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[SANYO Semiconductor \(U.S.A\) Corporation](#)
[2SD1047P-E](#)

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Ordering number : ENN6572

2SB817P : PNP Epitaxial Planar Silicon Transistor
2SD1047P : NPN Triple Diffused Planar Silicon Transistor



2SB817P / 2SD1047P

140V / 12A, AF80W Output Applications

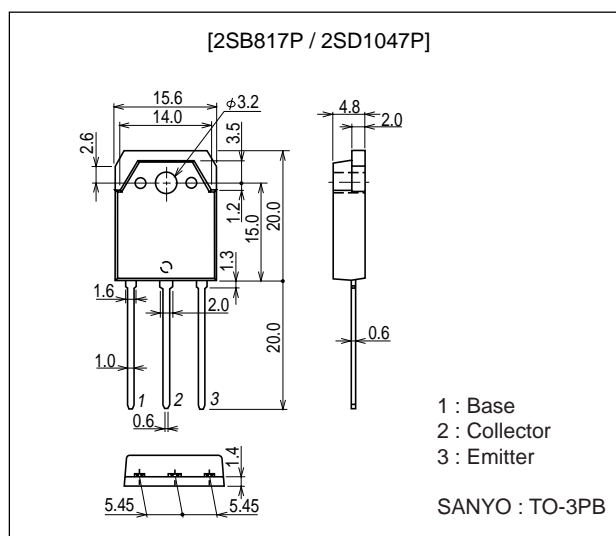
Features

- Capable of being mounted easily because of one-point fixing type plastic molded package (Interchangeable with TO-3).
- Wide ASO because of built-in ballast resistance.
- Good dependence of f_T on current and good HF characteristic.

Package Dimensions

unit : mm

2022A



Specifications

() : 2SB817P

Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

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}		(-)15	A
Collector Dissipation	P_C	$T_c=25^\circ\text{C}$	120	W
Junction Temperature	T_j		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-40 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CB0}	$V_{CB}=-80\text{V}, I_E=0$			(-)0.1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-4\text{V}, I_C=0$			(-)0.1	mA

