

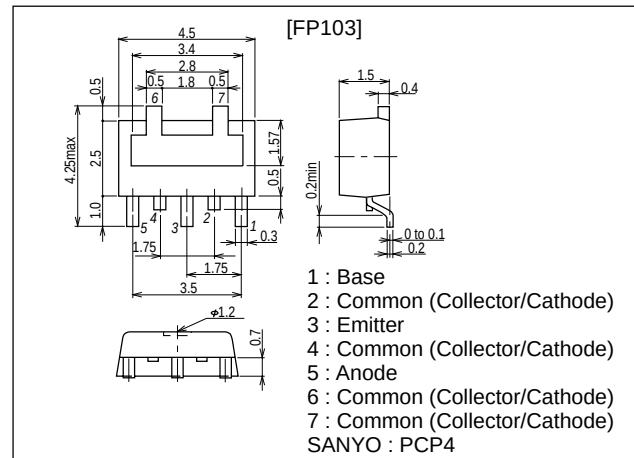
SANYO**FP103****DC/DC Converter Applications****Features**

- Composite type with a PNP transistor and a Schottky barrier diode contained in one package, facilitating high-density mounting.
- The FP103 is formed with 2chips, one being equivalent to the 2SB1121 and the other the SB07-03C, placed in one package.

Package Dimensions

unit:mm

2088A

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

Parameter	Symbol	Conditions	Ratings	Unit
[TR]				
Collector-to-Base Voltage	V_{CBO}		-30	V
Collector-to-Emitter Voltage	V_{CEO}		-25	V
Emitter-to-Base Voltage	V_{EBO}		-6	V
Collector Current	I_C		-2	A
Collector Current (Pulse)	I_{CP}		-5	A
Base Current	I_B		-400	mA
Collector Dissipation	P_C		1.3	W
Junction Temperature	T_J	Mounted on a ceramic board (250mm $\times$ 0.8mm)	150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$
[SBD]				
Repetitive Peak Reverse Voltage	V_{RRM}		30	V
Non-repetitive Peak Reverse Surge Voltage	V_{RSM}		35	V
Average Rectified Current	I_O		700	mA
Surge Forward Current	I_{FSM}	50Hz sine wave, 1cycle	5	A
Junction Temperature	T_J		-55 to +125	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +125	$^\circ\text{C}$

Marking:103

■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.

■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

SANYO Electric Co.,Ltd. Semiconductor Company

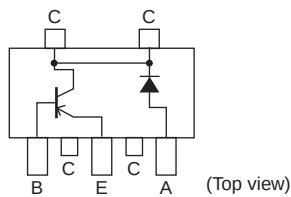
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

80700TS (KOTO)/52098HA (KT)/62094MT (KOTO) AX-8057 No.3962-1/5

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

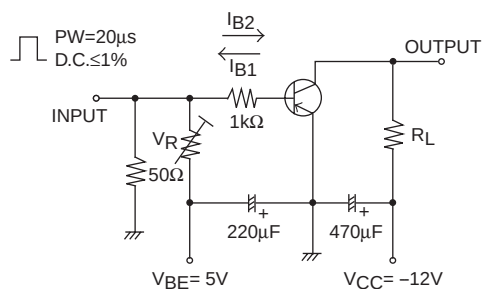
.Parameter	Symbol	Conditons	Ratings			Unit
			min	typ	max	
[TR]						
Collector Cutoff Current	I _{CBO}	V _{CB} =−20V, I _E =0			−0.1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =−4V, I _C =0			−0.1	μA
DC Current Gain	h _{FE1}	V _{CE} =−2V, I _C =−100mA	140		560	
	h _{FE2}	V _{CE} =−2V, I _C =−1.5A	65			
Gain-Bandwidth Product	f _T	V _{CE} =−10V, I _C =−50mA		150		MHz
Output Capacitance	C _{ob}	V _{CB} =−10V, f=1MHz		32		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =−1.5A, I _B =−75mA		−0.35	−0.6	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =−1.5A, I _B =−75mA		−0.85	−1.2	V
Collector-to-Base Breakdown Voltage	V _(BR) CBO	I _C =−10μA, I _E =0	−30			V
Collector-to-Emitter Breakdown Voltage	V _(BR) CEO	I _C =−1mA, R _{BE} =∞	−25			V
Emitter-to-Base Breakdown Voltage	V _(BR) EBO	I _E =−10μA, I _C =0	−6			V
Turn-ON Time	t _{on}	See specified Test Circuit		60		ns
Storage Time	t _{stg}	See specified Test Circuit		350		ns
Fall Time	t _f	See specified Test Circuit		25		ns
[SBD]						
Reverse Voltage	V _R	I _R =300μA	30			V
Forward Voltage	V _F	I _F =700mA			0.55	V
Reverse Current	I _R	V _R =15V			80	μA
Interterminal Capacitance	C	V _R =10V, f=1MHz		28		pF
Reverse Recovery Time	t _{rr}	I _F =I _R =100mA, See specified Test Circuit			10	ns
Thermal Resistance	R _{thj-a}	Mounted on a ceramic board (250mm²×0.8mm)		120		

