

SANYO

No.2209C

2SB1223/2SD1825

PNP/NPN Epitaxial Planar Silicon Darlington Transistor

Driver Applications

Applications

- Suitable for use in control of motor drivers, printer hammer drivers, relay drivers, and constant-voltage regulators.

Features

- High DC current gain.
- Large current capacity and wide ASO.
- Micaless package facilitating mounting.

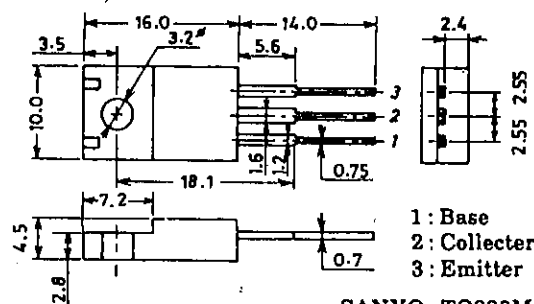
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Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

			unit
Collector-to-Base Voltage	V_{CB0}	(-)70	V
Collector-to-Emitter Voltage	V_{CE0}	(-)60	V
Emitter-to-Base Voltage	V_{EB0}	(-)6	V
Collector Current	I_C	(-)4	A
Collector Current (Pulse)	I_{CP}	(-)6	A
Collector Dissipation	P_C	2.0	W
		20	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)40\text{V}, I_E = 0$			(-)0.1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)5\text{V}, I_C = 0$			(-)3.0	mA
DC Current Gain	h_{FE}	$V_{CE} = (-)2\text{V}, I_C = (-)2\text{A}$	2000	5000		
Gain-Bandwidth Product	f_T	$V_{CE} = (-)5\text{V}, I_C = (-)2\text{A}$		20		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)2\text{A}, I_B = (-)4\text{mA}$		0.9	(-)1.5	V
				(-1.0)		V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)2\text{A}, I_B = (-)4\text{mA}$			(-)2.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)5\text{mA}, I_E = 0$	(-)70			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)50\text{mA}, R_{BE} = \infty$	(-)60			V
Turn-ON Time	t_{on}	See specified Test Circuit.		0.6		μs
		"		(0.5)		μs
Storage Time	t_{stg}	"		2.7		μs
		"		(1.4)		μs
Fall Time	t_f	"		1.6		μs
		"		(1.2)		μs

Package Dimensions 2041A
(unit : mm)