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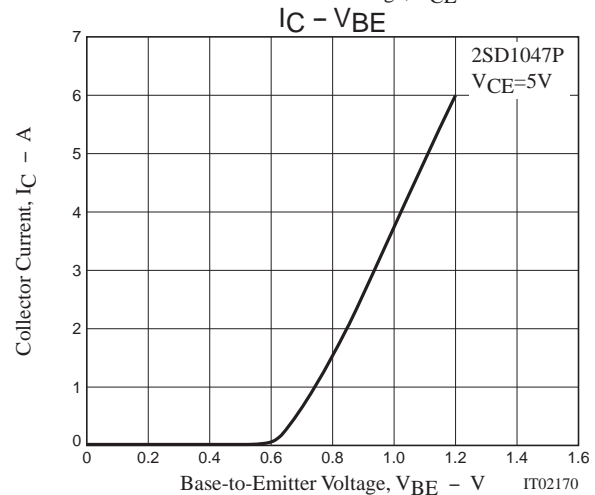
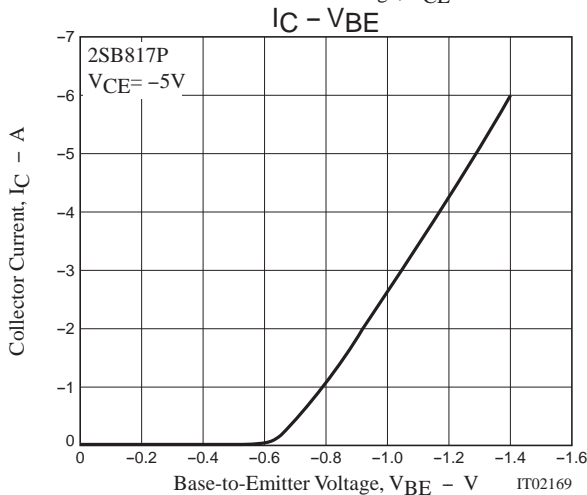
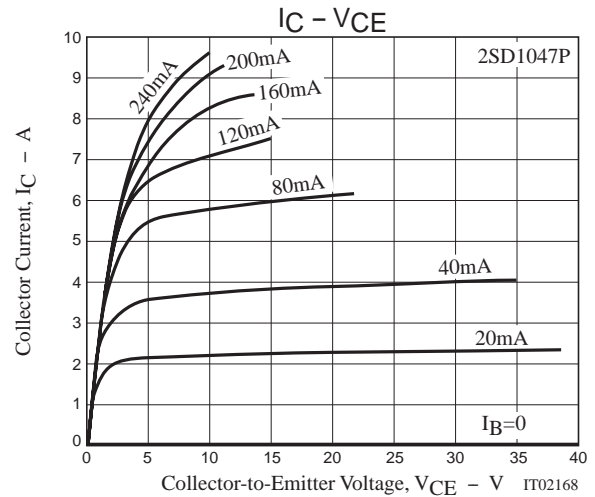
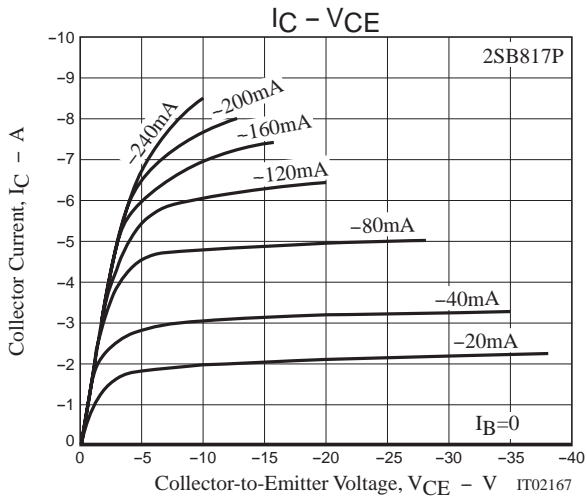
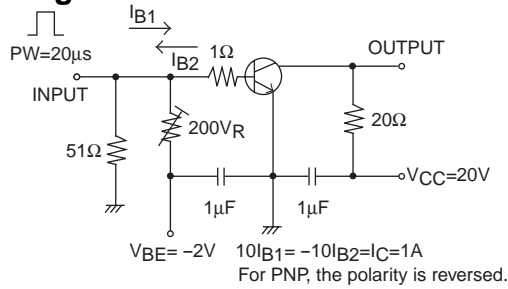
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
DC Current Gain	hFE1	VCE=(-)5V, IC=(-)1A	60*		200*	
	hFE2	VCE=(-)5V, IC=(-)6A	20			
Gain-Bandwidth Product	fT	VCE=(-)5V, IC=(-)1A		15		MHz
Output Capacitance	Cob	VCB=(-)10V, f=1MHz		(300)210		pF
Base-to-Emitter Saturation Voltage	VBE	VCE=(-)5V, IC=(-)1A			1.5	V
Collector-to-Emitter Saturation Voltage	VCE(sat)	IC=(-)5A, IB=(-)0.5A		(1.1)0.6	2.5	V
Collector-to-Base Breakdown Voltage	V(BR)CBO	IC=(-)5mA, IE=0	(-)160			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	IC=(-)5mA, RBE=∞	(-)140			V
		IC=(-)50mA, RBE=∞	(-)140			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	IE=(-)5mA, IC=0	(-)6			V
Turn-ON Time	ton	See specified test circuit.		(0.25)0.26		μs
Fall Time	tf	See specified test circuit.		(0.53)0.68		μs
Storage Time	tstg	See specified test circuit.		(1.61)6.88		μs

