



2SB1125/2SD1625

Driver Applications

Applications

- Motor drivers, printer hammer drivers, relay drivers, voltage regulator control.

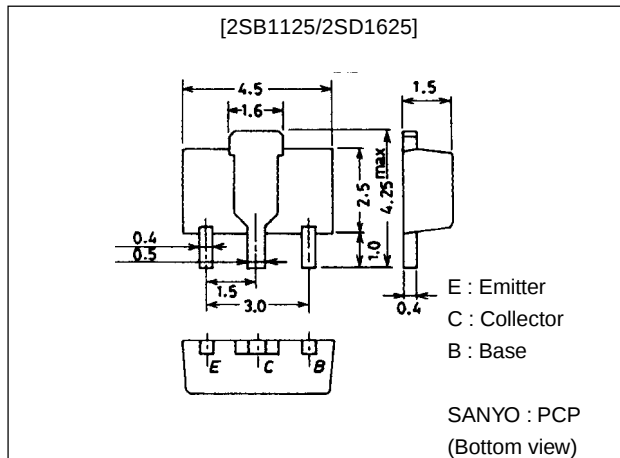
Features

- High DC current gain.
- Large current capacity and wide ASO.
- Very small size making it easy to provide high-density, small-sized hybrid IC'.

Package Dimensions

unit:mm

2038



() : 2SB1125

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		(-)0.7	A
Collector Current (Pulse)	I_{CP}		(-)2	A
Collector Dissipation	P_C		500	mW
		Mounted on ceramic board (250mm ² ×0.8mm)	1.3	W
Junction Temperature	T_J		150	°C
Storage Temperature	T_{stg}		-55 to +150	°C

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-)40V, I_E=0$			$(-)100$	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)8V, I_C=0$			$(-)100$	nA
DC Current Gain	h_{FE1}	$V_{CE}=(-)2V, I_C=(-)50mA$	5000			
	h_{FE2}	$V_{CE}=(-)2V, I_C=(-)500mA$	4000			
			(3000)			
Gain-Bandwidth Product	f_T	$V_{CE}=(-)5V, I_C=(-)50mA$		200		MHz
				(170)		MHz

