Ordering number:EN4697

FP201

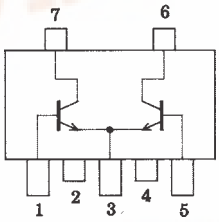
NPN Epitaxial Planar Silicon Composite Transistors

High-Frequency Amp, Differential Amp Applications

Features

- Composite type with 2 transistors contained in the PCP package currently in use, improving the mounting efficiency greatly.
- The FP201 is formed with two chips, being equivalent to the 2SC4504, placed in one package.
- Excellent in thermal equilibrium and pair capability.

Electrical Connection



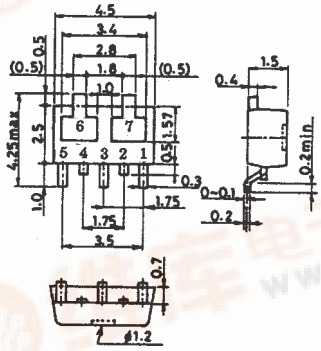
1:Base (NPN TR)
2:Collector (NPN TR)
3:Emitter Common
4:Collector (NPN TR)
5:Base (NPN TR)
6:Collector (NPN TR)
7:Collector (NPN TR)
(Top view)

Package Dimensions

unit:mm

2107A

[FP201]



1:Base (NPN TR)
2:Collector (NPN TR)
3:Emitter Common
4:Collector (NPN TR)
5:Base (NPN TR)
6:Collector (NPN TR)
7:Collector (NPN TR)

SANYO:PCP5
(Bottom view)

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		30	V
Collector-to-Emitter Voltage	V_{CEO}		20	V
Emitter-to-Base Voltage	V_{EBO}		3	V
Collector Current	I_C		300	mA
Collector Current (Pulse)	I_{CP}		600	mA
Collector Dissipation	P_C	Mounted on ceramic board (250mm²×0.8mm) 1unit	0.75	W
Total Dissipation	P_T	Mounted on ceramic board (250mm²×0.8mm)	1.0	W
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

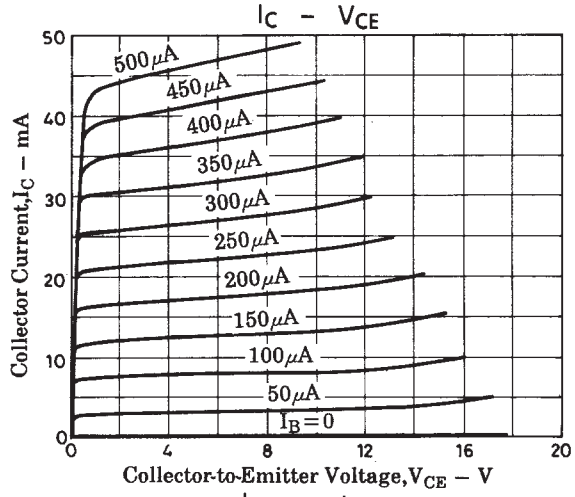
Electrical Characteristics at Ta=25˚C

Parameter	Symbol	Conditons	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=20V, I_E=0			1.0	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=2V, I_C=0			5.0	μA
DC Current Gain	$h_{FE}1$	V_{CE}=5V, I_C=50mA	60		200	
	$h_{FE}2$	V_{CE}=5V, I_C=300mA	20			
DC Current Gain Ratio	$h_{FE}1$(small/large)	V_{CE}=5V, I_C=50mA	0.7	0.95		
Base-to-Emitter Voltage Difference	V_{BE}(large-small	V_{CE}=5V, I_C=100mA		3.0	15	mV
Gain-Bandwidth Product	f_T	V_{CE}=5V, I_C=50mA		2.2		GHz
Output Capacitance	Cob	V_{CB}=10V, f=1MHz		2.9		pF
Reverse Transfer Capacitance	Cre	V_{CB}=10V, f=1MHz		2.6		pF
C-E Saturation Voltage	$V_{CE(sat)}$	I_C=200mA, I_B=20mA		0.2	0.5	V
B-E Saturation Voltage	$V_{BE(sat)}$	I_C=200mA, I_B=20mA		0.9	1.2	V

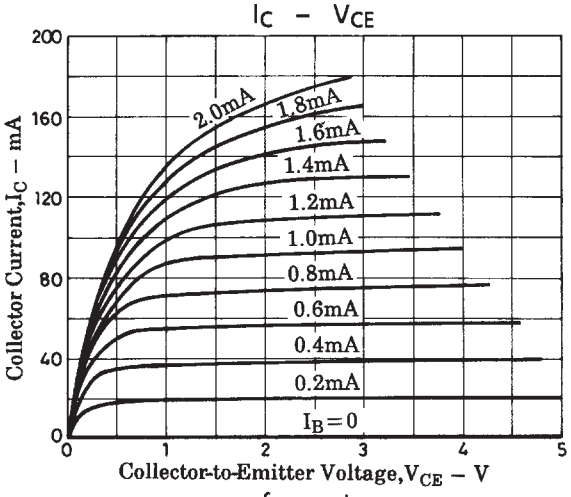
Note:The specifications shown above are for each individual transistor.
However, the DC Current Gain Ratio and Base Emitter to Voltage Difference are for the paired transistors.

