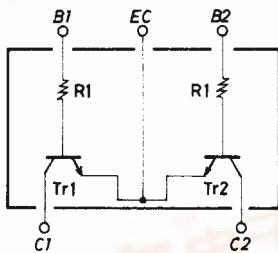


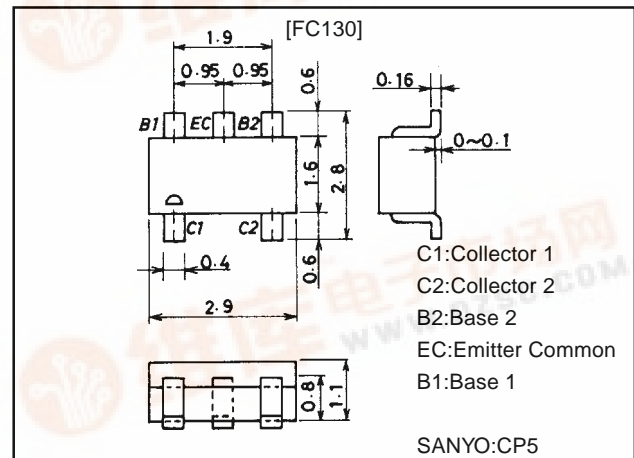
**SANYO****FC130****NPN Epitaxial Planar Silicon Composite Transistor  
Switching Applications  
(with Bias Resistance)****Features**

- On-chip bias resistance ( $R1=10k\Omega$ ).
- Composite type with 2 transistors contained in the CP package currently in use, improving the mounting efficiency greatly.
- The FC130 is formed with two chips, being equivalent to the 2SC3859, placed in one package.
- Excellent in thermal equilibrium and pair capability.

**Electrical Connection****Package Dimensions**

unit:mm

2066

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

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	$V_{EBO}$		5	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	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

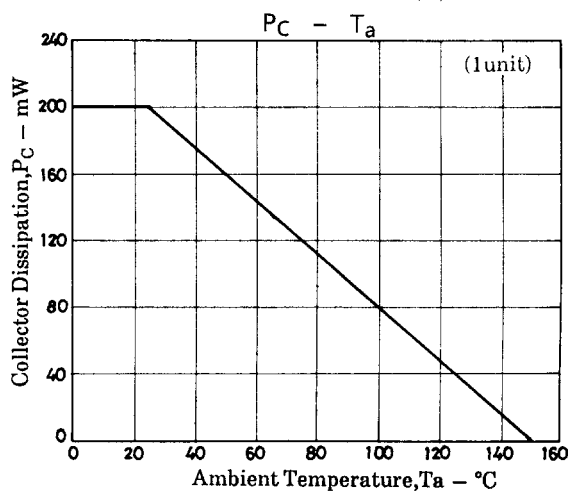
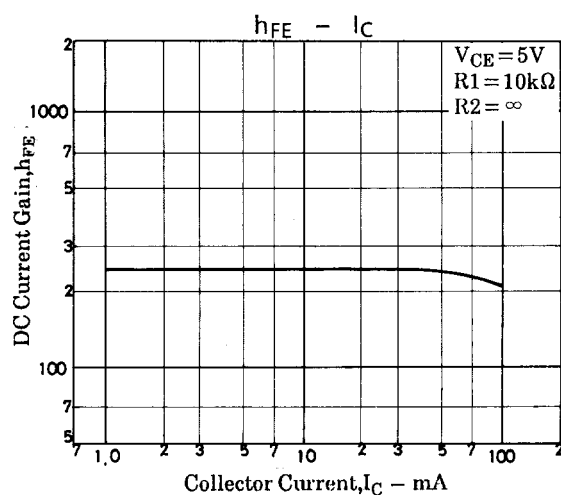
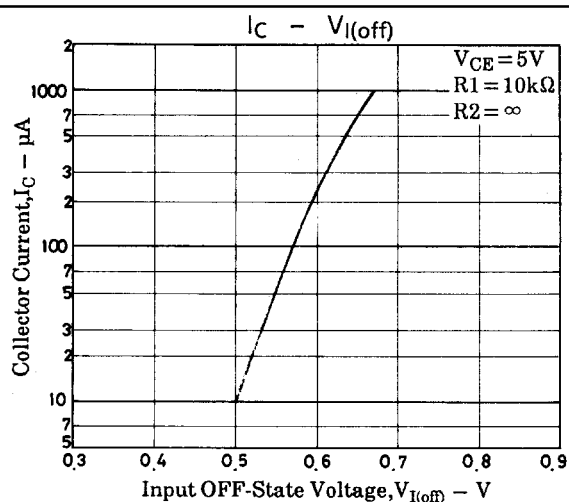
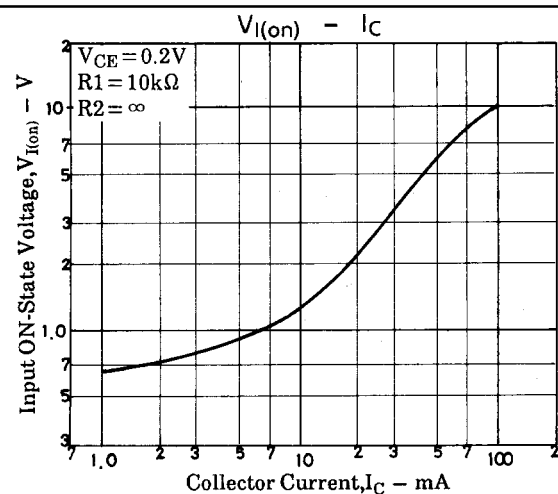
**Electrical Characteristics at  $T_a = 25^\circ\text{C}$** 

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=40V, I_E=0$			0.1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			0.1	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE}=5V, I_C=10\text{mA}$	100			
Gain-Bandwidth Product	$f_T$	$V_{CE}=10V, I_C=5\text{mA}$		250		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10V, f=1\text{MHz}$		3.3		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=0.5\text{mA}$		0.1	0.3	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	50			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=100\mu\text{A}, R_{BE}=\infty$	50			V
Input OFF-State Voltage	$V_{I(off)}$	$V_{CE}=5V, I_C=100\mu\text{A}$	0.4	0.55	0.8	V
Input ON-State Voltage	$V_{I(on)}$	$V_{CE}=0.2V, I_C=10\text{mA}$	0.7	1.2	3.0	V
Input Resistance	$R1$		7	10	13	$k\Omega$

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

Marking:130

# FC130



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