



SANYO Semiconductors

DATA SHEET

2SB817C / 2SD1047C

PNP Epitaxial Planar Silicon Transistor
NPN Triple Diffused Planar Silicon Transistor

140V / 12A, AF 80W Output Applications

Features

- Large current capacitance.
- Wide ASO and high durability against breakdown.
- Adoption of MBIT process.

Specifications () : 2SB817C

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CB0}		(-)160	V
Collector-to-Emitter Voltage	V _{CEO}		(-)140	V
Emitter-to-Base Voltage	V _{EBO}		(-)6	V
Collector Current	I _C		(-)12	A
Collector Current (Pulse)	I _{CP}		(-)20	A
Collector Dissipation	P _C		2.5	W
		T _c =25°C	120	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 _{CB0}	V _{CB} =(-)160V, I _E =0A			(-)0.1	mA
Emitter Cutoff Current	I _{EBO}	V _{EB} =(-)4V, I _C =0A			(-)0.1	mA
DC Current Gain	h _{FE1}	V _{CE} =(-)5V, I _C =(-)1A	100		200	
	h _{FE2}	V _{CE} =(-)5V, I _C =(-)5A	35			
Gain-Bandwidth Product	f _T	V _{CE} =(-)5V, I _C =(-)1A		(10)15		MHz
Output Capacitance	C _{ob}	V _{CB} =(-)10V, f=1MHz		(280)140		pF
Base-to-Emitter Voltage	V _{BE}	V _{CE} =(-)5V, I _C =(-)5A			1.5	V
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =(-)5A, I _B =(-)0.5A		(-0.3)0.2	(-)2.0	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C =(-)5mA, I _E =0A	(-)160			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =(-)50mA, R _{BE} =∞	(-)140			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =(-)5mA, I _C =0A	(-)6			V

Continued on next page.

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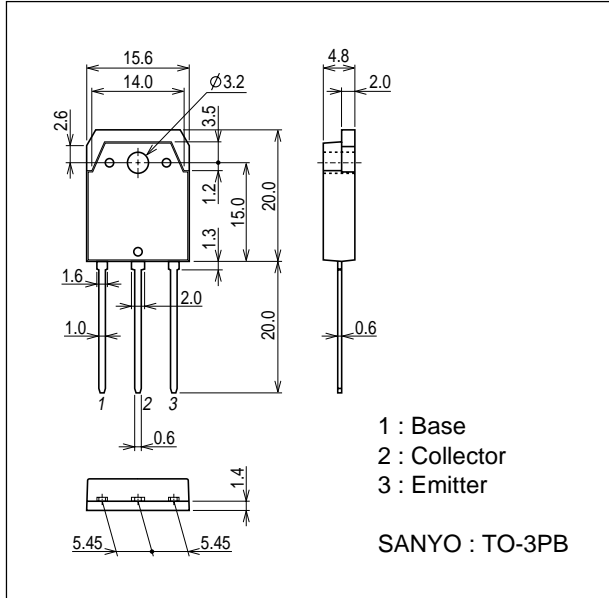
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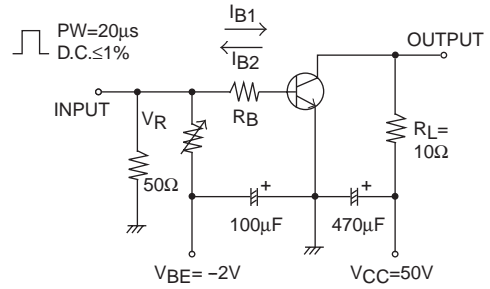
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-On Time	t_{on}	See specified Test Circuit.		(0.45)0.56		μs
Storage Time	t_{stg}	See specified Test Circuit.		(1.75)3.3		μs
Fall Time	t_f	See specified Test Circuit.		(0.25)0.4		μs

