



SANYO Semiconductors

DATA SHEET

2SB1228 / 2SD1830 — PNP / NPN Epitaxial Planar Silicon Darlington Transistors 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.
- Low saturation voltage.
- Micaless package facilitating mounting.

Specifications () : 2SB1228

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		(-)110	V
Collector-to-Emitter Voltage	V _{CEO}		(-)100	V
Emitter-to-Base Voltage	V _{EBO}		(-)6	V
Collector Current	I _C		(-)8	A
Collector Current (Pulse)	I _{CP}		(-)12	A
Collector Dissipation	P _C		2.0	W
		T _C =25°C	30	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 _{CBO}	V _{CB} =(-)80V, I _E =0A			(-)0.1	mA
Emitter Cutoff Current	I _{EBO}	V _{EB} =(-)5V, I _C =0A			(-)3.0	mA
DC Current Gain	h _{FE}	V _{CE} =(-)3V, I _C =(-)4A	1500	4000		
Gain-Bandwidth Product	f _T	V _{CE} =(-)5V, I _C =(-)4A		20		MHz
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =(-)4A, I _B =(-)8mA		(-1.0)0.9	(-)1.5	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =(-)4A, I _B =(-)8mA			(-)2.0	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C =(-)5mA, I _E =0A	(-)110			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =(-)50mA, R _{BE} =∞	(-)100			V

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SANYO Semiconductor Co., Ltd.

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

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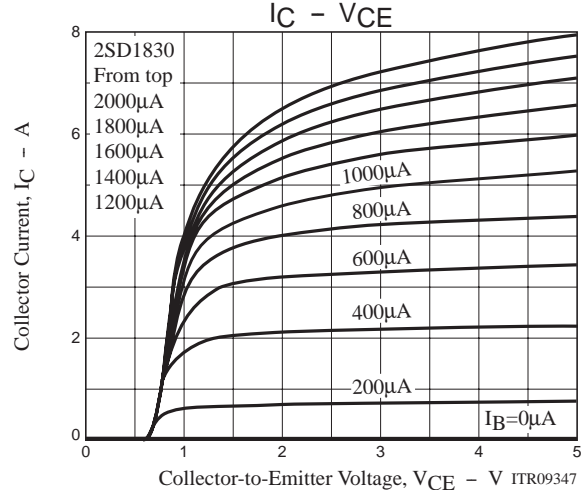
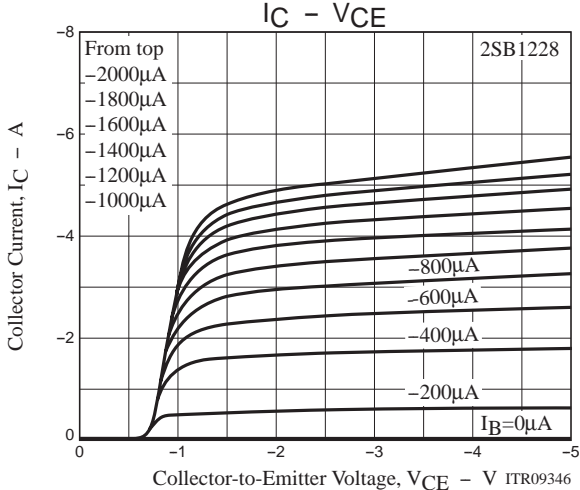
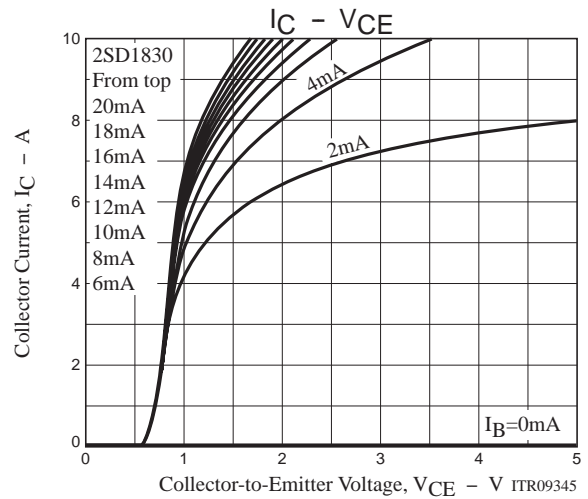
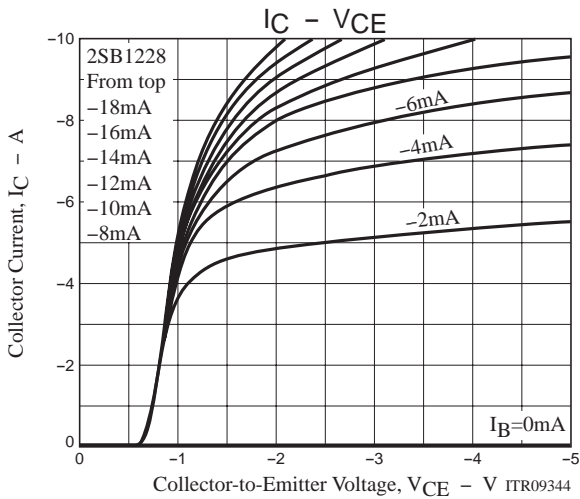
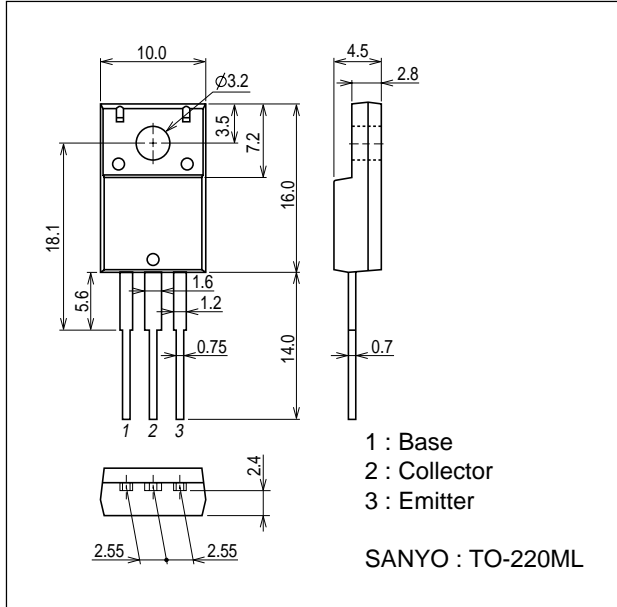
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-On Time	t_{on}	See specified Test Circuit.		(0.7)0.6		μs
Storage Time	t_{stg}	See specified Test Circuit.		(1.4)4.8		μs
Fall Time	t_f	See specified Test Circuit.		(1.5)1.6		μs

