PNP/NPN Epitaxial Planar Silicon Darlington Transistors



2SB892/2SD1207

# **Large-Current Switching Applications**

## Features

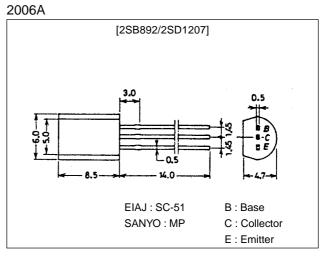
• Power supplies, relay drivers, lamp drivers, and automotive wiring.

### **Features**

- FBET and MBIT processed (Original process of SANYO).
- · Low saturation voltage.
- · Large current capacity and wide ASO.

# **Package Dimensions**

unit:mm



():2SB892

# **Specifications**

### 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		(–)2	Α
Collector Current (Pulse)	I <sub>CP</sub>		(-)4	Α
Allowable Collector Dissipation	PC		1	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	Unit
Collector Cutoff Current	ICBO	V <sub>CB</sub> =(-)50V, I <sub>E</sub> =0			(–)0.1	μA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =(-)4V, I <sub>C</sub> =0			(–)0.1	μA
DC Current Gain	h <sub>FE</sub> 1	V <sub>CE</sub> =(-)2V, I <sub>C</sub> =(-)100mA	100		560	
	h <sub>FE</sub> 2	V <sub>CE</sub> =(-)2V, I <sub>C</sub> =(-)1.5A	40			
Gain-Bandwidth Product	fT	V <sub>CE</sub> =(-)10V, I <sub>C</sub> =(-)50mA		150		MHz
Output Capacitance	Cob	V <sub>CB</sub> =(-)10V, f=1MHz		12		pF
				(22)		pF

 $\ast$  : The 2SB892/2SD1207 are graded as follows by  $h_{FE}$  at 100mA :

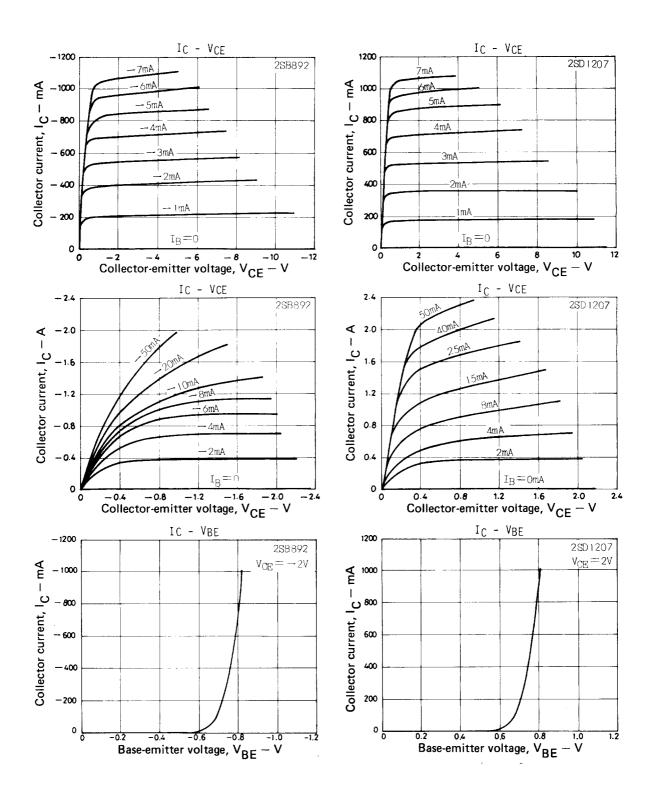
100 R 200 140 S 280 200 T 400 280 U 560

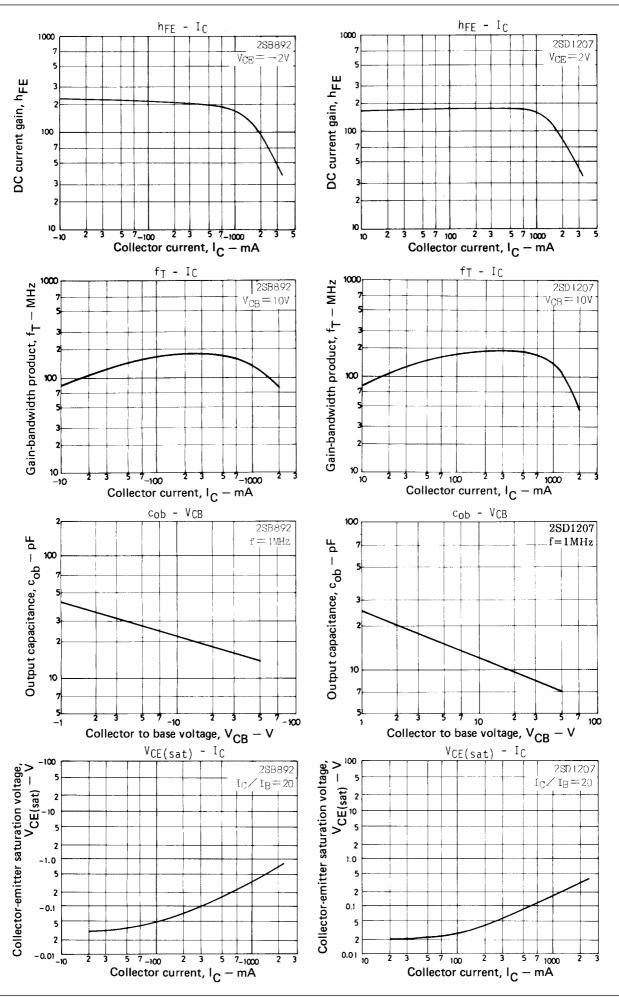
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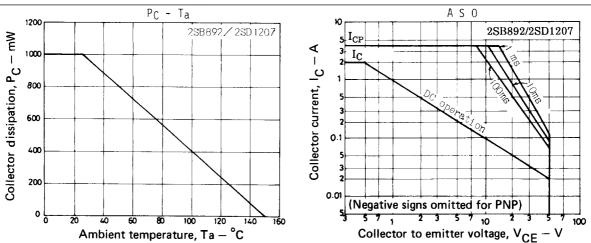
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# 2SB892/2SD1207

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
Collector-to-Emitter Saturation Voltage	VCE(sat)	I <sub>C</sub> =(-)1A, I <sub>B</sub> =(-)50mA		0.15	0.4	V
				(-0.3)	(-0.7)	V
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =(-)1A, I <sub>B</sub> =(-)50mA		(–)0.9	(–)1.2	V
Collector-to-Base Breakdown Voltage	V <sub>(BR)</sub> CBO	I <sub>C</sub> =(-)10µA, I <sub>E</sub> =0	(–)60			V
Collector-to-Emitter Breakdown Voltage	V <sub>(BR)</sub> CEO	I <sub>C</sub> =(−)1mA, R <sub>BE</sub> =∞	(–)50			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	I <sub>E</sub> =(-)10μA, I <sub>C</sub> =0	(–)6			V







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