Package Dimensions

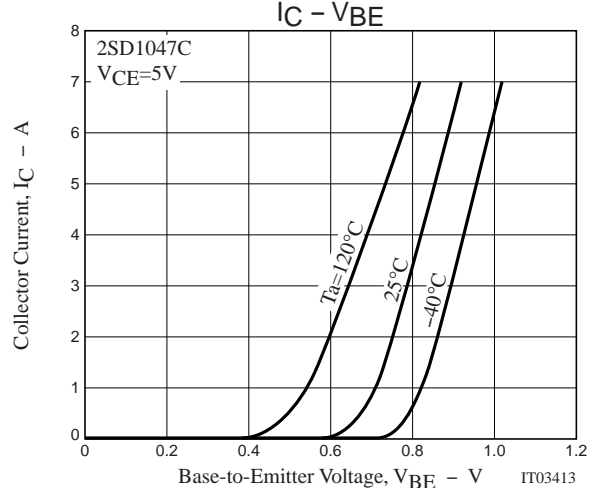
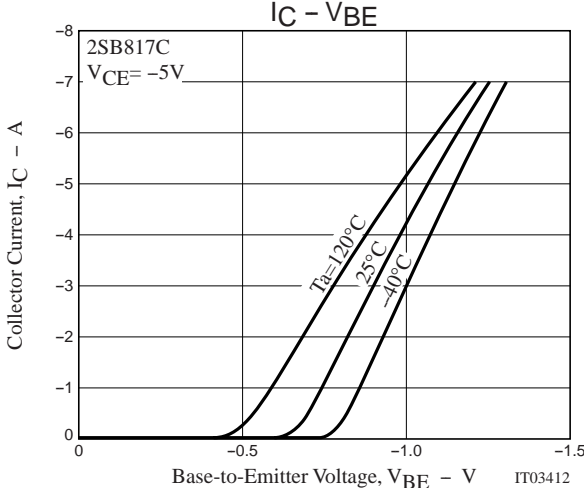
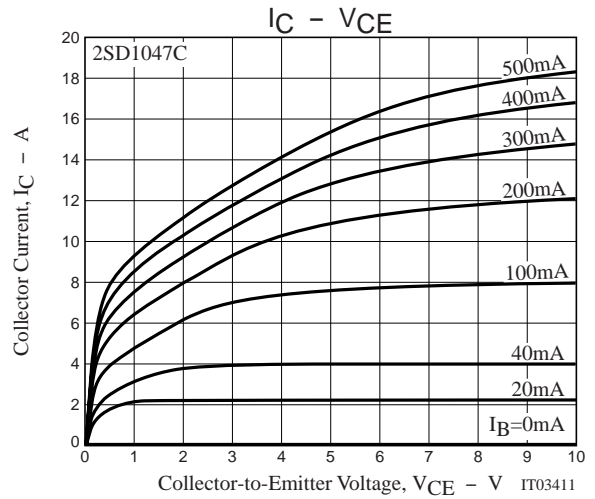
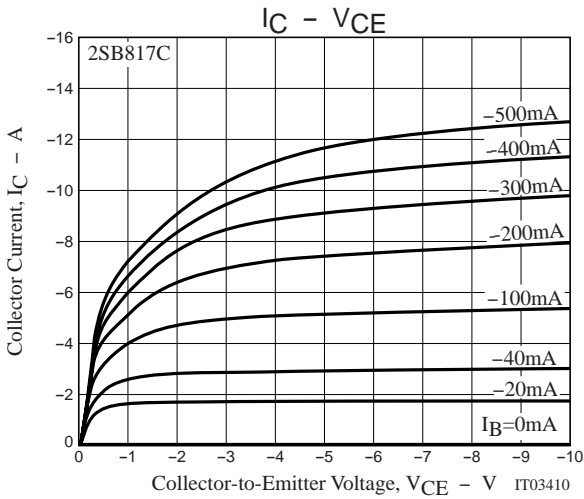
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7503-003



