



SANYO Semiconductors

DATA SHEET

2SB1230 / 2SD1840 — PNP / NPN Epitaxial Planar Silicon Transistors

High-Current 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.

Specifications () : 2SB1230

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 _{CEO}		(-)100	V
Emitter-to-Base Voltage	V _{EBO}		(-)6	V
Collector Current	I _C		(-)15	A
Collector Current (Pulse)	I _{CP}		(-)25	A
Base Current	I _B		(-)5	A
Collector Dissipation	P _C		3.0	W
		T _C =25°C	100	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} =(-)100V, I _E =0A			(-)0.1	mA
Emitter Cutoff Current	I _{EBO}	V _{EB} =(-)5V, I _C =0A			(-)0.1	mA
DC Current Gain	h _{FE1}	V _{CE} =(-)2V, I _C =(-)1.5A	50*		140*	
	h _{FE2}	V _{CE} =(-)2V, I _C =(-)6A	20			
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =(-)6A, I _B =(-)0.6A			(-)0.8	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =(-)6A, I _B =(-)0.6A			(-)1.5	V

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* : For the h_{FE1} of the 2SB1230 / 2SD1840, specify two ranks or more in principle.

Rank	P	Q
h _{FE}	50 to 100	70 to 140

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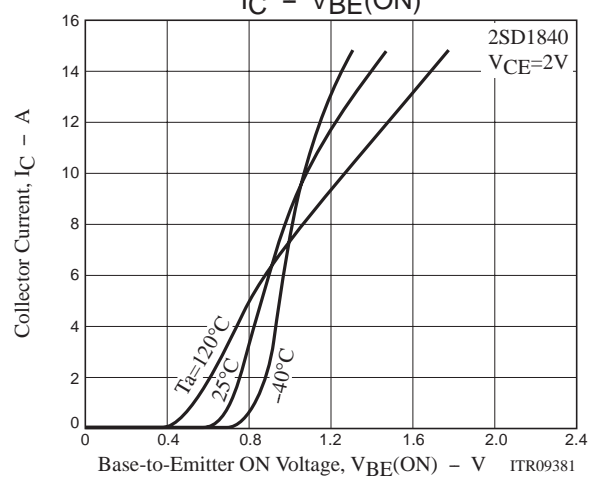
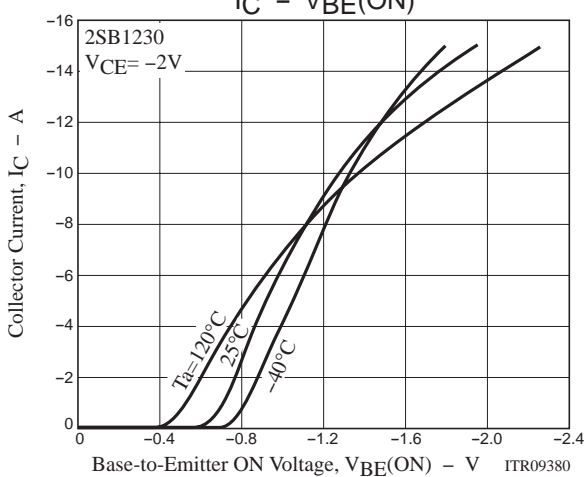
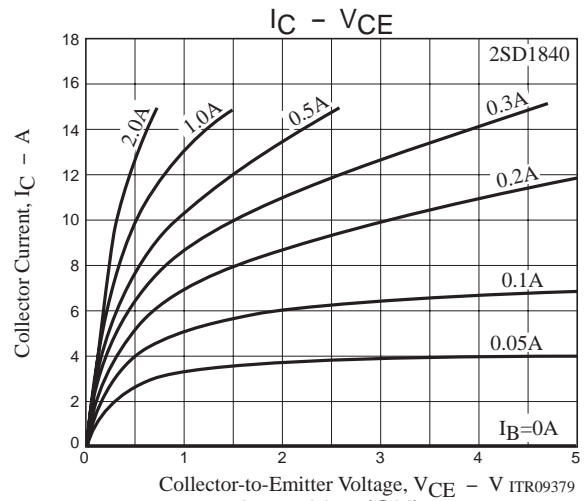
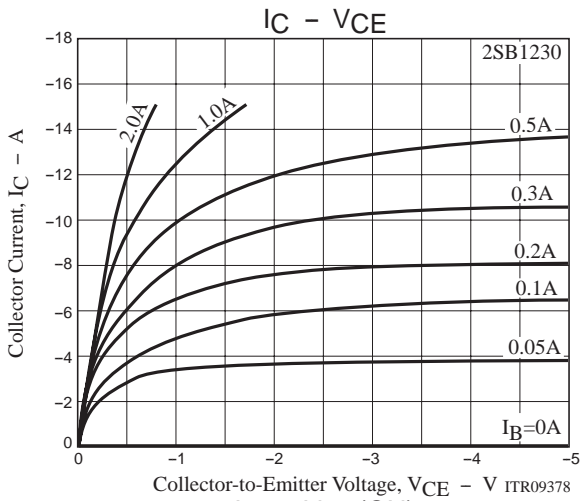
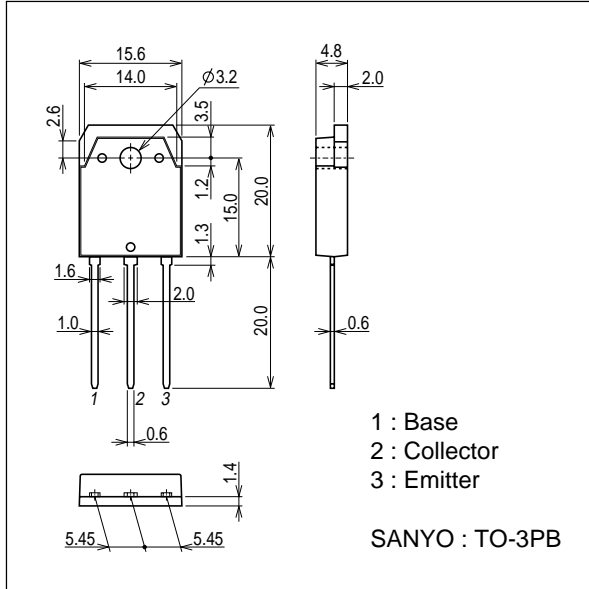
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)1mA, I_E = 0A$	(-)110			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)5mA, R_{BE} = \infty$	(-)100			V
Emitter-to-Base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

