

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 Ta = 25°C

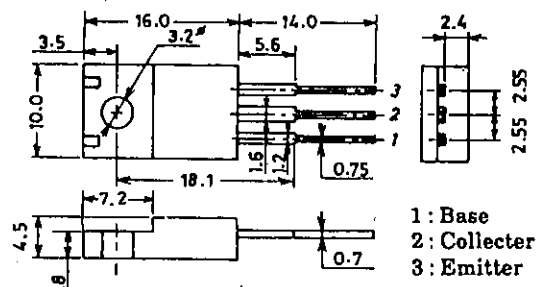
			unit
Collector-to-Base Voltage	V _{CB0}	(-)70	V
Collector-to-Emitter Voltage	V _{CEO}	(-)60	V
Emitter-to-Base Voltage	V _{EBO}	(-)6	V
Collector Current	I _C	(-)4	A
Collector Current (Pulse)	I _{CP}	(-)6	A
Collector Dissipation	P _C	2.0	W
		20	W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

T_c = 25°C

Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
Collector Cutoff Current	I _{CBO}	V _{CB} = (-)40V, I _E = 0			(-)0.1	mA
Emitter Cutoff Current	I _{EBO}	V _{EB} = (-)5V, I _C = 0			(-)3.0	mA
DC Current Gain	h _{FE}	V _{CE} = (-)2V, I _C = (-)2A	2000	5000		
Gain-Bandwidth Product	f _T	V _{CE} = (-)5V, I _C = (-)2A		20		MHz
C-E Saturation Voltage	V _{CE(sat)}	I _C = (-)2A, I _B = (-)4mA		0.9	(-)1.5	V
					(-1.0)	V
B-E Saturation Voltage	V _{BE(sat)}	I _C = (-)2A, I _B = (-)4mA			(-)2.0	V
C-B Breakdown Voltage	V _{(BR)CBO}	I _C = (-)5mA, I _E = 0	(-)70			V
C-E Breakdown Voltage	V _{(BR)CEO}	I _C = (-)50mA, R _{BE} = ∞	(-)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)



