


SANYO Semiconductors

DATA SHEET

2SB986 / 2SD1348 — PNP / NPN Epitaxial Planar Silicon Transistors 50V / 4A Switching Applications

Applications

- Power supplies, relay drivers, lamp drivers, electrical equipment.

Features

- Adoption of FBET and MBIT processes.
- Low saturation voltage.
- Large current capacity and wide ASO.

Specifications () : 2SB986

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	VCBO		(-)60	V
Collector-to-Emitter Voltage	VCEO		(-)50	V
Emitter-to-Base Voltage	VEBO		(-)6	V
Collector Current	IC		(-)4	A
Collector Current (Pulse)	ICP		(-)6	A
Collector Dissipation	PC		1.2	W
		Tc=25°C	10	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	ICBO	VCB=(-)40V, IE=0A			(-)1.0	mA
Emitter Cutoff Current	IEBO	VEB=(-)4V, IC=0A			(-)1.0	mA

Continued on next page.

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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
DC Current Gain	hFE1	$V_{CE}=(-)2V, I_C=(-)100mA$	100*		560*	
	hFE2	$V_{CE}=(-)2V, I_C=(-)3A$	40			
Gain-Bandwidth Product	f _T	$V_{CE}=(-)10V, I_C=(-)50mA$		150		MHz
Output Capacitance	C _{ob}	$V_{CB}=(-)10V$		(39)25		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	$I_C=(-)2A, I_B=(-)100mA$, Pulse		(-0.35)0.19	(-0.7)0.5	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	$I_C=(-)2A, I_B=(-)100mA$, Pulse		(-0.94)	(-1.2)	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	$I_C=(-)10\mu A, I_E=0A$	(-60)			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}	$I_E=(-)10\mu A, I_C=0A$	(-6)			V

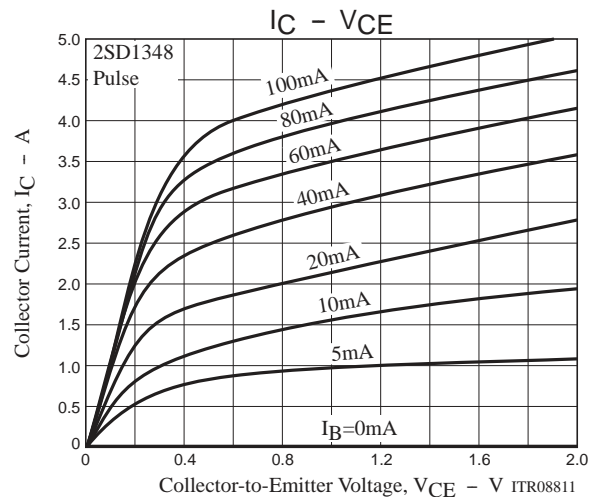
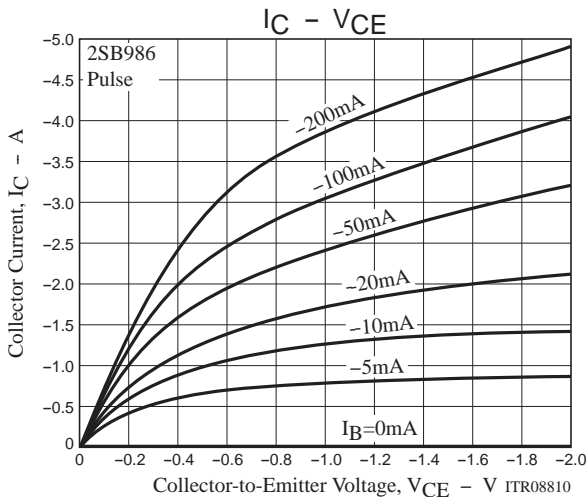
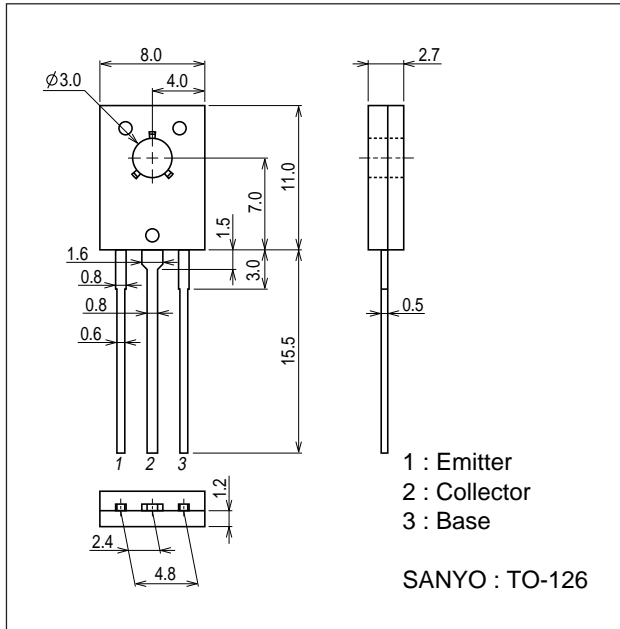
* : The 2SB986 / 2SD1348 are classified by 100mA hFE as follows :