Electrical Connection



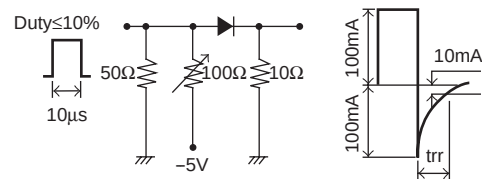
Switching Time Test Circuit

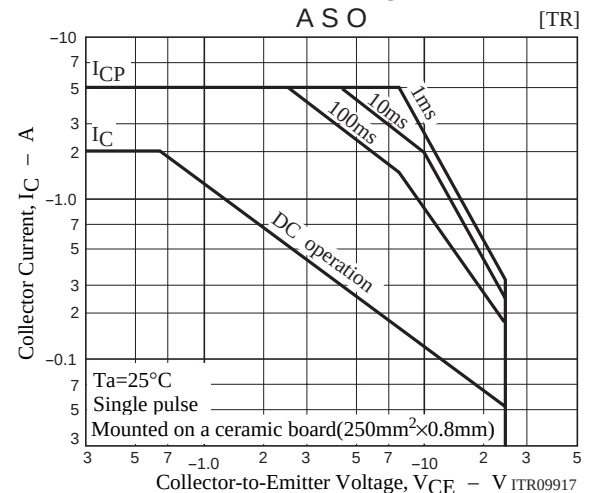
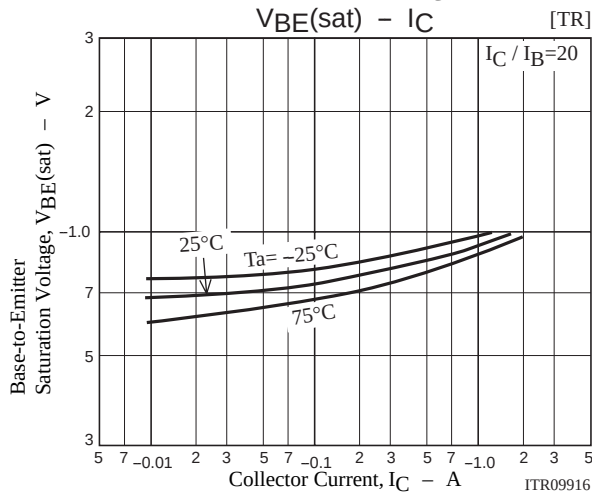
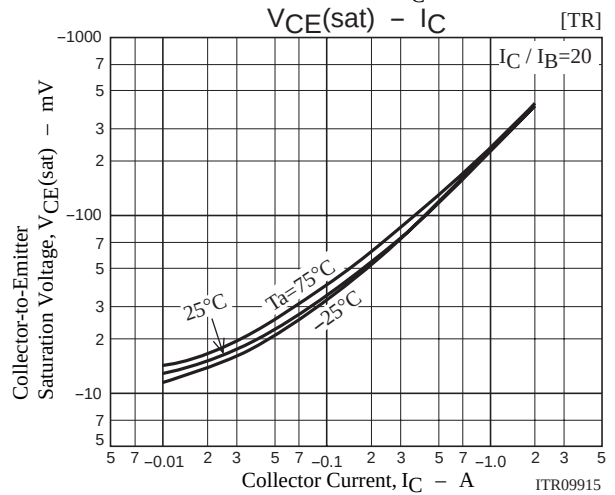
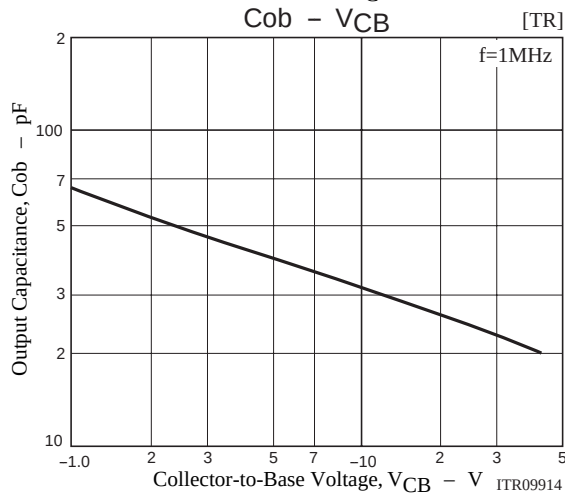