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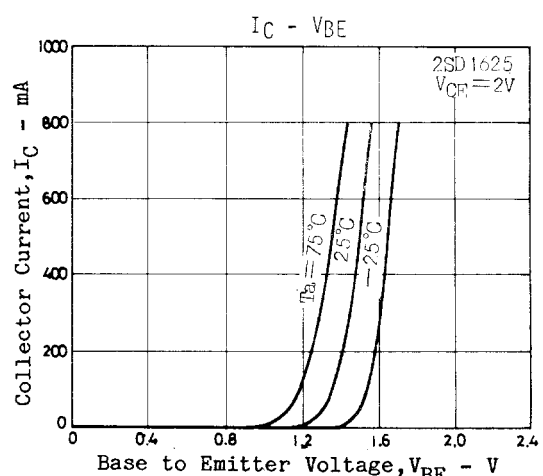
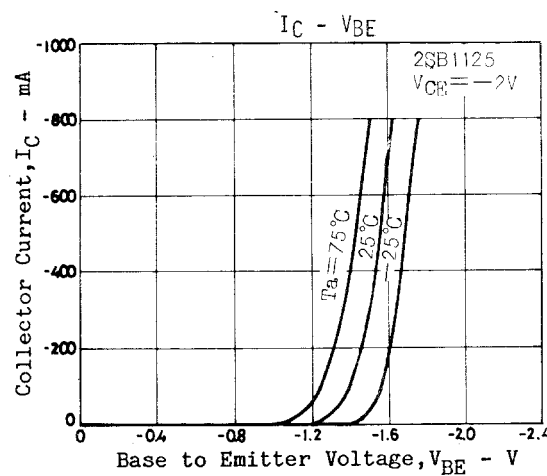
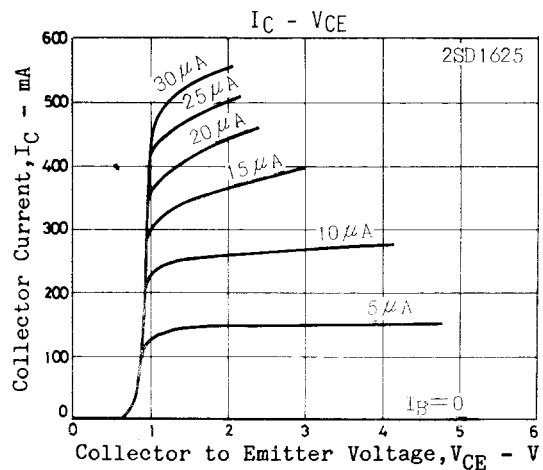
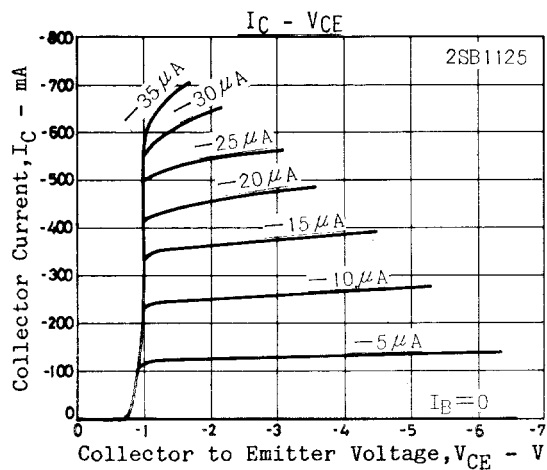
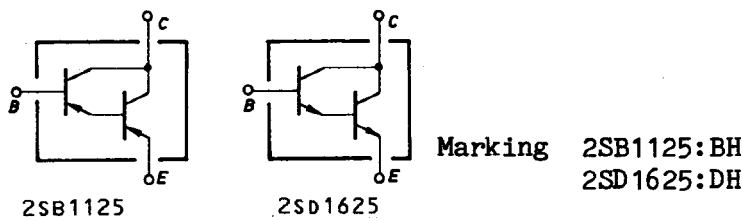
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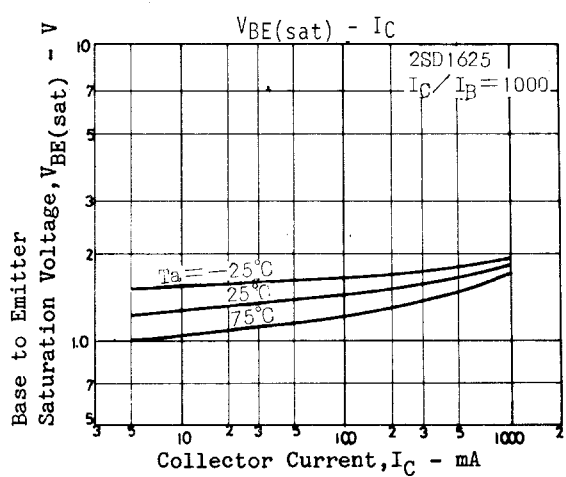
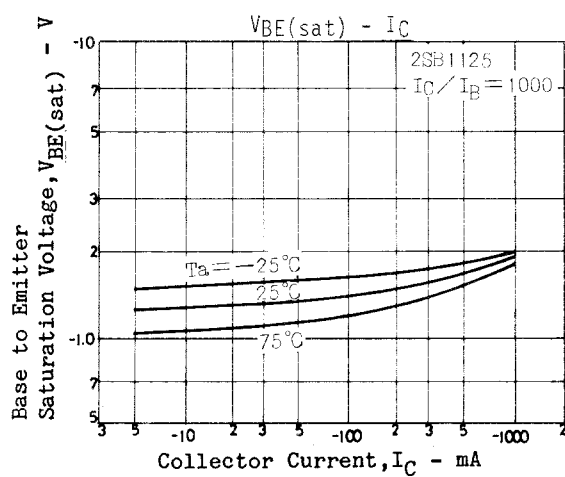
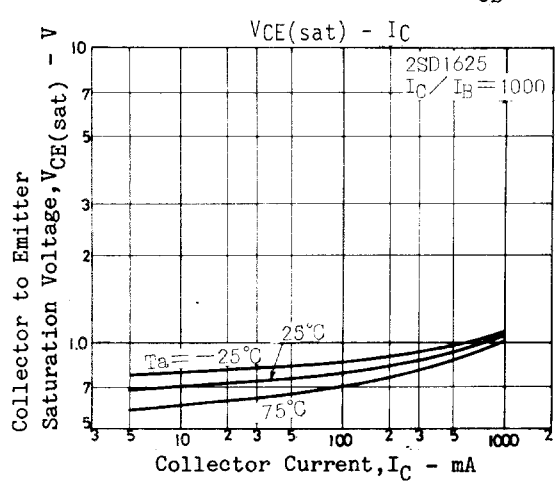
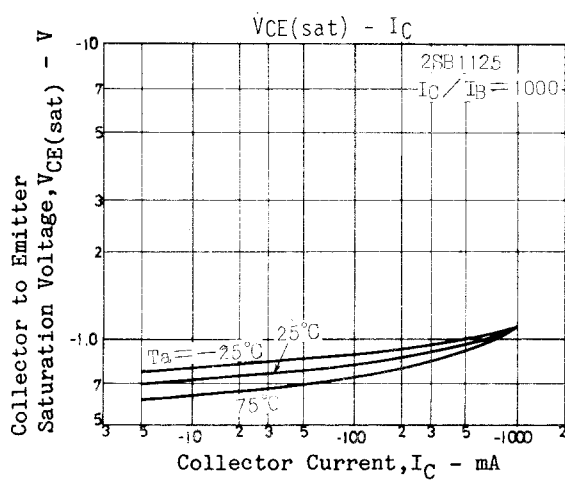
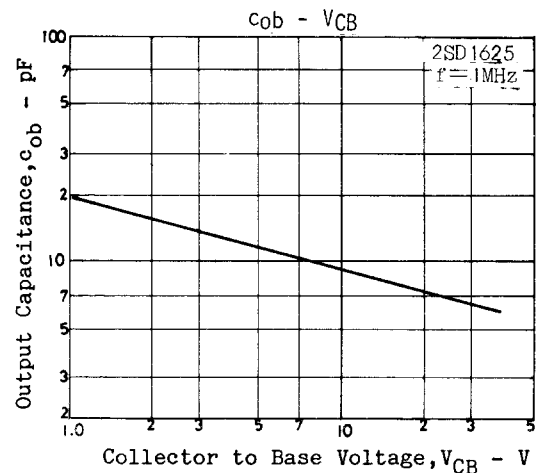
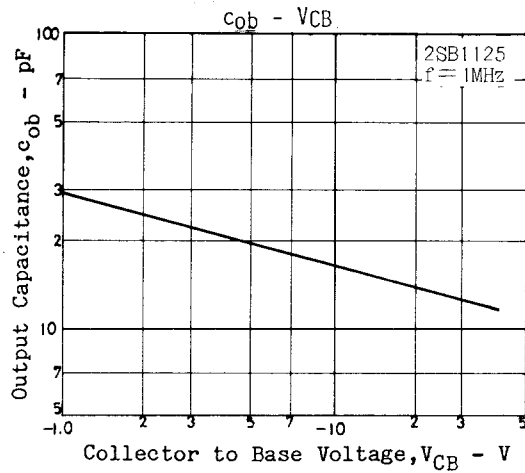
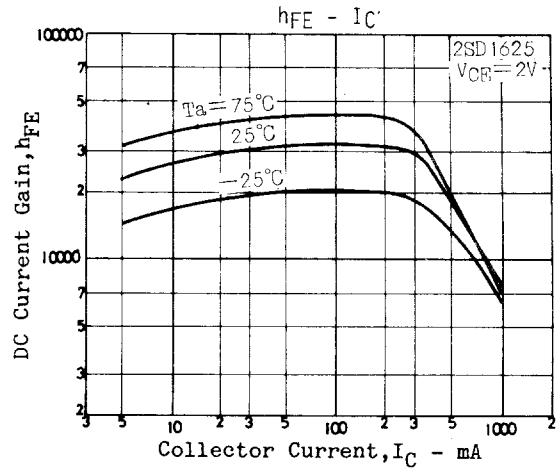
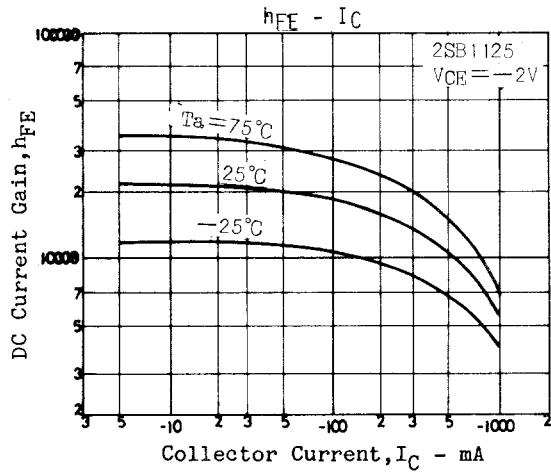