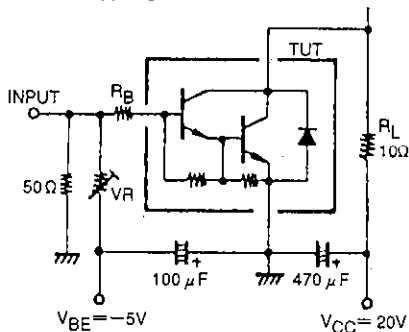
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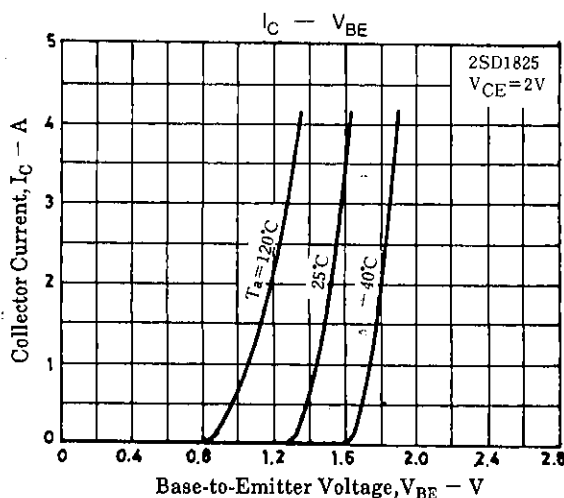
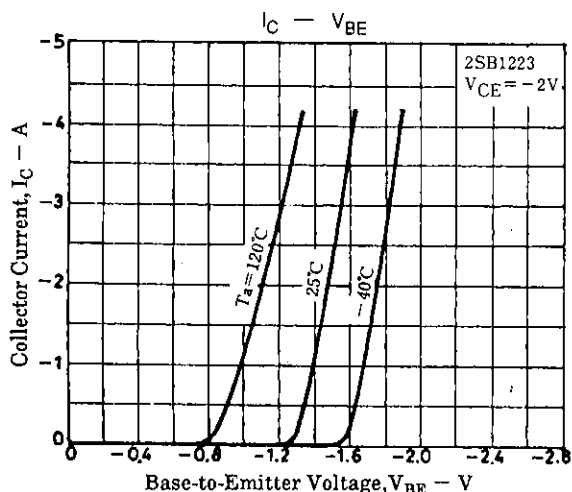
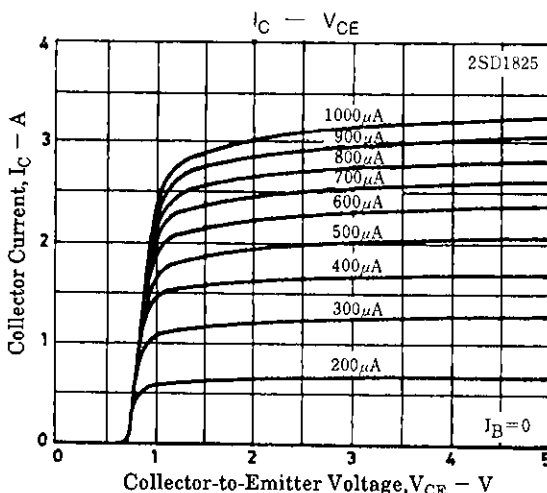
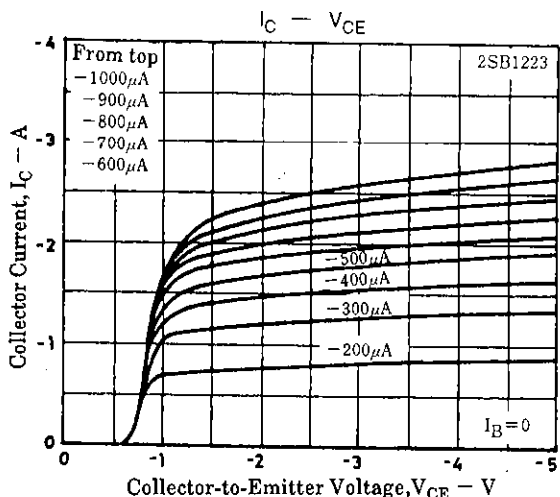
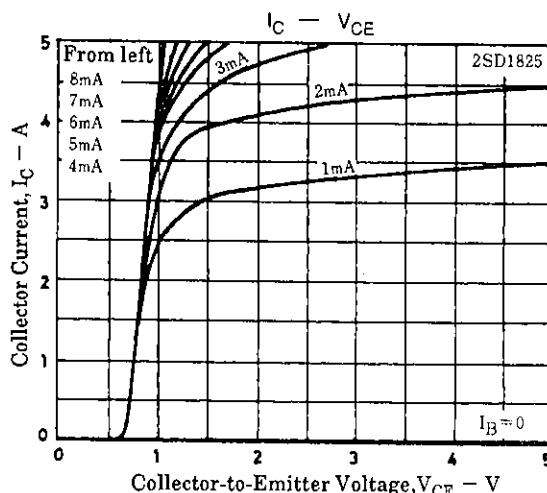
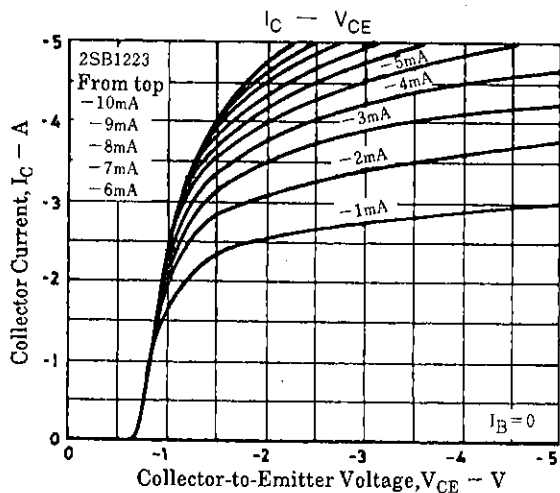
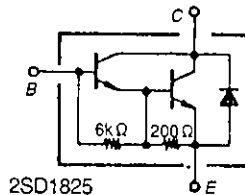
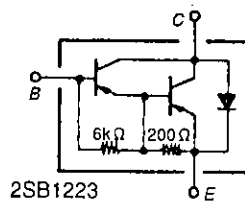
Specified Test Circuit (For PNP, the polarity is reversed.)