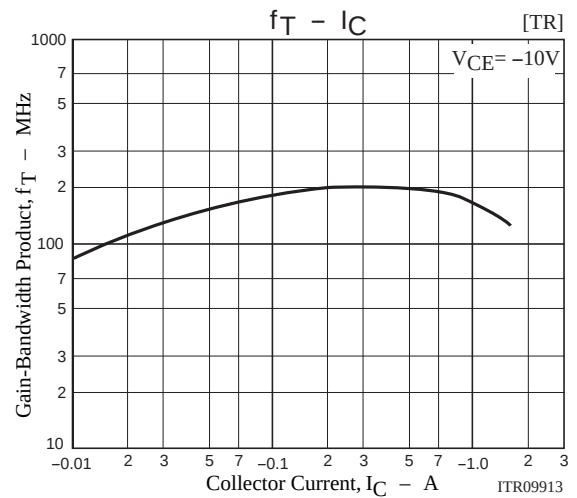
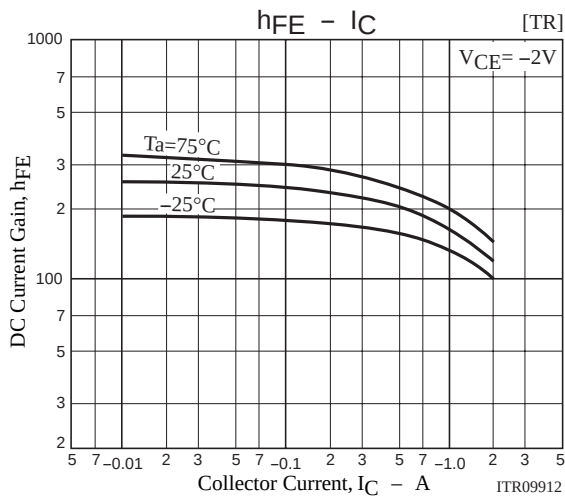
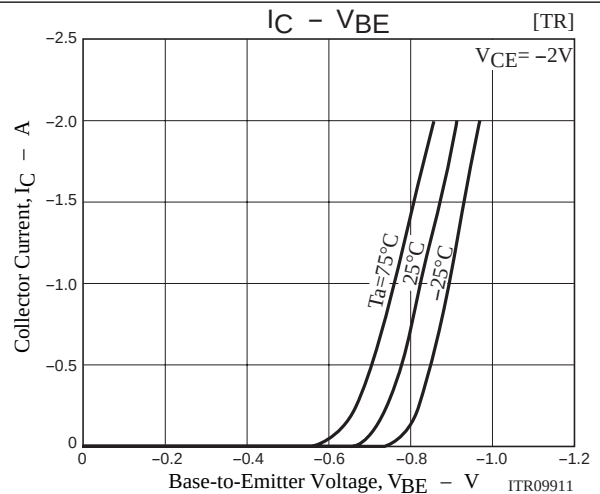
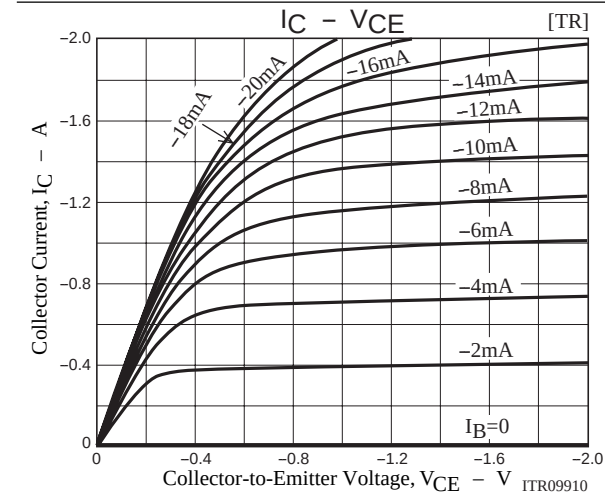
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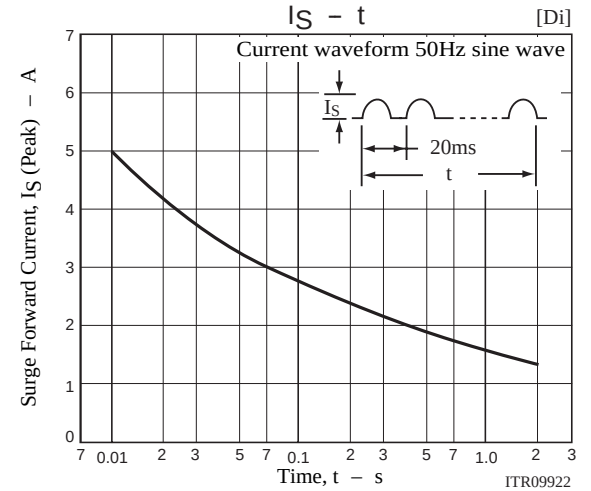