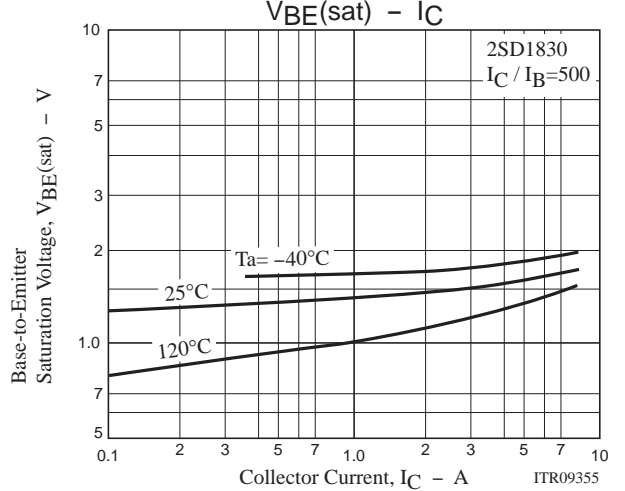
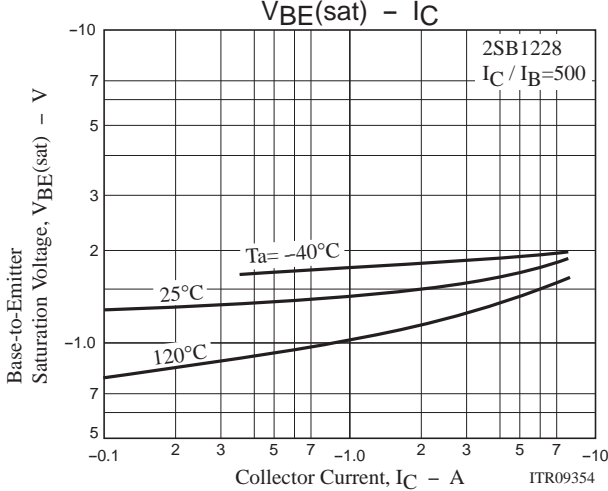
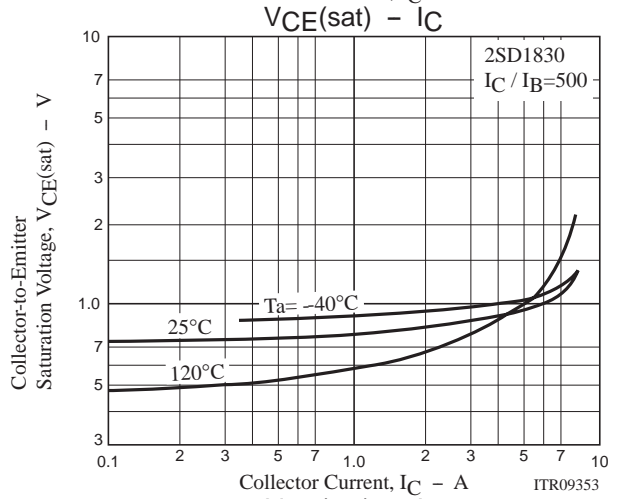
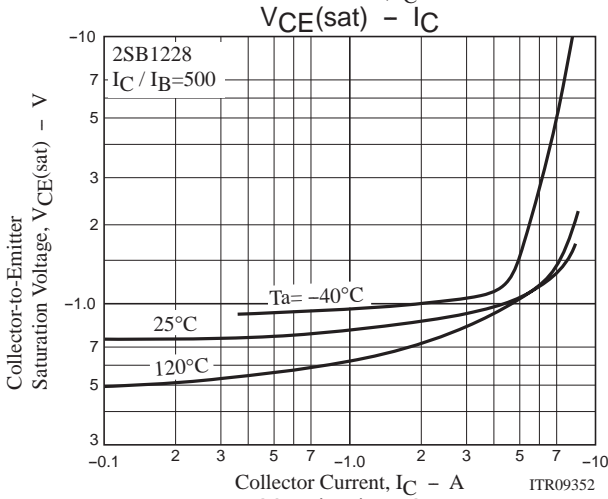