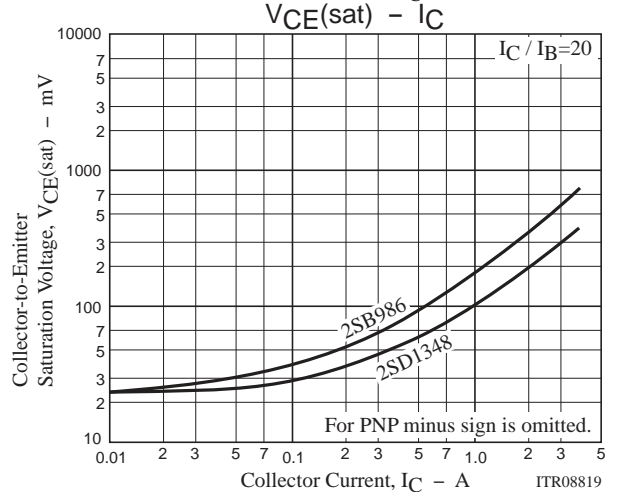
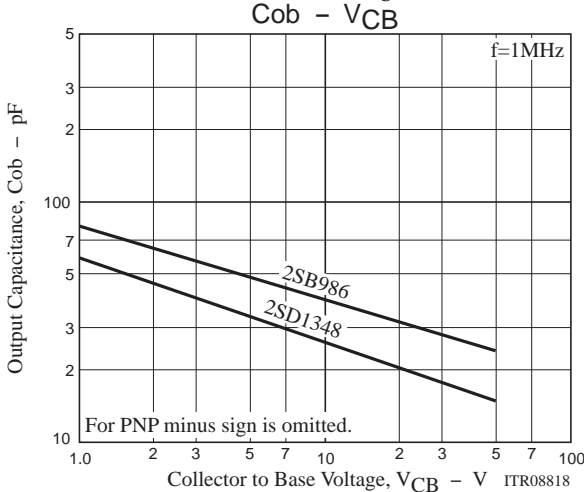
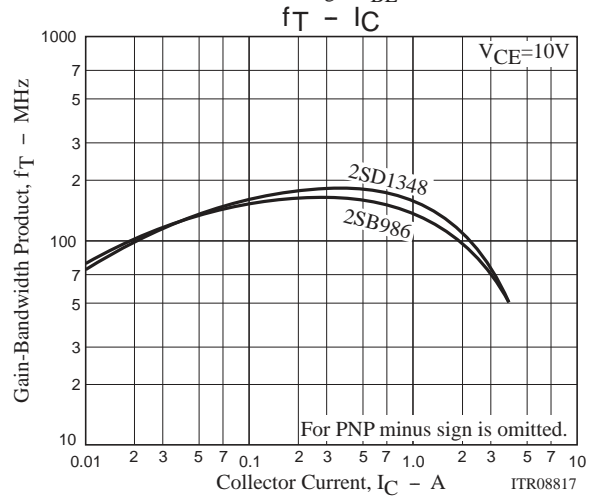
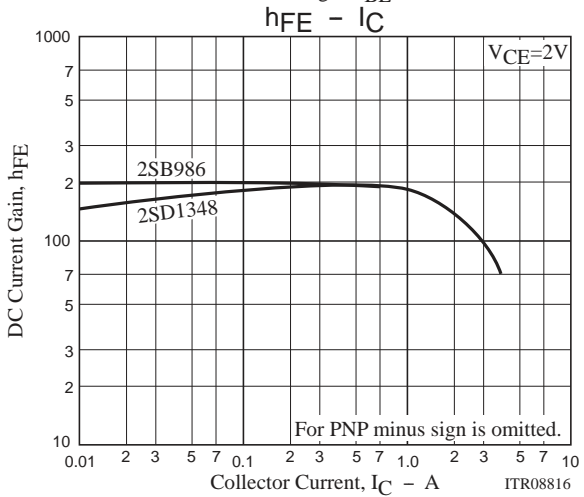
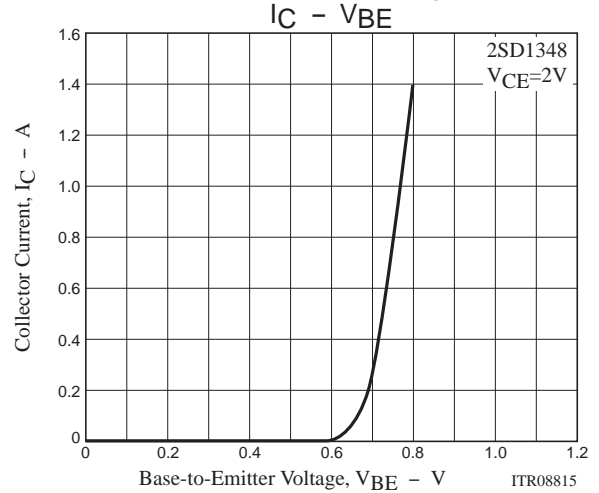
