



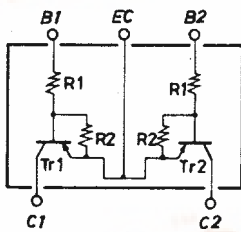
FC142

PNP Epitaxial Planar Silicon Composite Transistor Switching Applications (with Bias Resistance)

Features

- On-chip bias resistance (R1=4.7kΩ, R2=10kΩ).
- Composite type with 2 transistors contained in the CP package currently in use, improving the mounting efficiency greatly.
- The FC142 is formed with two chips, being equivalent to the 2SA1653, placed in one package.
- Excellent in thermal equilibrium and pair capability.

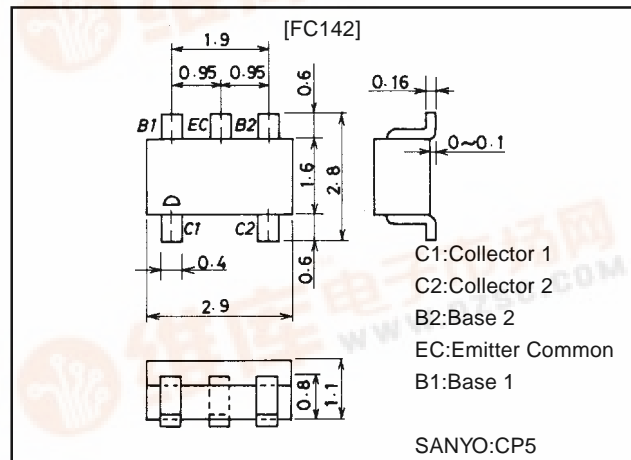
Electrical Connection



Package Dimensions

unit:mm

2066



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CB0}		-50	V
Collector-to-Emitter Voltage	V _{CEO}		-50	V
Emitter-to-Base Voltage	V _{EBO}		-6	V
Collector Current	I _C		-100	mA
Peak Collector Current	I _{CP}		-200	mA
Collector Dissipation	P _C	1 unit	200	mW
Total Power Dissipation	P _T		300	mW
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 _{CBO}	V _{CB} =-40V, I _E =0			-0.1	μA
Collector Cutoff Current	I _{CEO}	V _{CB} =-40V, I _E =0			-0.5	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =-5V, I _C =0	-262	-340	-485	μA
DC Current Gain	h _{FE}	V _{CE} =-5V, I _C =-10mA	50			
Gain-Bandwidth Product	f _T	V _{CE} =-5V, I _C =5mA		200		MHz
Output Capacitance	C _{ob}	V _{CB} =-10V, f=1MHz		5.1		pF
C-E Saturation Voltage	V _{CE(sat)}	I _C =-10mA, I _B =-0.5mA		-0.1	-0.3	V
C-B Breakdown Voltage	V _{(BR)CBO}	I _C =-10μA, I _E =0	-50			V
C-E Breakdown Voltage	V _{(BR)CEO}	I _C =-100μA, R _{BE} =∞	-50			V
Input OFF-State Voltage	V _{I(off)}	V _{CE} =-5V, I _C =-100μA	-0.7	-0.85	-0.95	V
Input ON-State Voltage	V _{I(on)}	V _{CE} =-0.2V, I _C =-10mA	-0.95	-1.3	-2.0	V
Input Resistance	R1		3.3	4.7	6.1	kΩ
Resistance Ratio	R1/R2			0.47		

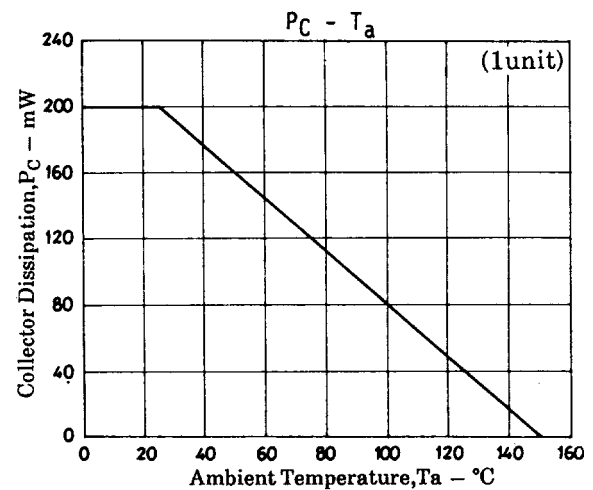
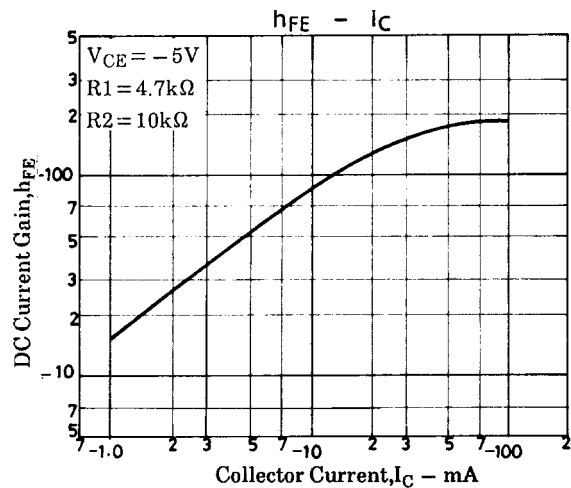
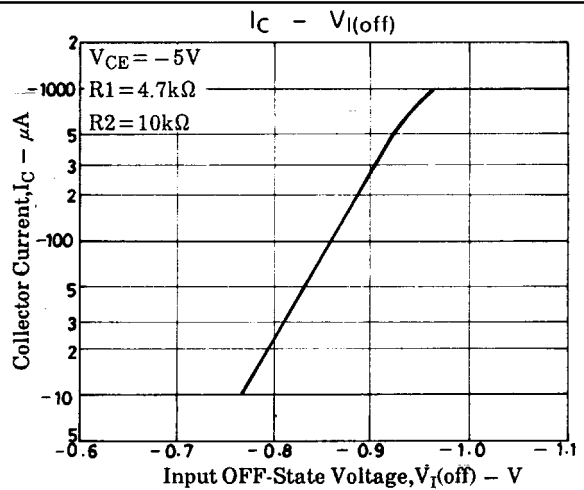
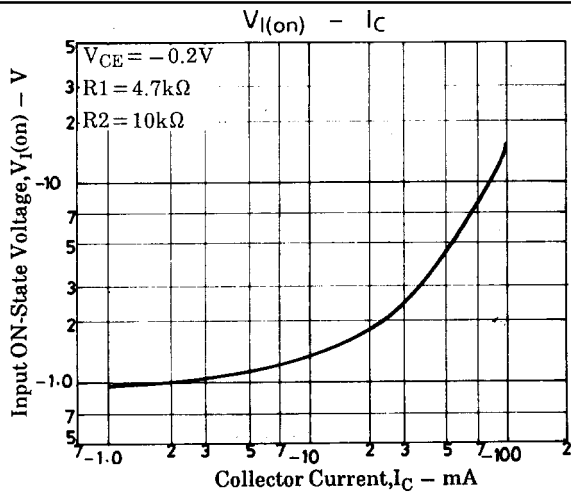
Note: The specifications shown above are for each individual transistor.

Marking: 142

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FC142



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