PW = 50μs, Duty cycle ≤ 1%

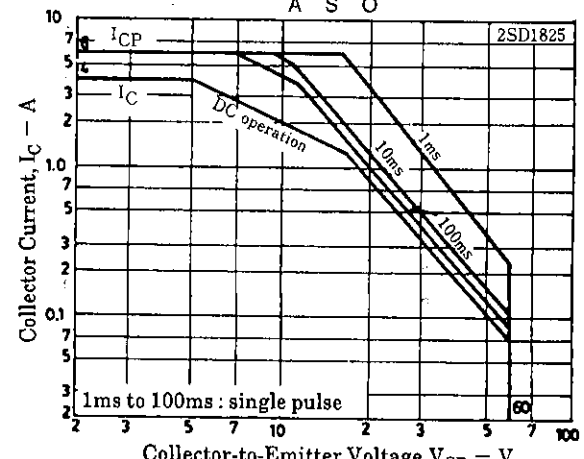
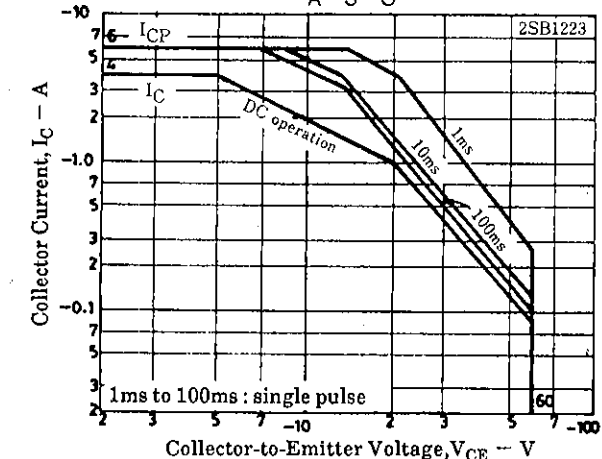
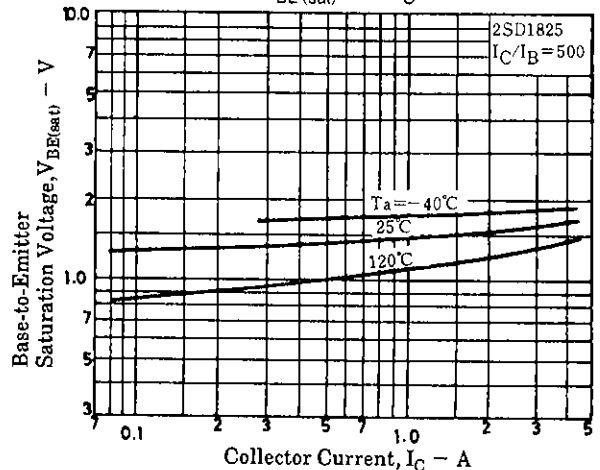
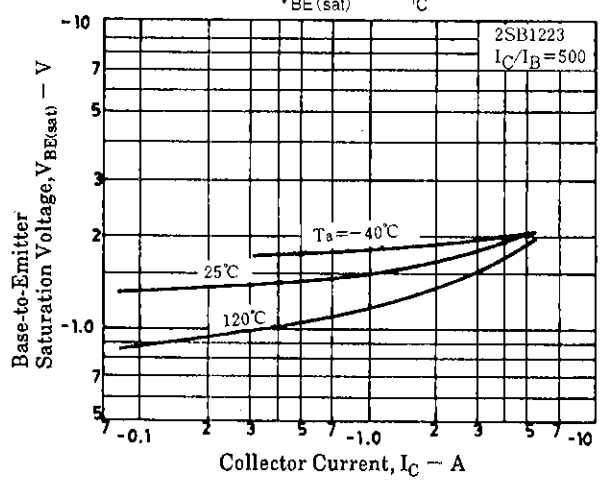
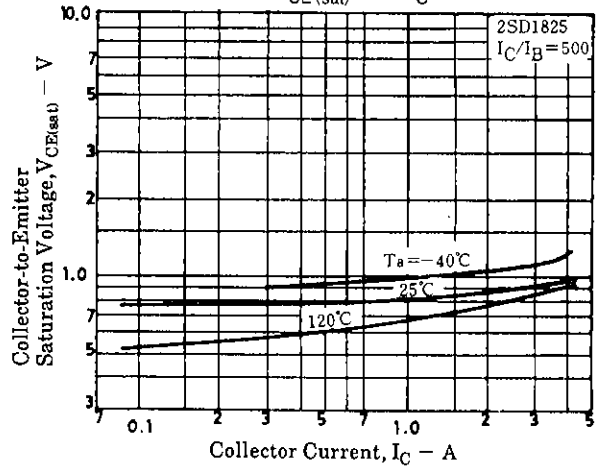
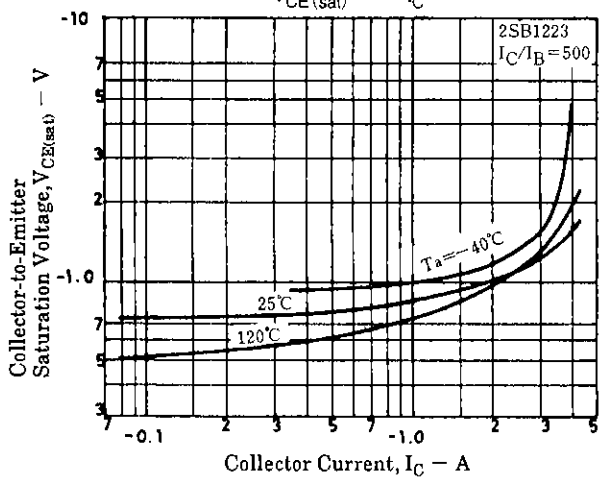
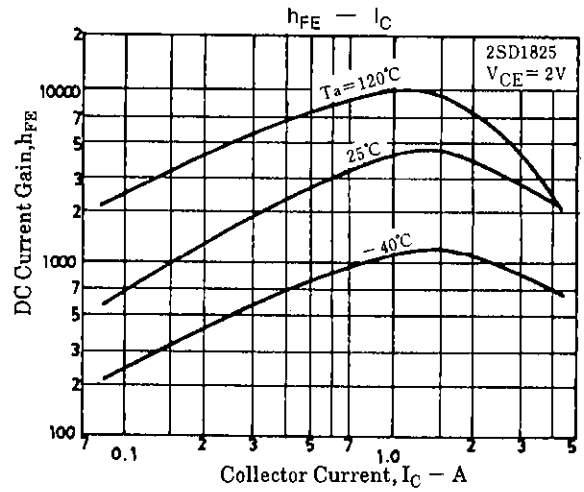
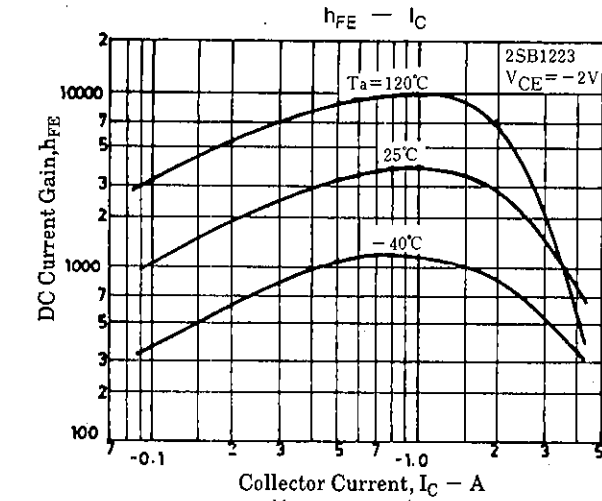
500I_{B1} = -500I_{B2} = I_C = 2A