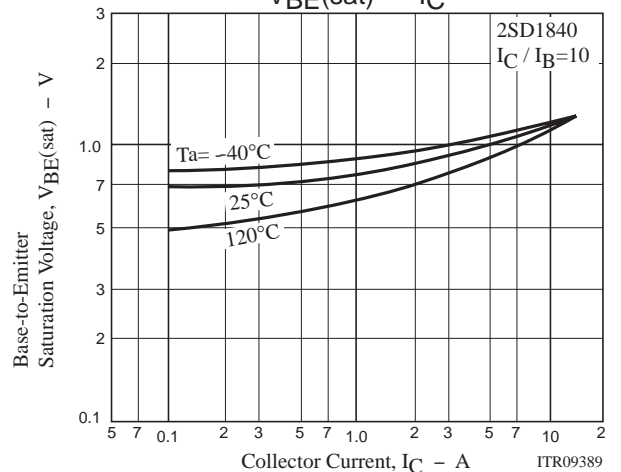
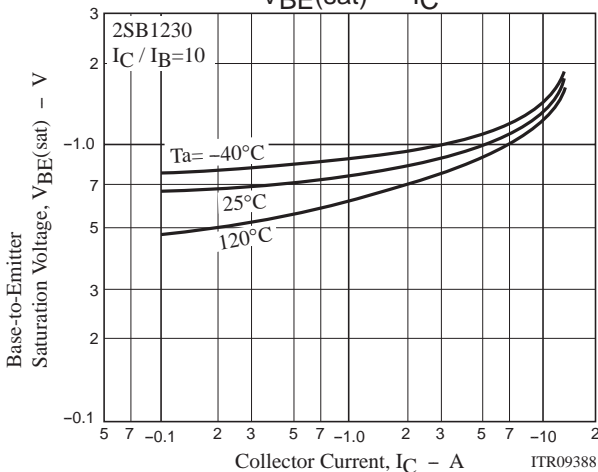
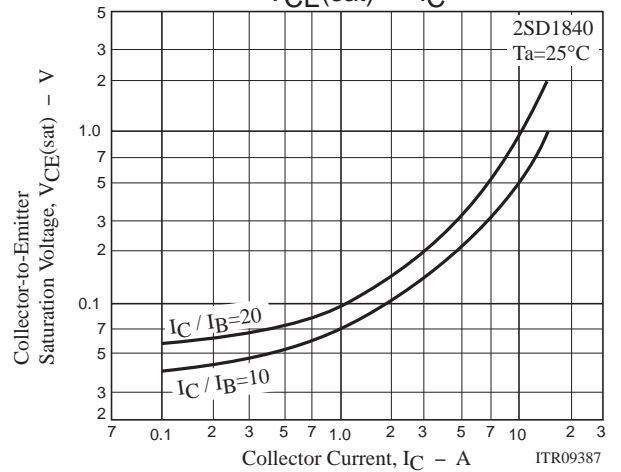
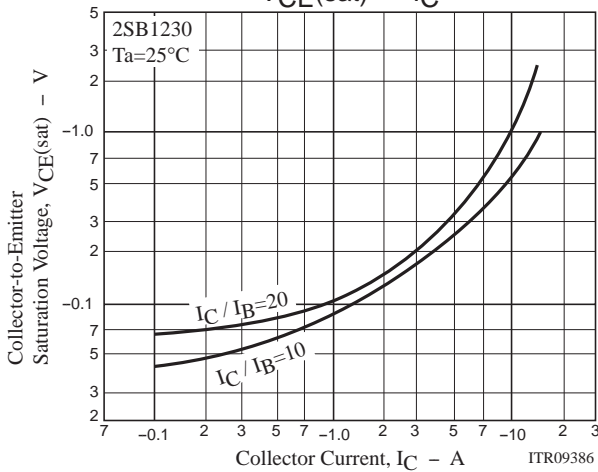
