

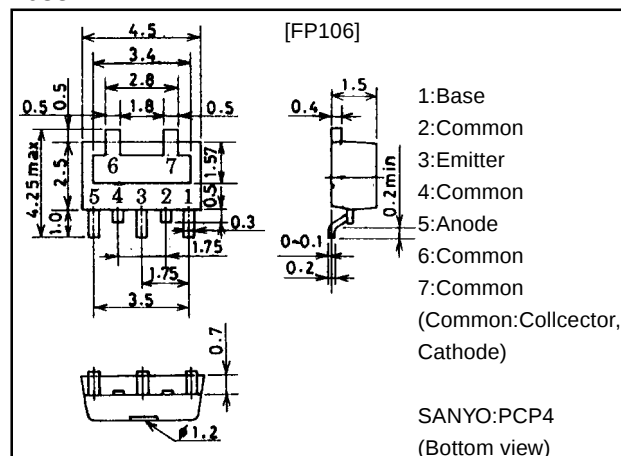
SANYO**FP106**TR:PNP Epitaxial Planar Silicon Transistor
SBD:Schottky Barrier Diode**DC-DC Converter Applications****Features**

- Complex type with a PNP transistor and a Schottky barrier diode in one package, facilitating high-density mounting.
- The FP106 is composed of 2 chips, one being equivalent to the 2SA1898 and the other the SB10-05C.

Package Dimensions

unit:mm

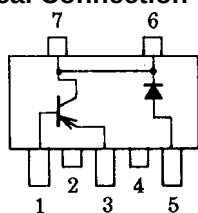
2088A

**Specifications****Absolute Maximum Ratings at Ta = 25°C**

Parameter	Symbol	Conditions	Ratings	Unit
[TR]				
Collector-to-Base Voltage	V_{CBO}		-15	V
Collector-to-Emitter Voltage	V_{CEO}		-15	V
Emitter-to-Base Voltage	V_{EBO}		-5	V
Collector Current	I_C		-3	A
Collector Current (Pulse)	I_{CP}		-5	A
Base Current	I_B		-600	mA
Collector Dissipation	P_C	Mounted on ceramic board (250mm ² ×0.8mm)	1.3	W
Junction Temperature	T_J		150	°C
Storage Temperature	T_{stg}		-55 to +150	°C
[SBD]				
Repetitive Peak Reverse Voltage	V_{RRM}		15	V
Non-repetitive Peak Reverse Surge Voltage	V_{RSM}		17	V
Average Rectified Current	I_O		1	A
Surge Forward Current	I_{FSM}	50Hz sine wave, 1cycle	8	A
Junction Temperature	T_J		-55 to +125	°C
Storage Temperature	T_{stg}		-55 to +125	°C

Marking:106

Continued on next page.

Electrical Connection

1:Base
2:Common
3:Emitter
4:Common
5:Anode
6:Common
7:Common
(Common:Collector, Cathode)

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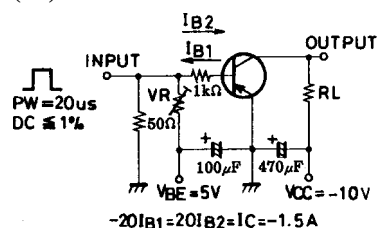
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Electrical Characteristics at Ta=25°C

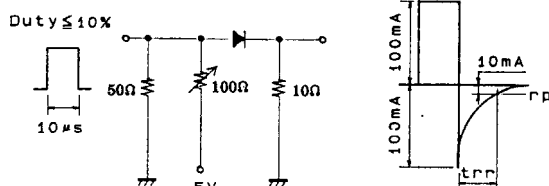
.Parameter	Symbol	Conditons	Ratings			Unit
			min	typ	max	
[TR]						
Collector Cutoff Current	I _{CBO}	V _{CB} =-12V, I _E =0			-1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =-3V, I _C =0			-1	μA
DC Current Gain	h _{FE1}	V _{CE} =-2V, I _C =-0.5A	100		280	
	h _{FE2}	V _{CE} =-2V, I _C =-3A	50			
Gain-Bandwidth Product	f _T	V _{CE} =-2V, I _C =-0.3A		300		MHz
Output Capacitance	C _{ob}	V _{CE} =-10V, f=1MHz		28		pF
C-E Saturation Voltage	V _{CE(sat)}	I _C =-1.5A, I _B =-75mA		-0.25	-0.5	V
B-E Saturation Voltage	V _{BE(sat)}	I _C =-1.5A, I _B =-75mA		-0.95	-1.2	V
C-B Breakdown Voltage	V _{(BR)CBO}	I _C =-10μA, I _E =0	-15			V
C-E Breakdown Voltage	V _{(BR)CEO}	I _C =-1mA, R _{BE} =∞	-15			V
E-B Breakdown Voltage	V _{(BR)EBO}	I _E =-10μA, I _C =0	-5			V
Turn-ON Time	t _{on}	See specified Test Circuit		30		ns
Storage Time	t _{stg}	See specified Test Circuit		100		ns
Fall Time	t _f	See specified Test Circuit		120		ns
[SBD]						
Reverse Voltage	V _R	I _R =300μA	15			V
Forward Voltage	V _F	I _F =1A			0.55	V
Reverse Current	I _R	V _R =7.5V			50	μA
Interterminal Capacitance	C	V _R =10V, f=1MHz		30		pF
Reverse Recovery Time	t _{rr}	I _F =I _R =100mA, See specified Test Circuit			10	ns
Thermal Resistance	R _{thj-a}	Mounted on ceramic board (250mm²×0.8mm)		120		°C/W