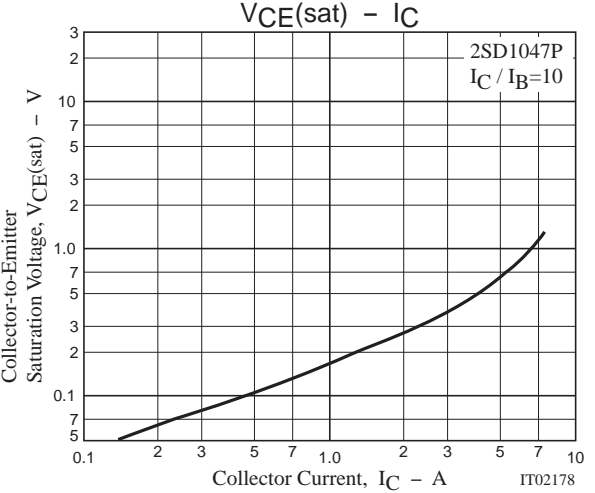
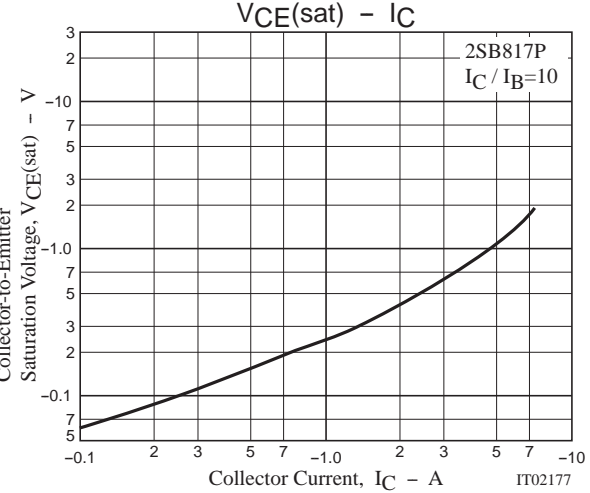
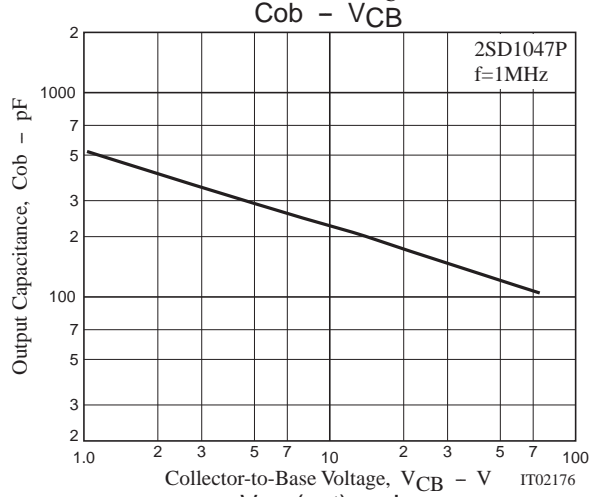
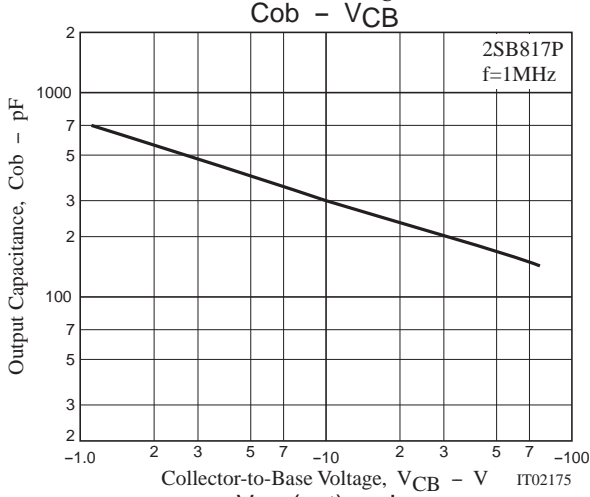
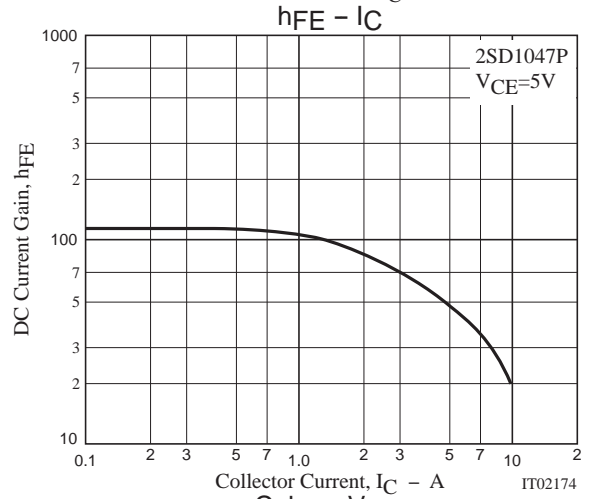