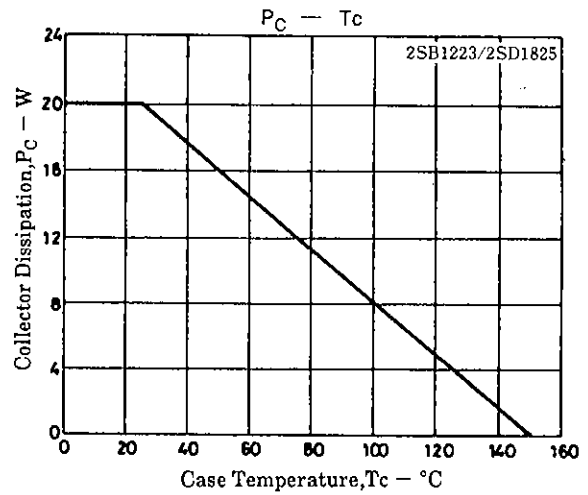
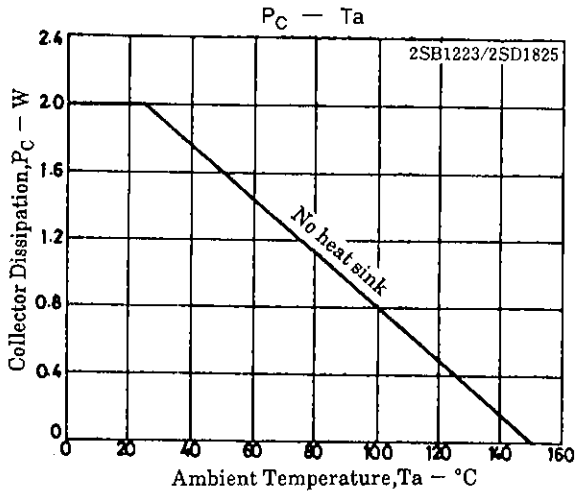
Electrical Connection



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