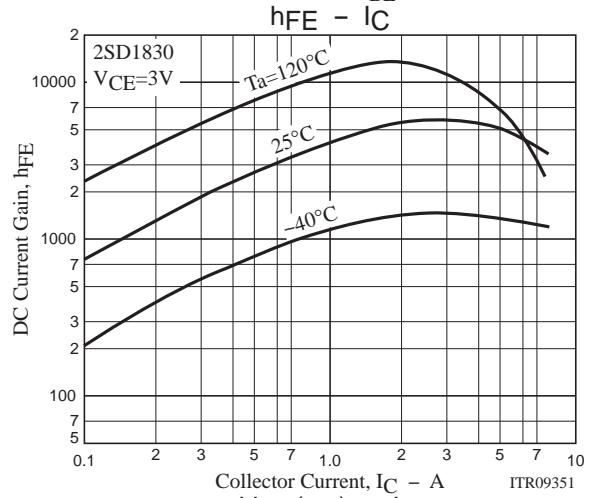
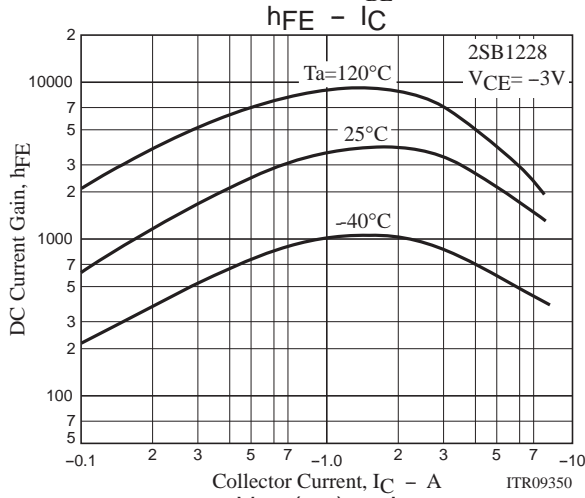
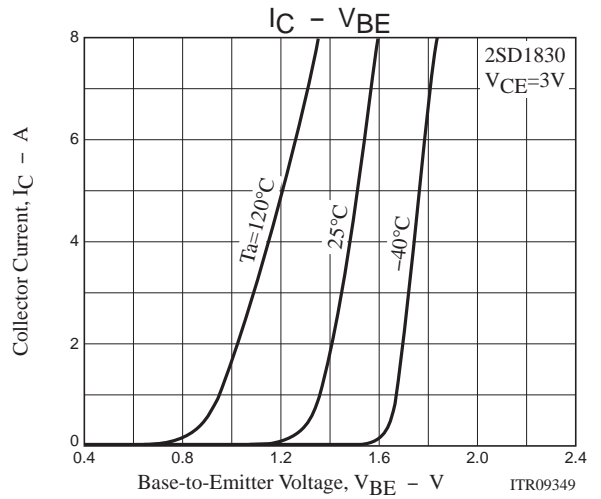
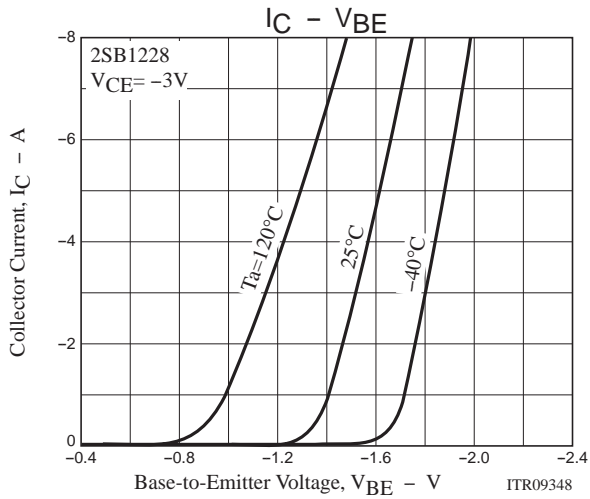
Package Dimensions

