



# FC105

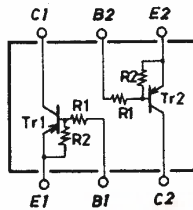
PNP Epitaxial Planar Silicon Composite Transistor

## Switching Applications

### Features

- On-chip bias resistors (R1=47kΩ, R2=47kΩ)
- Composite type with 2 transistors contained in the CP package currently in use, improving the mounting efficiency greatly.
- The FC105 is formed with two chips, being equivalent to the 2SA1341, placed in one package.
- Excellent in thermal equilibrium and pair capability.

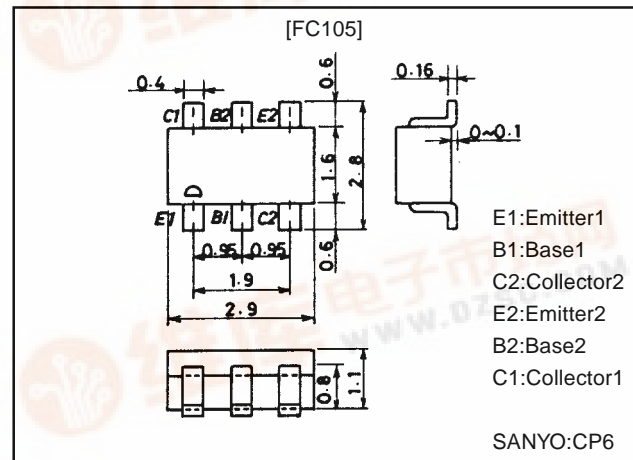
### Electrical Connection



### Package Dimensions

unit:mm

2067



### Specifications

#### Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CB0</sub>		-50	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>		-50	V
Emitter-to-Base Voltage	V <sub>EBO</sub>		-10	V
Collector Current	I <sub>C</sub>		-100	mA
Collector Current (Pulse)	I <sub>CP</sub>		-200	mA
Collector Dissipation	P <sub>C</sub>	1 unit	200	mW
Total Dissipation	P <sub>T</sub>		300	mW
Junction Temperature	T <sub>J</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to+150	°C

#### Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> =-40V, I <sub>E</sub> =0			-0.1	μA
Collector Cutoff Current	I <sub>CEO</sub>	V <sub>CE</sub> =-40V, I <sub>B</sub> =0			-0.5	μA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =-5V, I <sub>C</sub> =0	-30	-53	-80	μA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-5mA	50			
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =-10V, I <sub>C</sub> =-5mA		200		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-10V, f=1MHz		5.1		pF
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-5mA, I <sub>B</sub> =-0.25mA		-0.1	-0.3	V
C-B Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =-10μA, I <sub>E</sub> =0	-50			V
C-E Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =-100μA, R <sub>BE</sub> =∞	-50			V
Input OFF-State Voltage	V <sub>I(off)</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-100μA	-0.8	-1.1	-1.5	V
Input ON-State Voltage	V <sub>I(on)</sub>	V <sub>CE</sub> =-0.2V, I <sub>C</sub> =-5mA	-1.0	-2.5	-5.0	V
Input Resistance	R <sub>1</sub>		32	47	62	kΩ
Resistance Ratio	R <sub>1/R2</sub>		0.9	1.0	1.1	

Note: The specifications shown above are for each individual transistor.