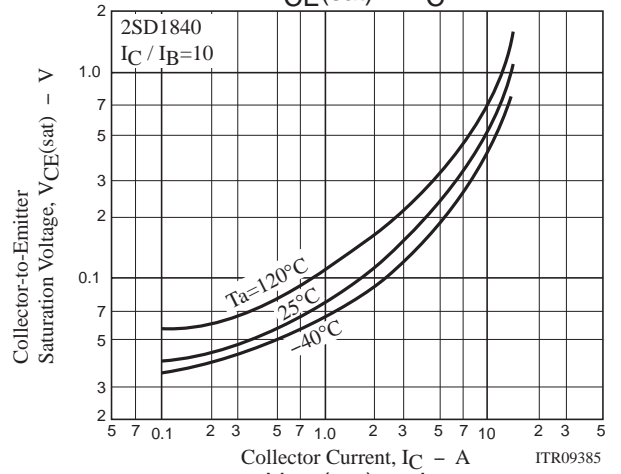
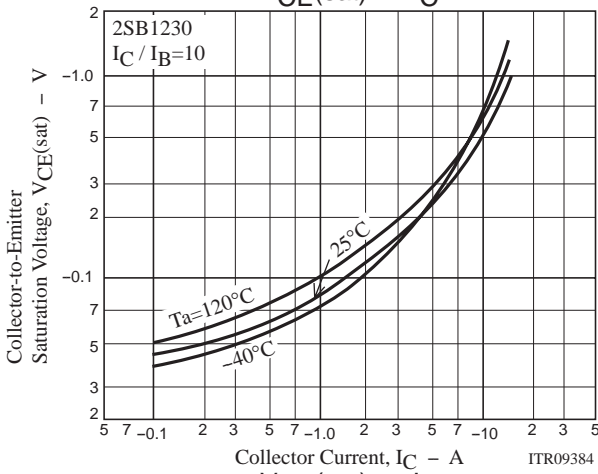
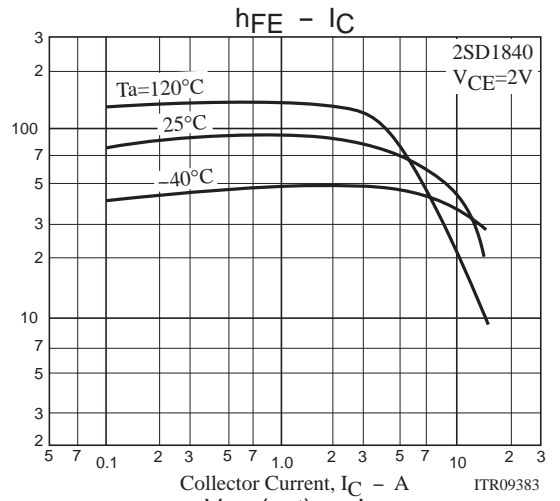
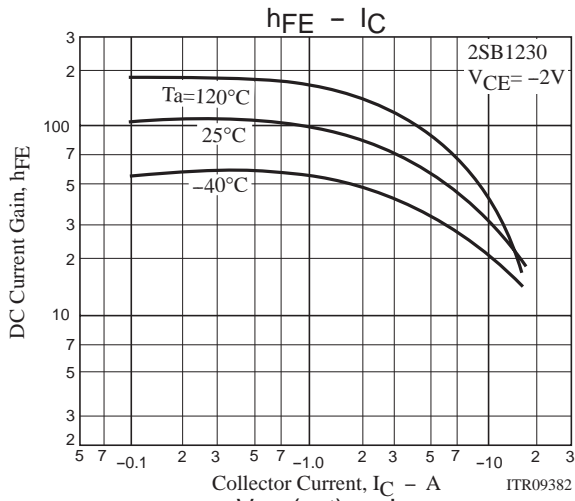
Package Dimensions