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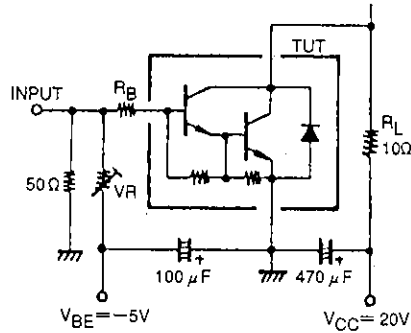
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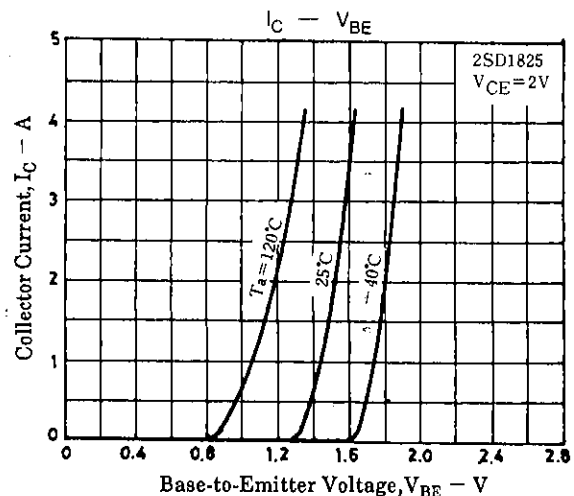
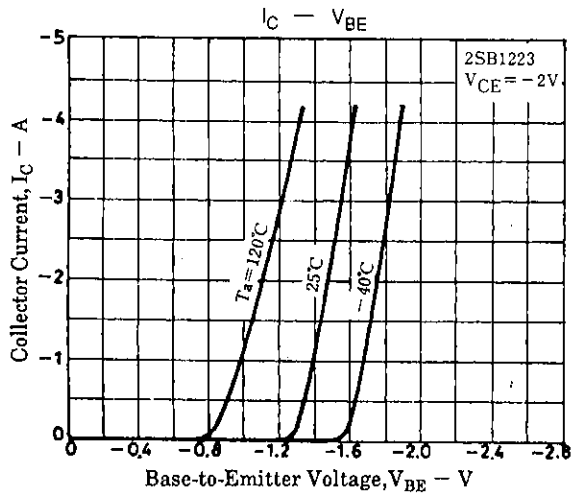
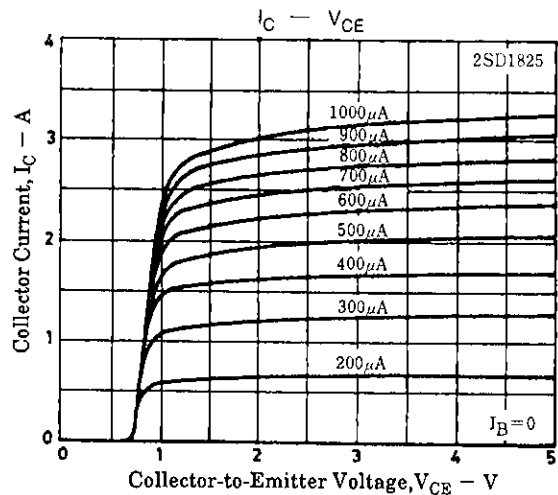
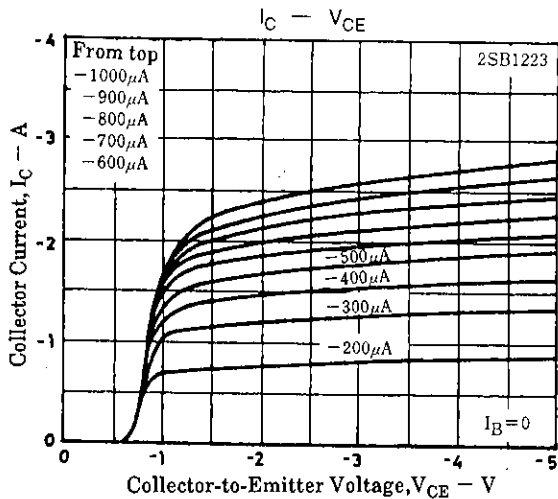
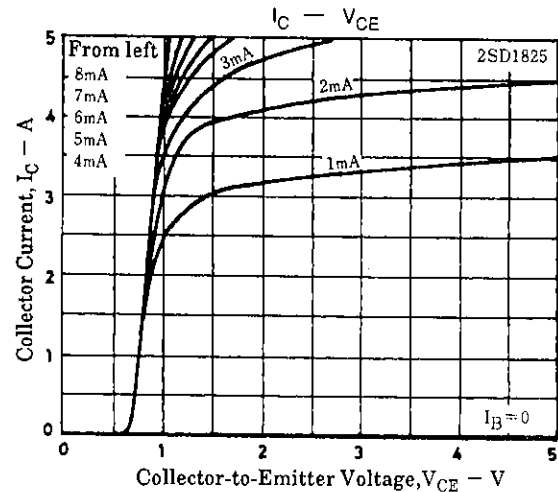
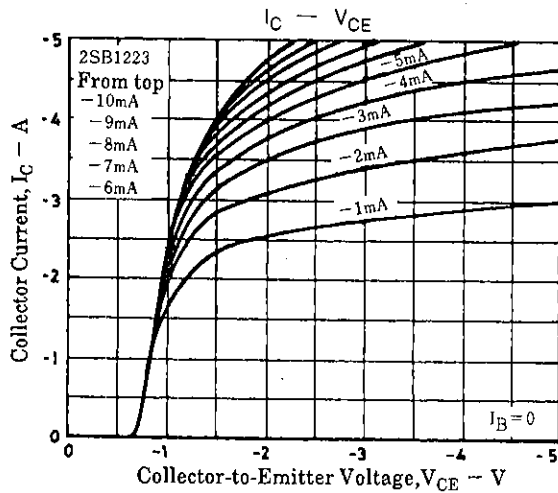
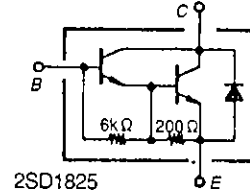
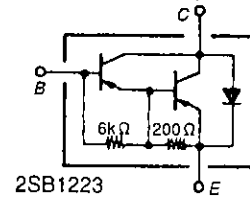
Specified Test Circuit (For PNP, the polarity is reversed.)