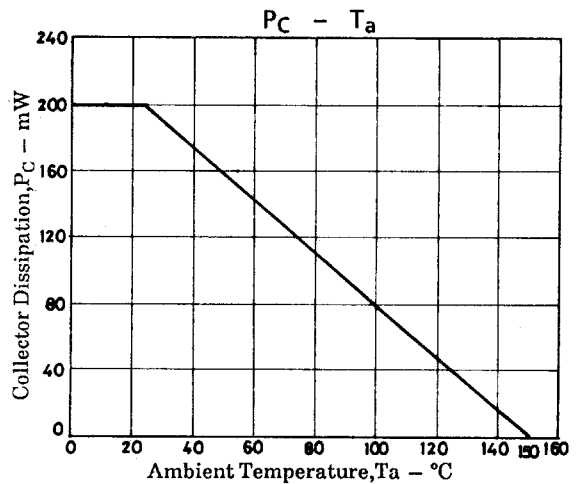
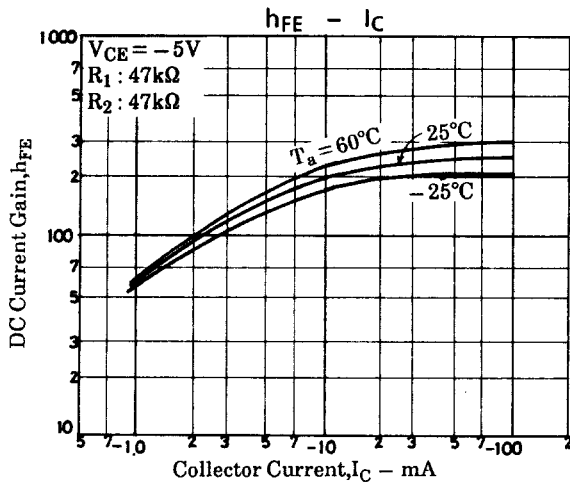
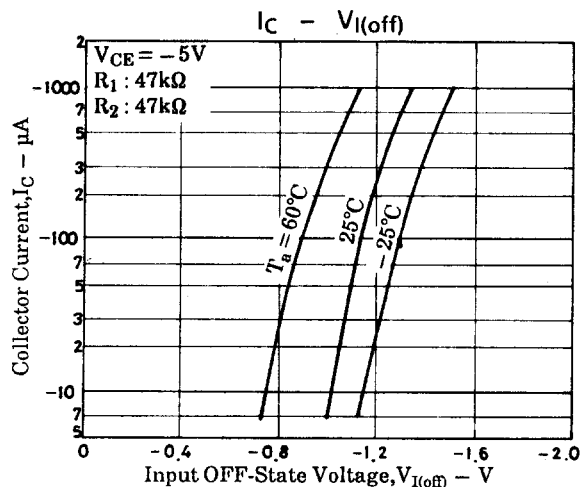
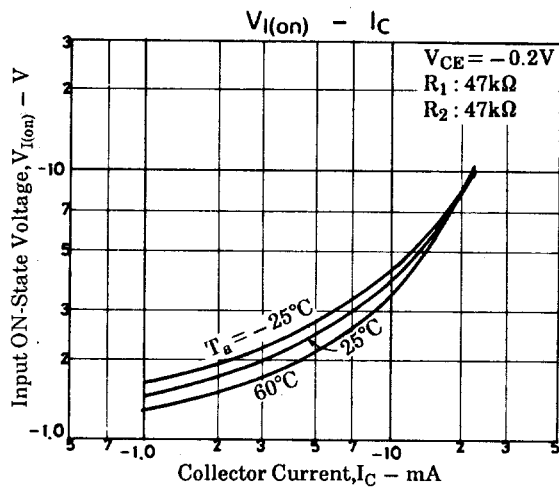
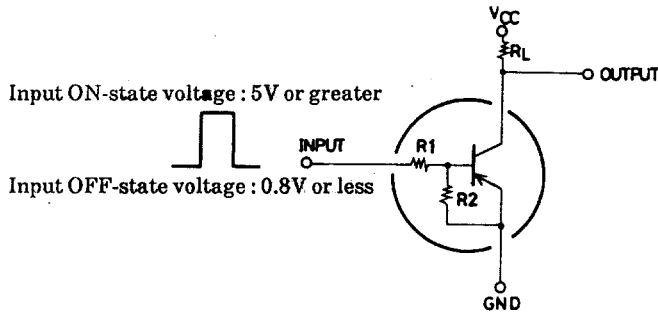
Marking:105

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Sample Application Circuit



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