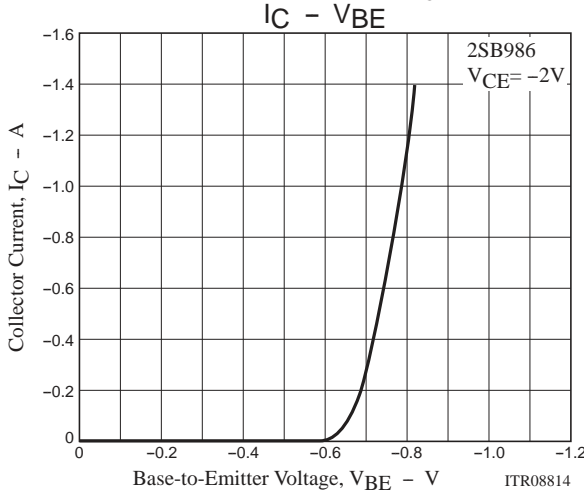
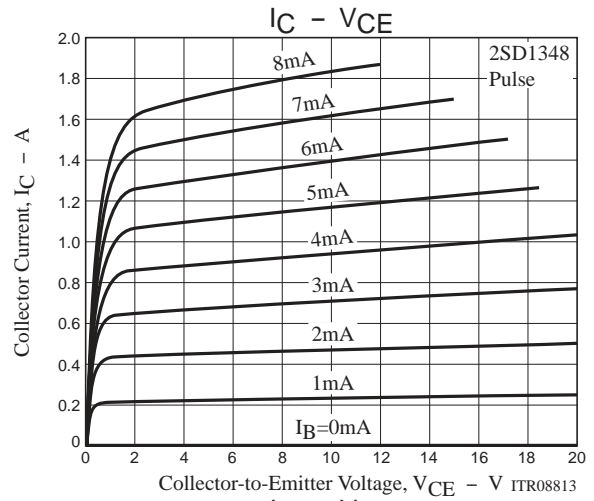
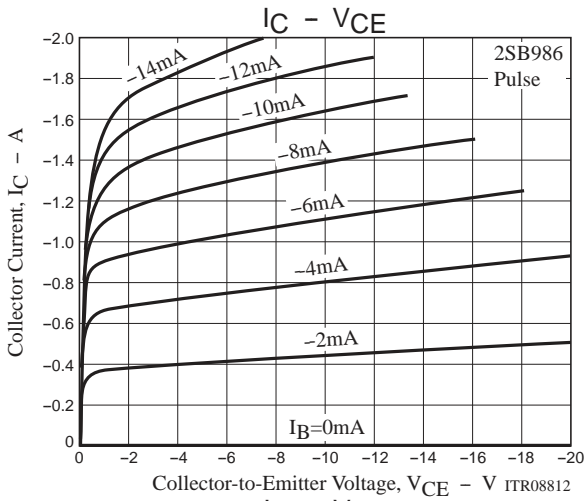
Rank	R	S	T	U
hFE	100 to 200	140 to 280	200 to 400	280 to 560