PW = 50μs, Duty cycle ≤ 1%

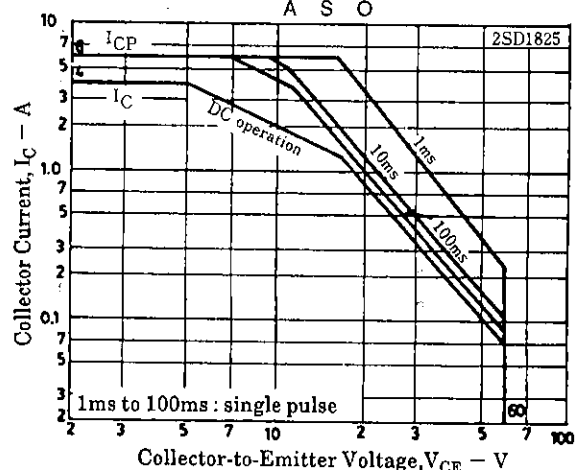
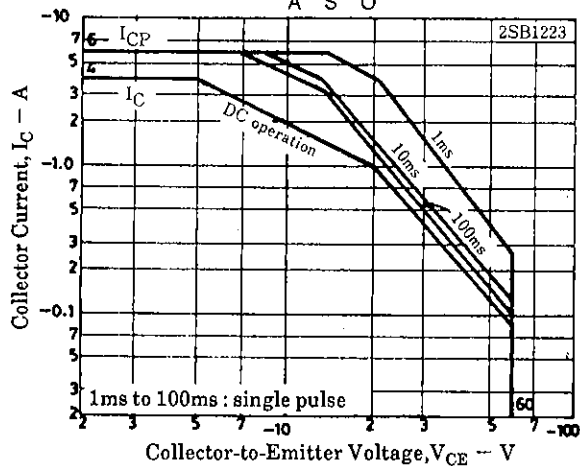
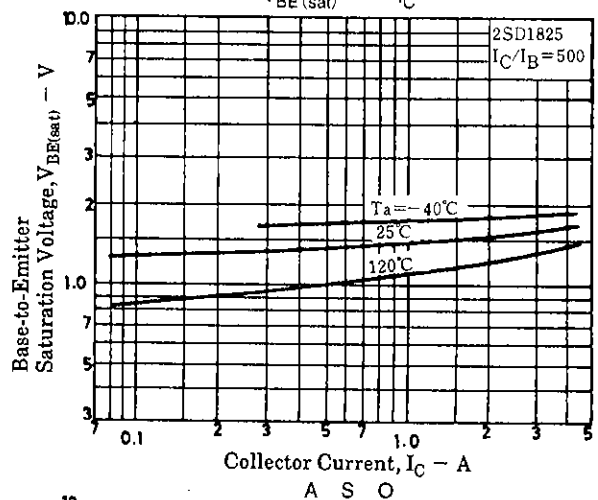
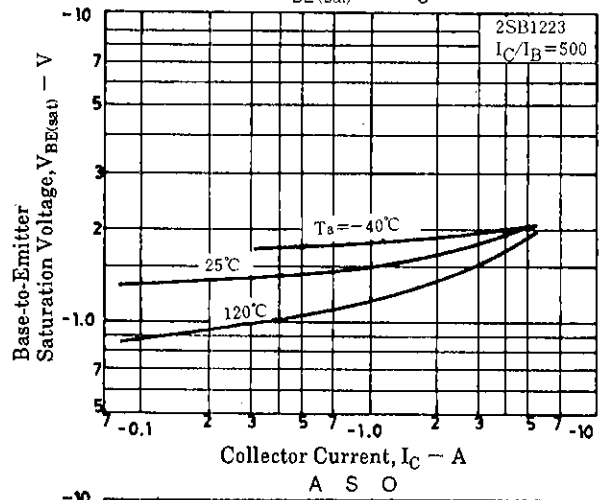
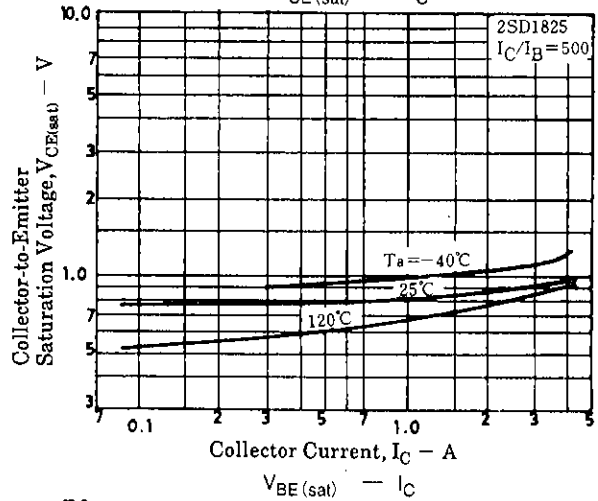
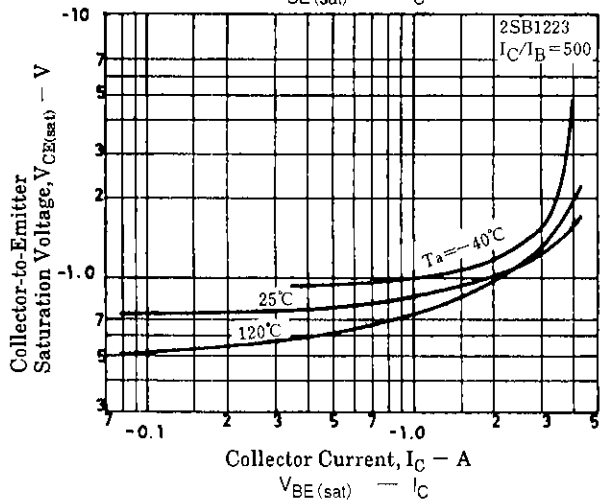
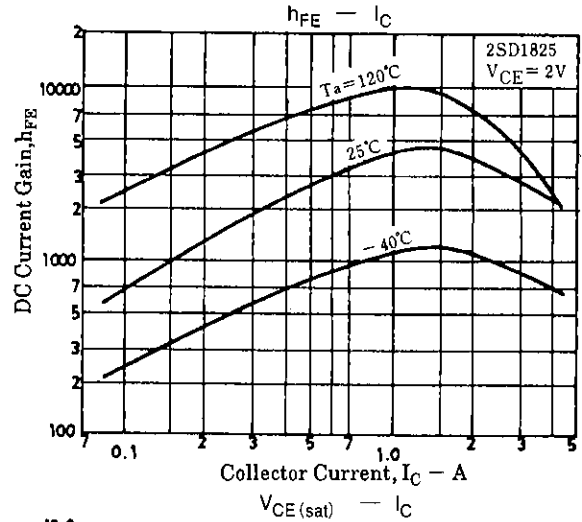
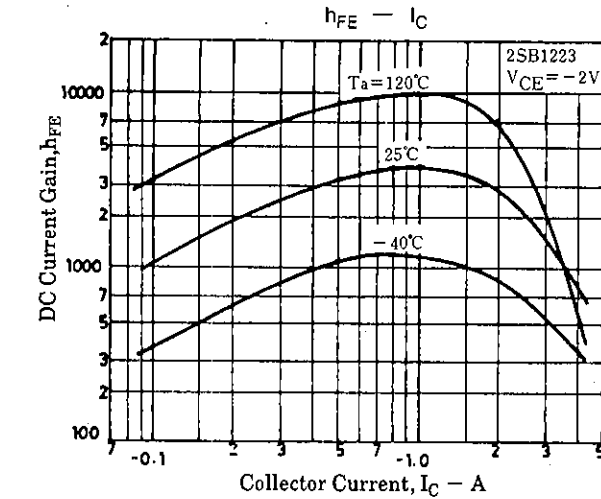
500I_{B1} = -500I_{B2} = I_C = 2A