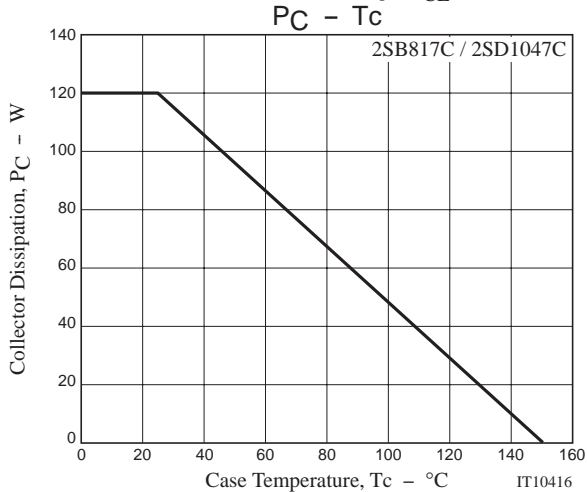
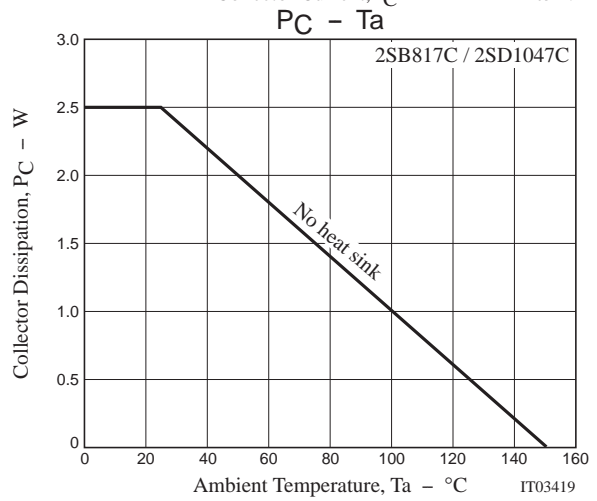
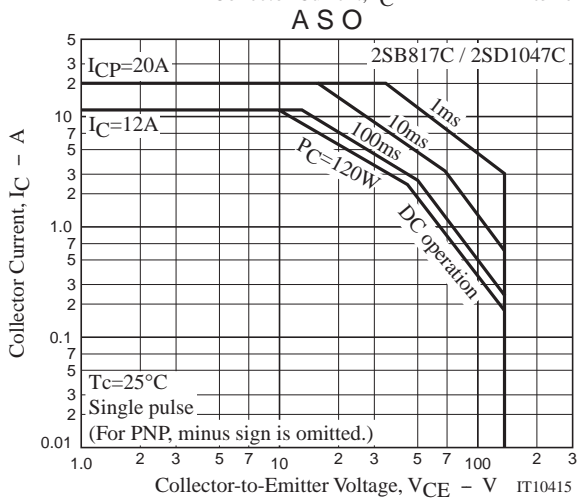
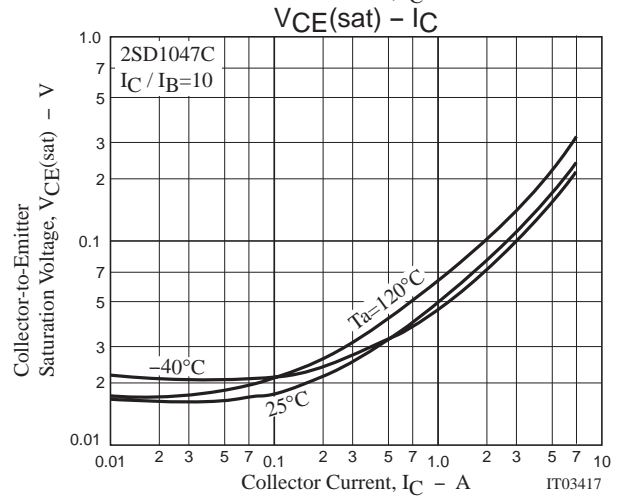
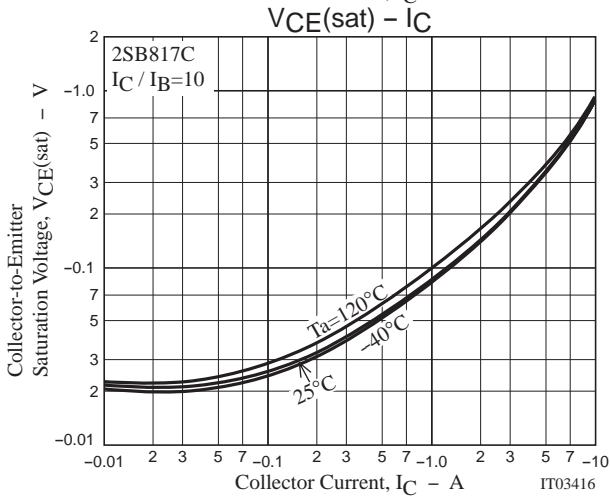
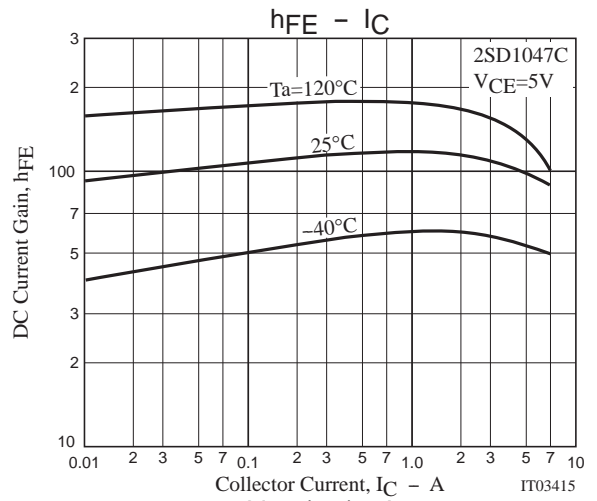
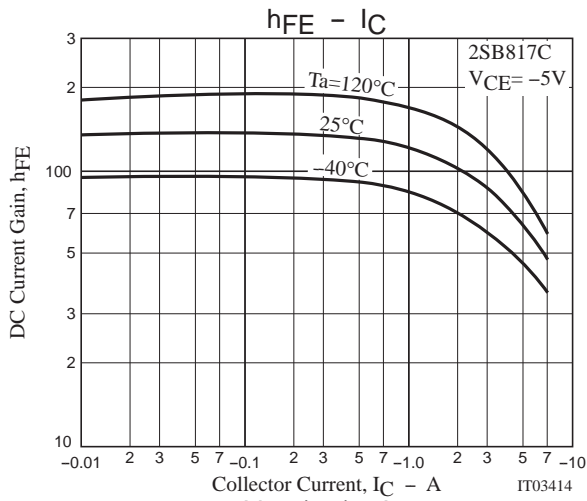
Switching Time Test Circuit



$I_C = 10I_{B1} = -10I_{B2} = 5A$
For PNP, the polarity is reversed.



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