Ordering number:EN3084

FC116

NPN Epitaxial Planar Silicon Composite Transistor

Switching Applications

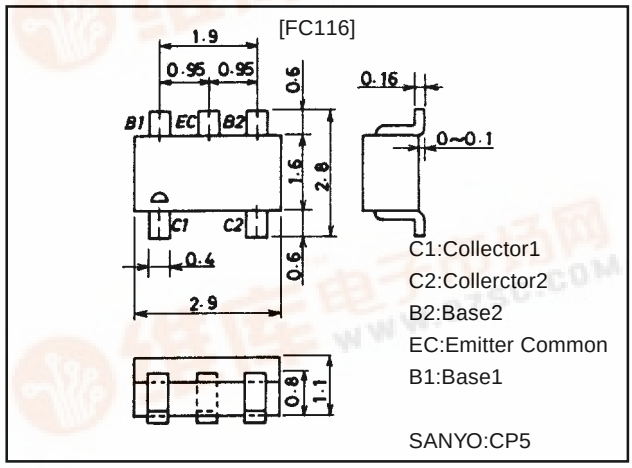
Features

- On-chip bias resistors (R_1=10kΩ, R_2=10kΩ)
- Composite type with 2 transistors contained in the CP package currently in use, improving the mounting efficiency greatly.
- The FC116 is formed with two chips, being equivalent to the 2SC3398, placed in one package.
- Excellent in thermal equilibrium and pair capability.

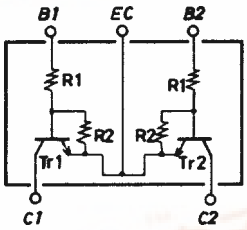
Package Dimensions

unit:mm

2066



Electrical Connection



Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		50	V
Collector-to-Emitter Voltage	V_{CEO}		50	V
Emitter-to-Base Voltage	V_{EBO}		10	V
Collector Current	I_C		100	mA
Collector Current (Pulse)	I_{CP}		200	mA
Collector Dissipation	P_C	1 unit	200	mW
Total Dissipation	P_T		300	mW
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–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_{CE}=40V, I_B=0			0.5	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=5V, I_C=0	170	250	360	μA
DC Current Gain	h_{FE}	V_{CE}=5V, I_C=10mA	50			
Gain-Bandwidth Product	f_T	V_{CE}=10V, I_C=5mA		250		MHz
Output Capacitance	Cob	V_{CB}=10V, f=1MHz		3.3		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	0.8	1.1	1.5	V
Input ON-State Voltage	$V_{I(on)}$	V_{CE}=0.2V, I_C=10mA	1.0	2.0	4.0	V
Input Resistance	R_1		7.0	10	13	kΩ
Resistance Ratio	R_1/R_2		0.9	1.0	1.1	

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

Marking:116

Sample Application Circuit