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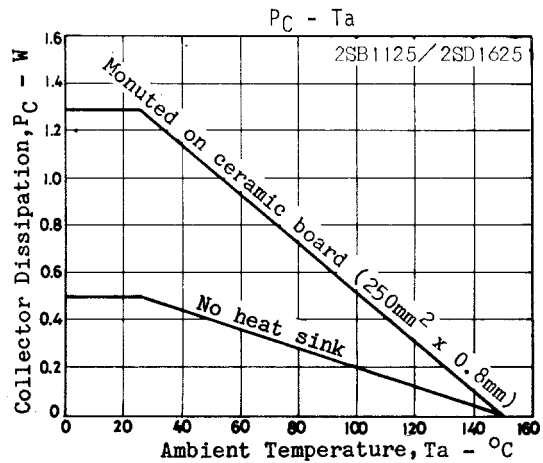
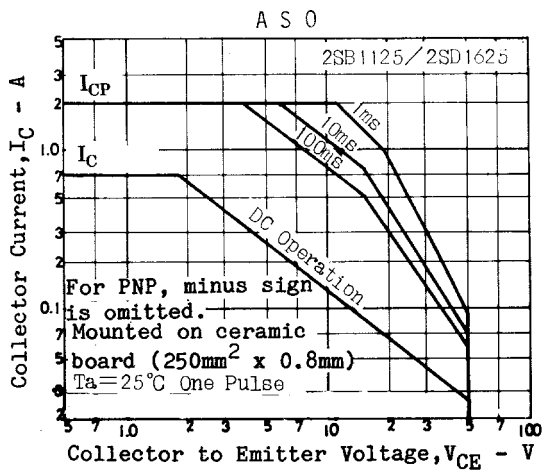
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output Capacitance	C_{ob}	$V_{CB}=(-)10V, f=1MHz$		9		pF
				(18)		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)100mA, I_B=(-)0.1mA$		(-)0.8	(-)1.2	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)100mA, I_B=(-)0.1mA$		(-)1.3	(-)2.0	V
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	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=0$	(-)10			V

Electrical Connection





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