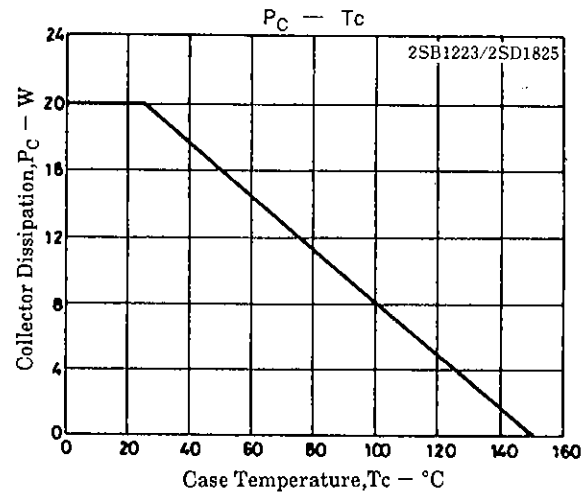
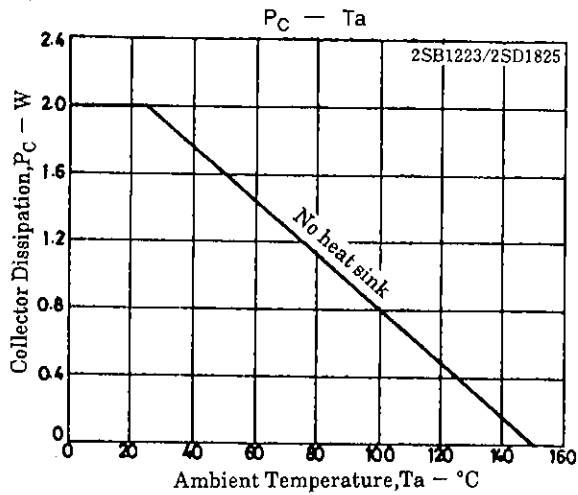


Electrical Connection



2SB1223/2SD1825





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