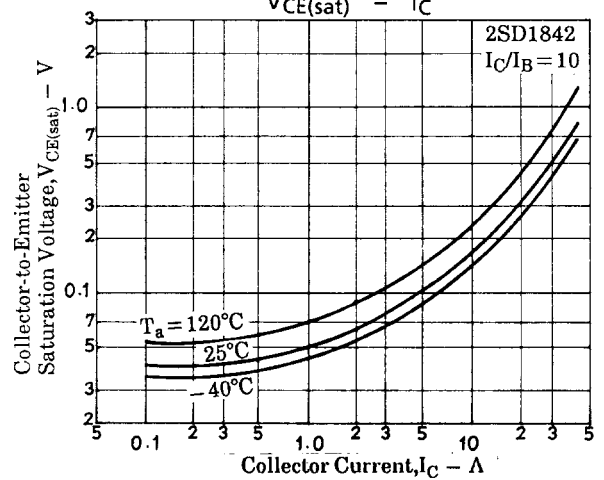
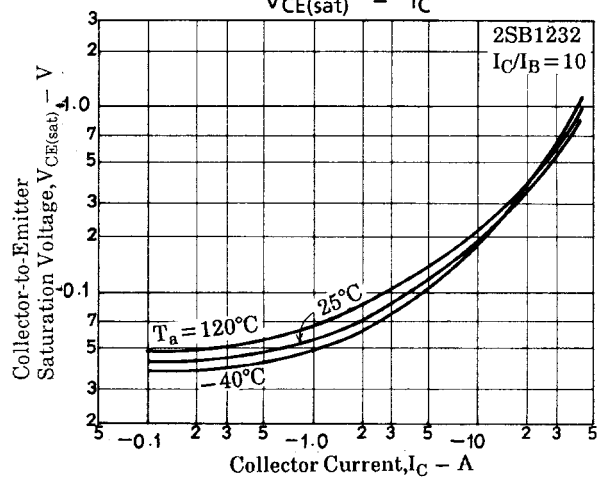
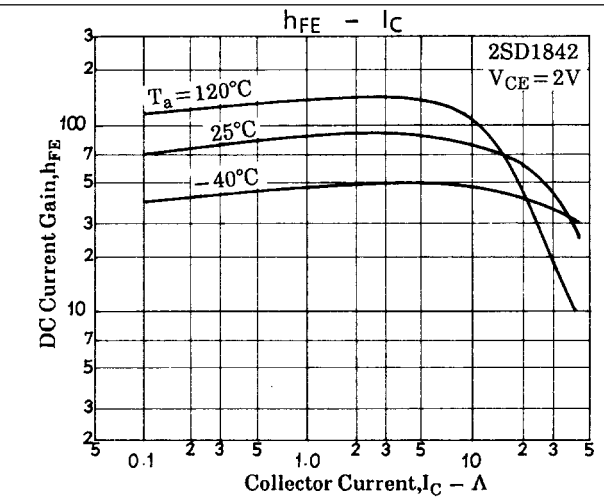
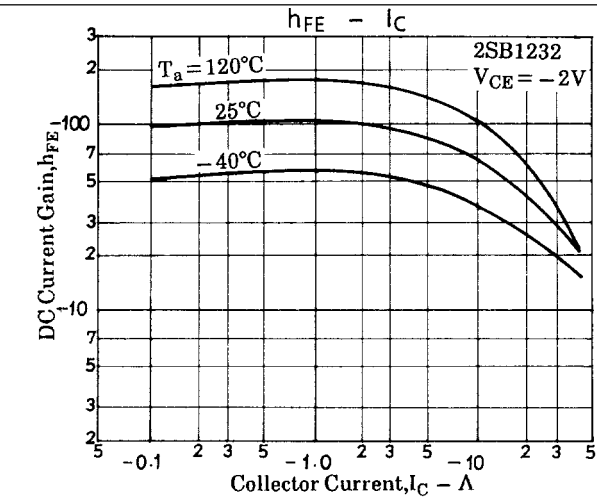
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)1\text{mA}, I_E = 0$	(-)110			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)5\text{mA}, R_{BE} = \infty$	(-)100			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$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

* : For the $h_{FE}I$ of the 2SB1232/2SD1842, specify at least two ranks in principle.

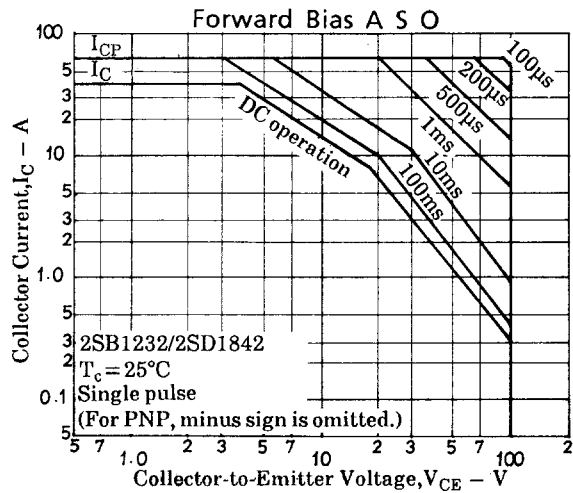
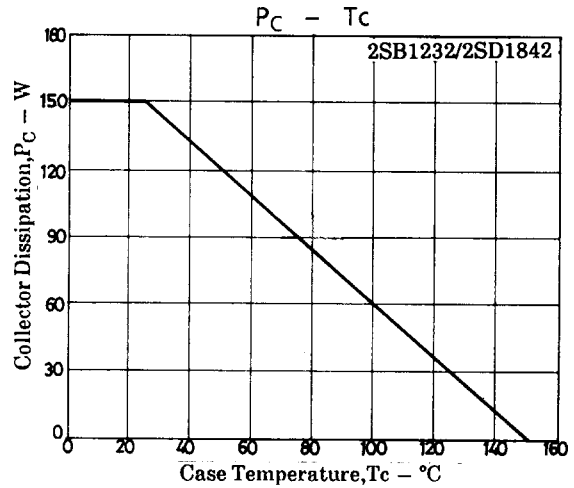
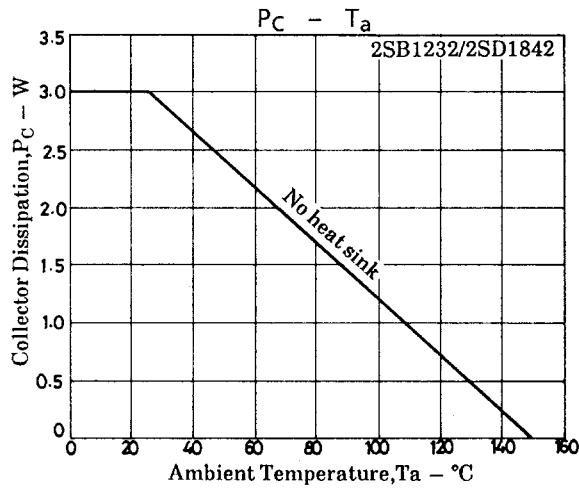
50	P	100	70	Q	140
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