Marking:201

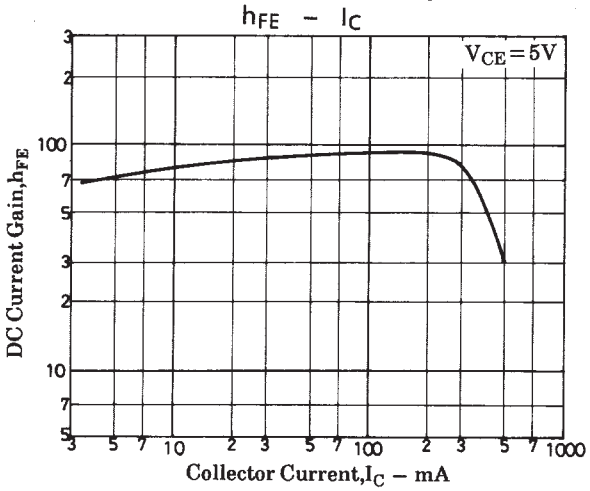
I_C – V_{CE}



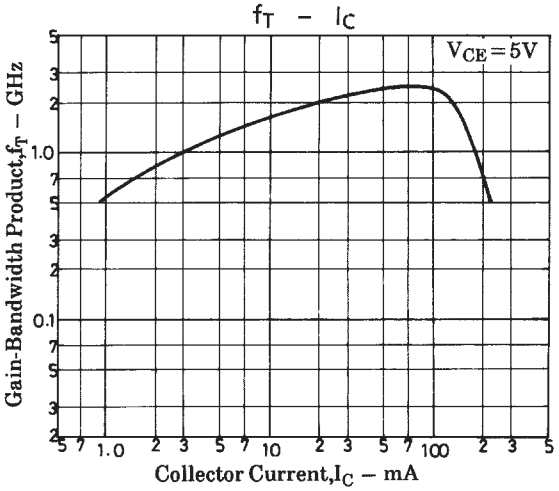
I_C – V_{CE}



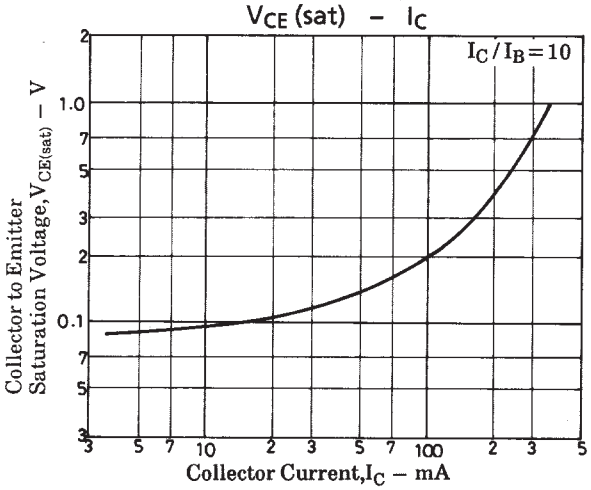
h_{FE} – I_C



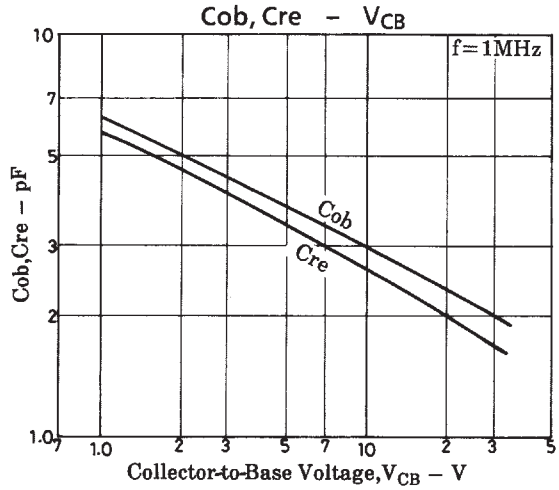
f_T – I_C



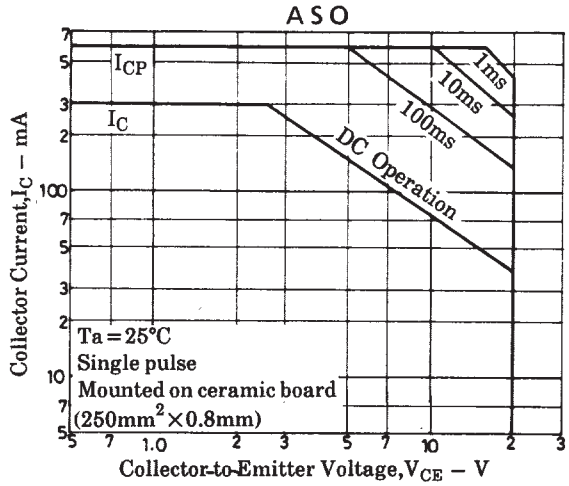
V_{CE}(sat) – I_C



Cob, Cre – V_{CB}



ASO



Collector Dissipation (Total)