Package Dimensions

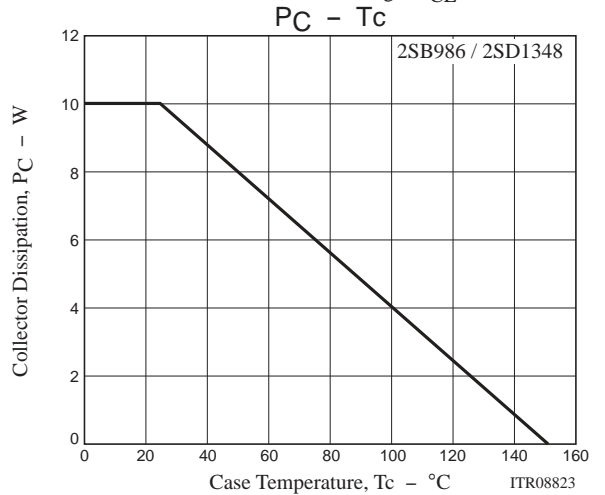
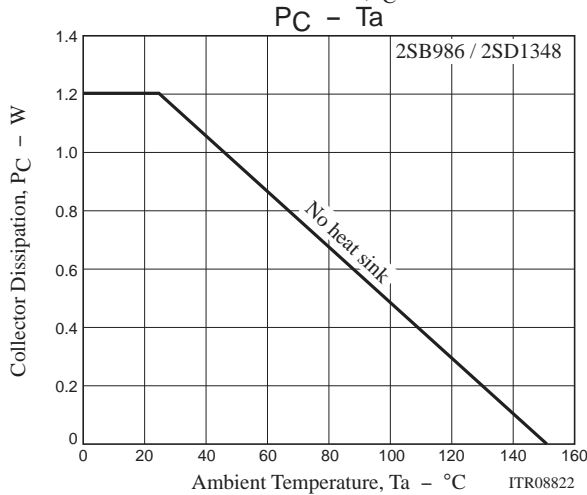
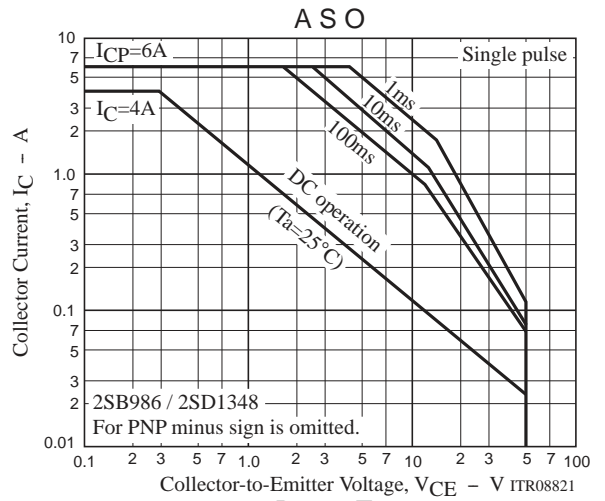
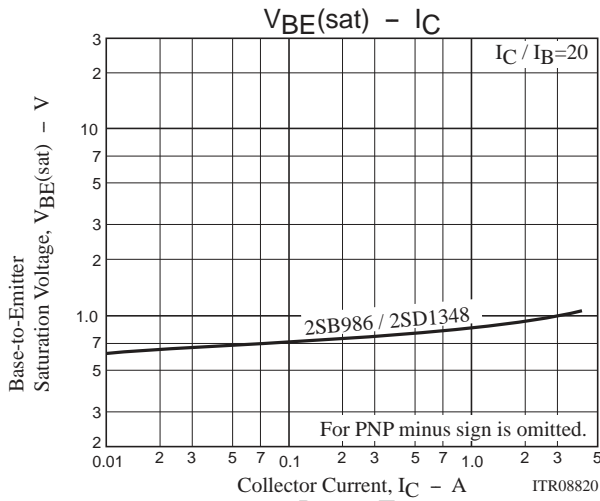
unit : mm (typ)

7515-002





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