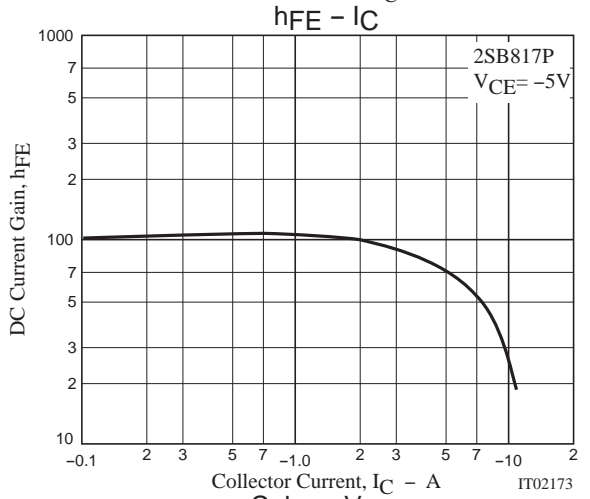
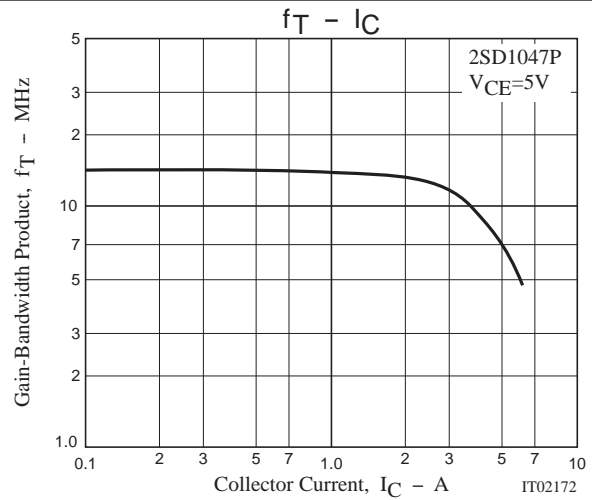
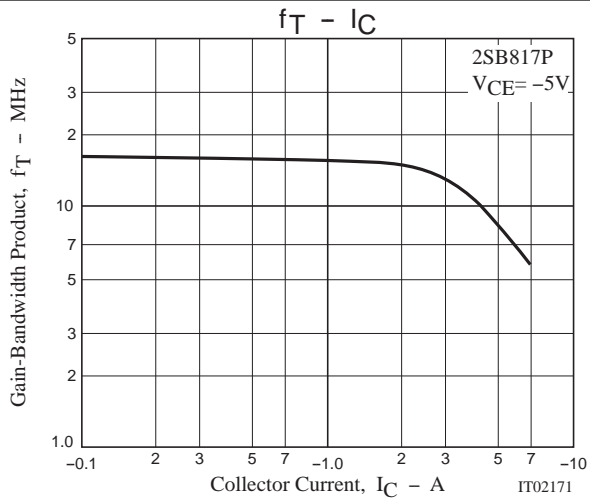
* : The 2SB817P / 2SD1047P are classified by 1A hFE as follows