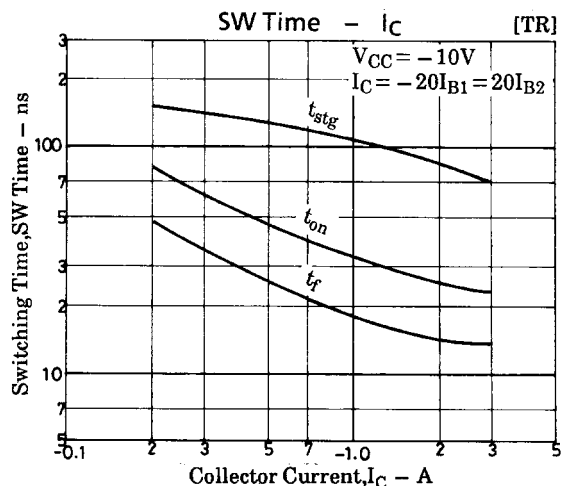
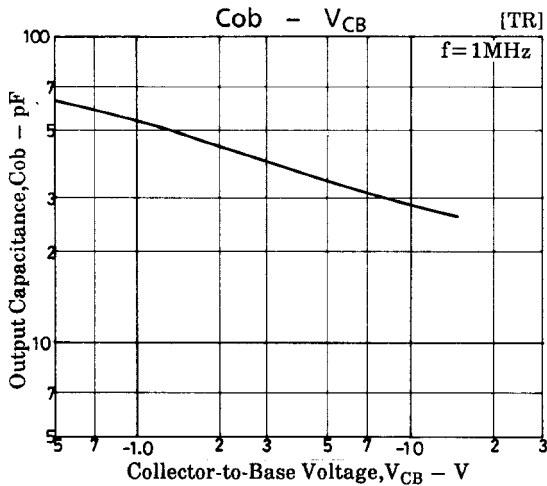
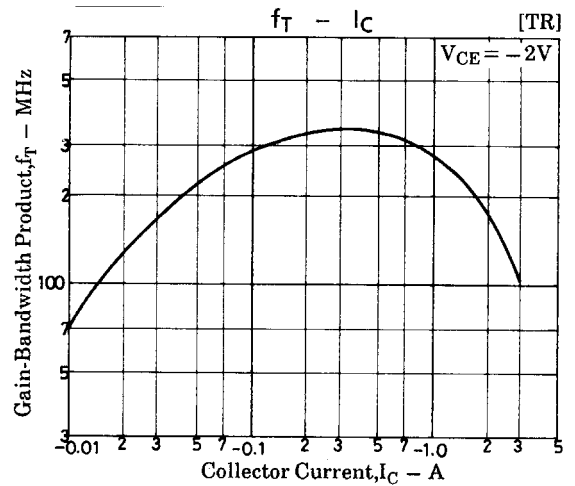
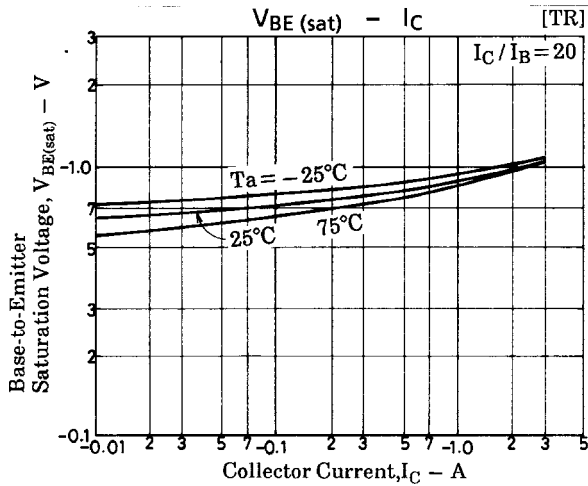