unit : mm (typ)

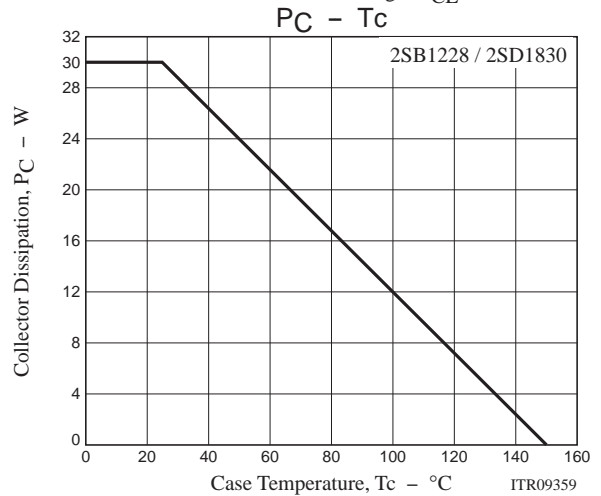
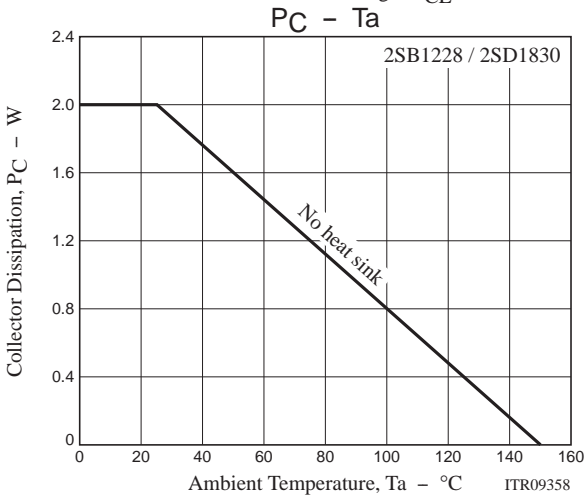
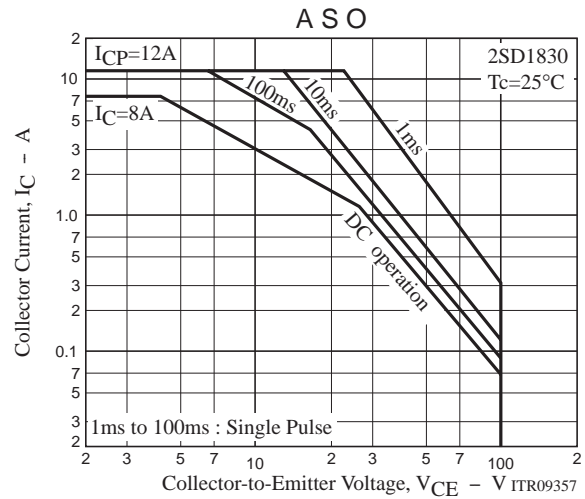
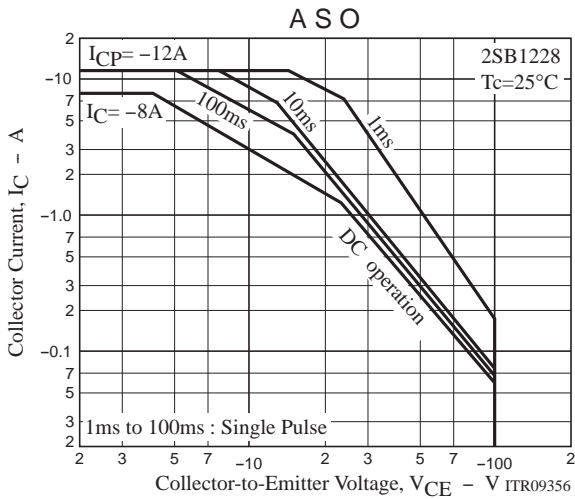
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