unit : mm

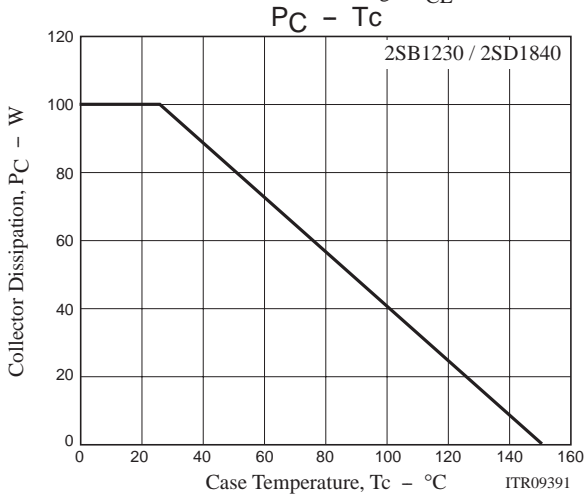
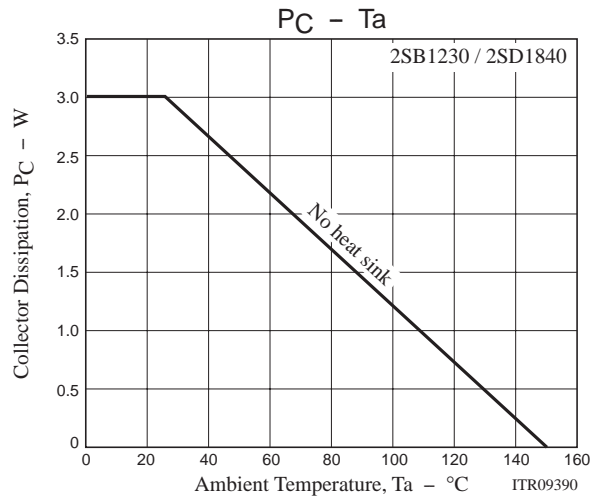
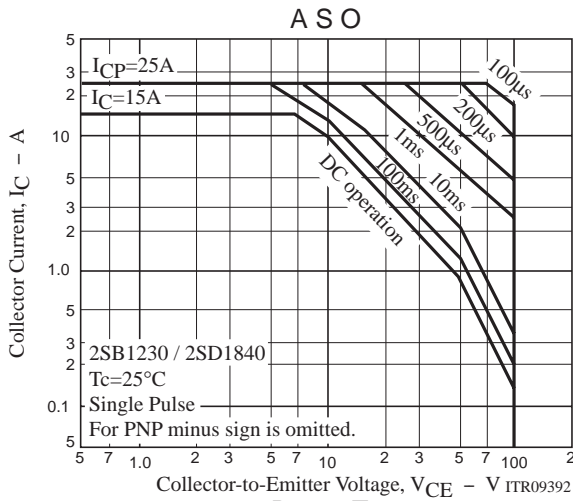
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