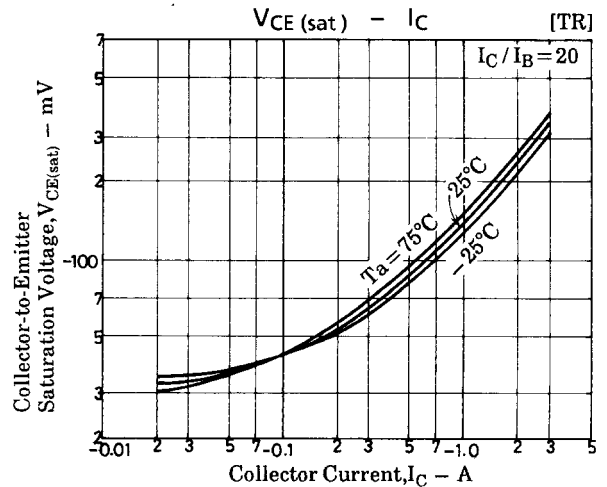
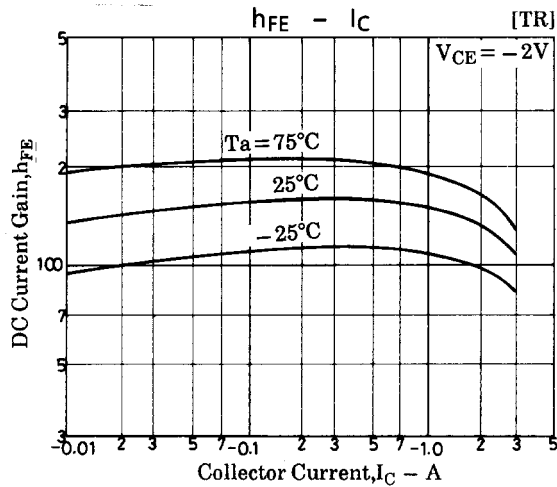
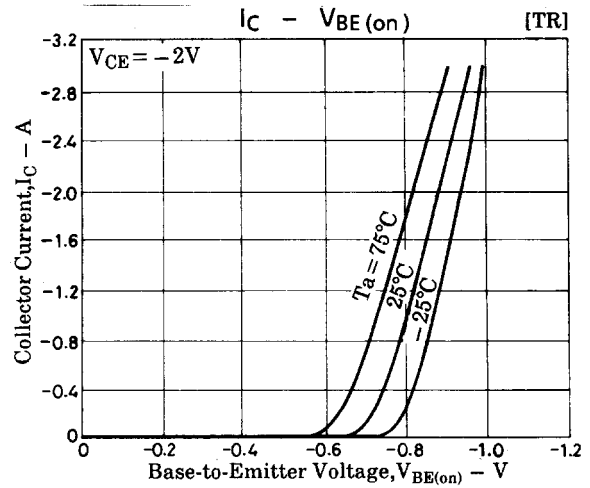
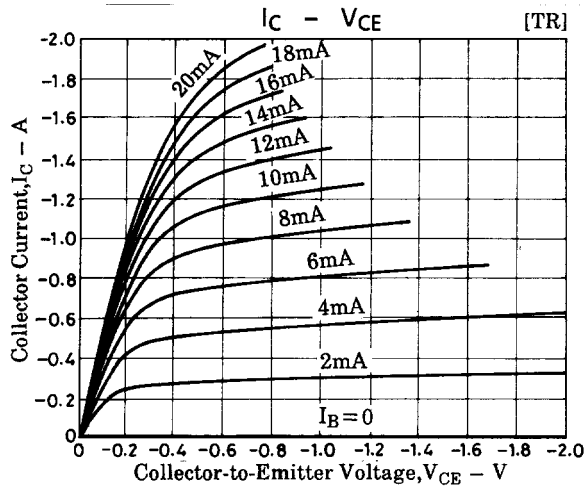
Switching Time Test Circuit