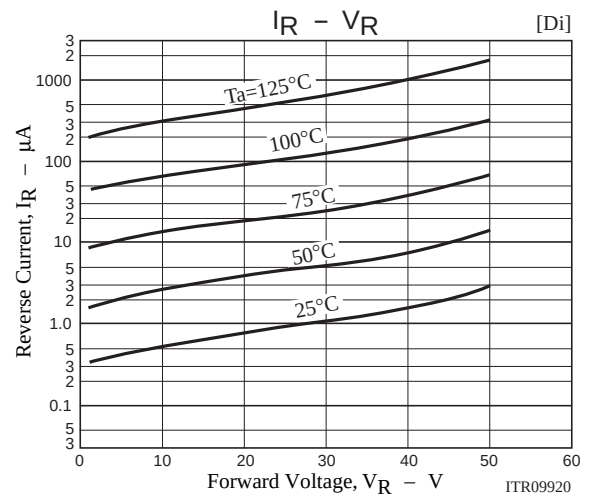
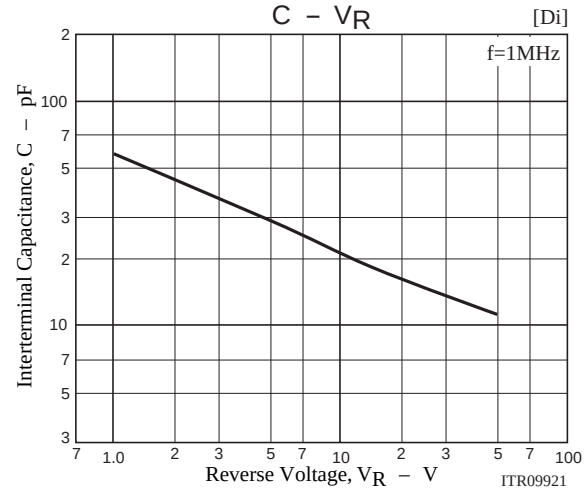
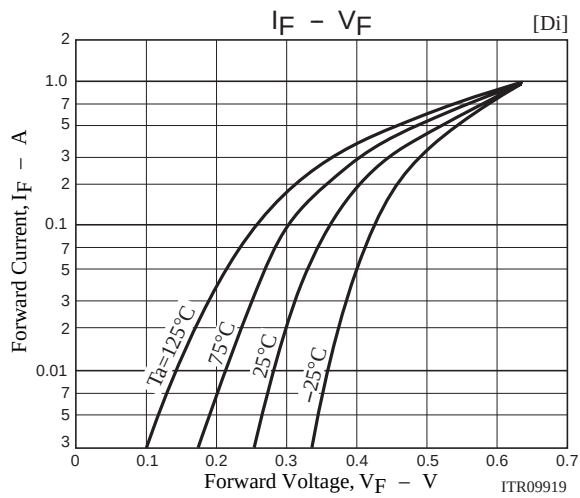
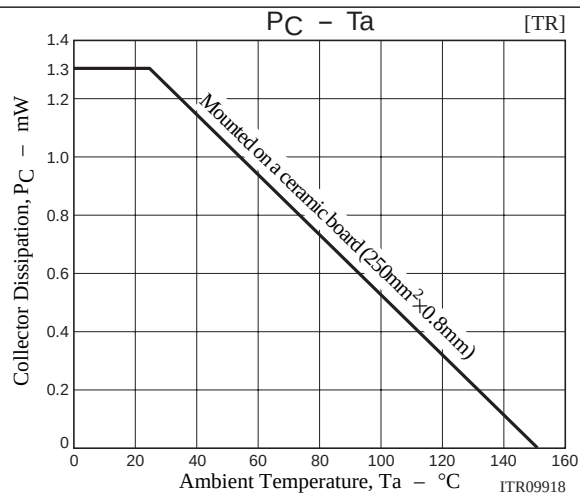


$$-20I_{B1} = 20I_{B2} = I_C = -500\text{mA}$$

[SBD]







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