Rank	D	E
hFE	60 to 120	100 to 200

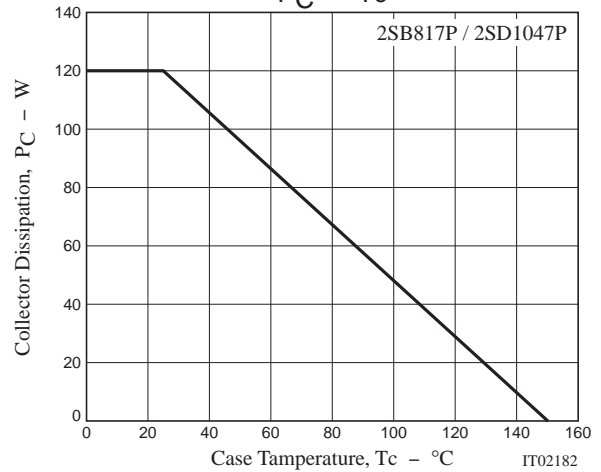
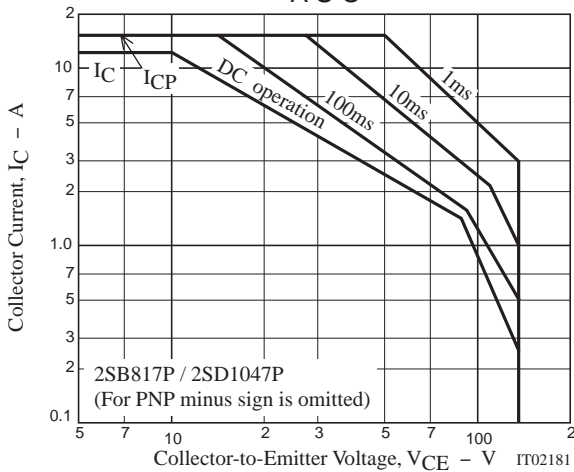
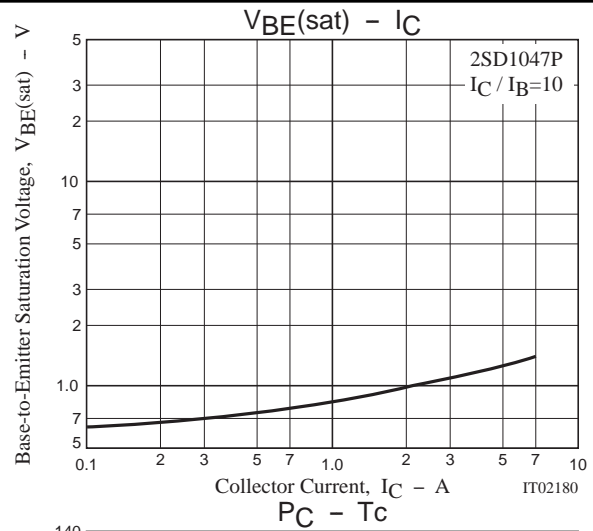
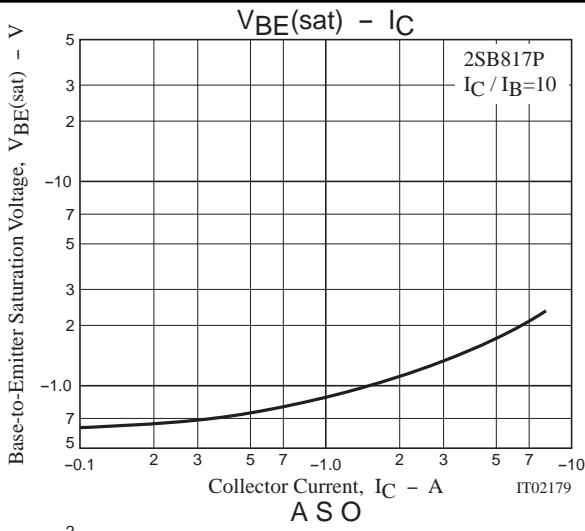
Swiching Time Test Circuit



2SB817P / 2SD1047P



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