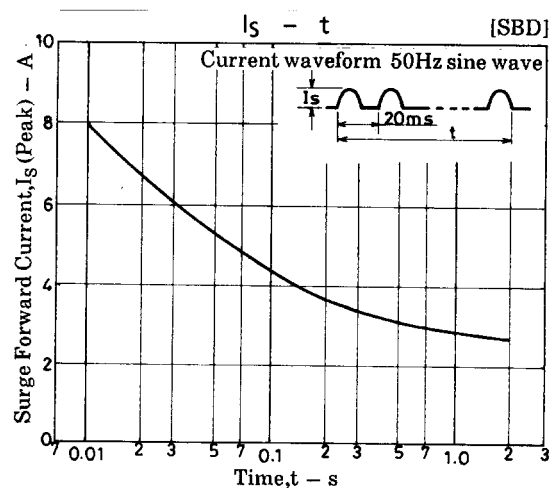
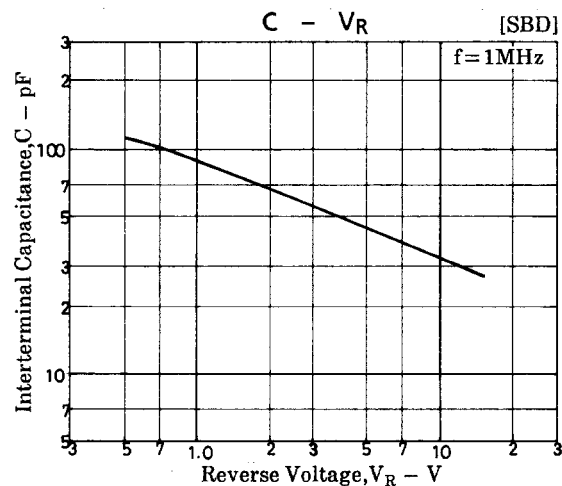
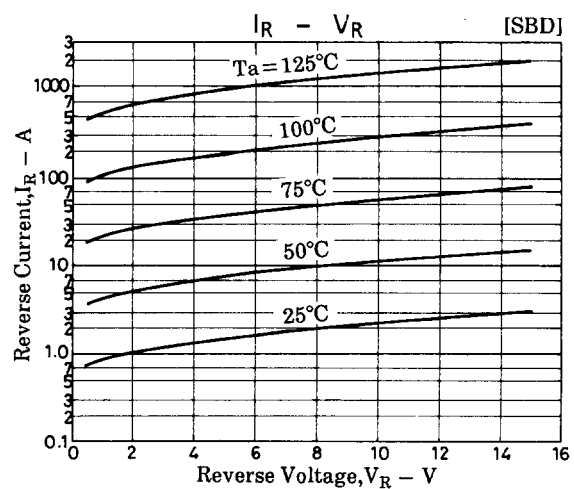
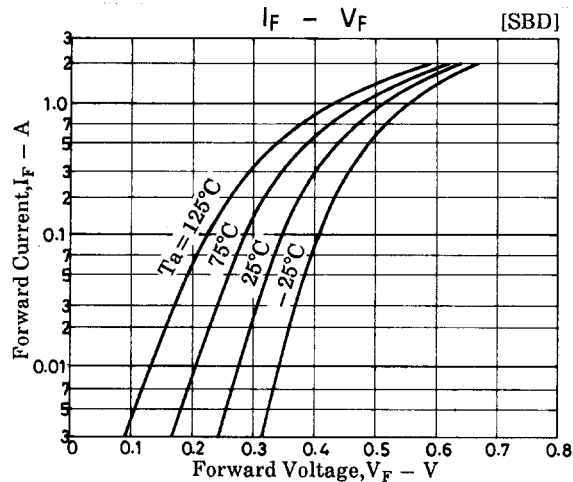
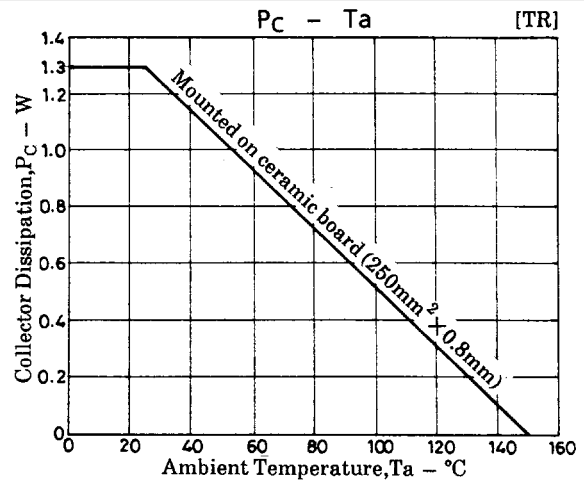
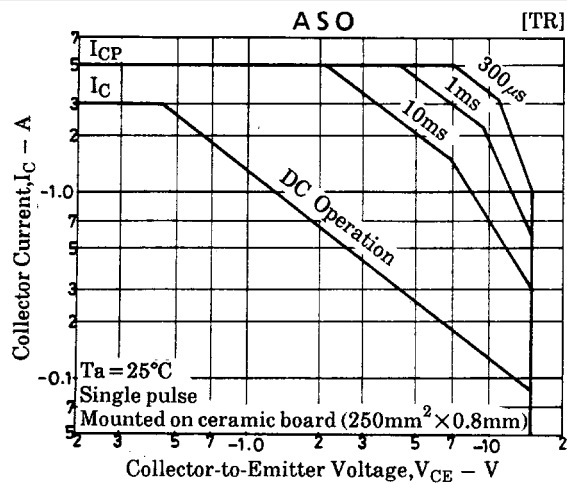
(TR)



(SBD)







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