Ordering number:EN4725

FP214

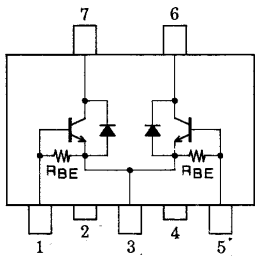
NPN Epitaxial Planar Silicon Transistor

Motor Driver Applications

Features

- Composite type with 2 NPN transistors, facilitating high-density mounting.
- The FP214 is composed of 2 chips, each being equivalent to the 2SD2100, placed in one package.

Electrical Connection



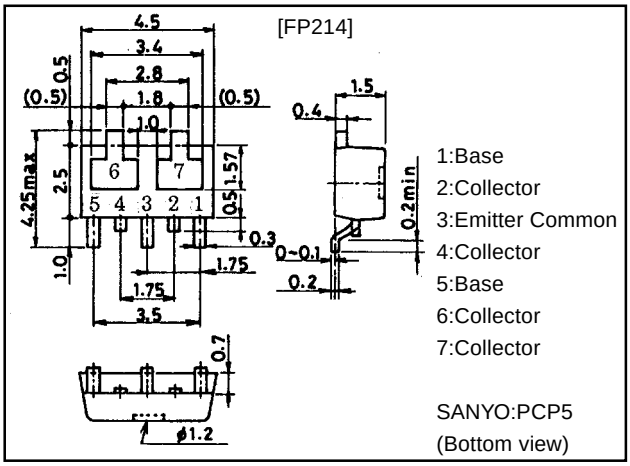
1:Base
2:Collector
3:Emitter Common
4:Collector
5:Base
6:Collector
7:Collector

(Top view)

Package Dimensions

unit:mm

2097A



1:Base
2:Collector
3:Emitter Common
4:Collector
5:Base
6:Collector
7:Collector

SANYO:PCP5
(Bottom view)

Specifications

Absolute Maximum Ratings at Ta = 25˚C

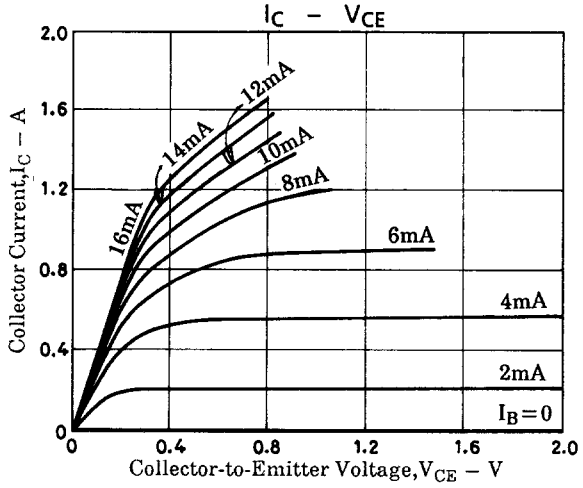
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		25	V
Collector-to-Emitter Voltage	V_{CEO}		20	V
Emitter-to-Base Voltage	V_{EBO}		6	V
Collector Current	I_C		2	A
Collector Current (Pulse)	I_{CP}		4	A
Base Current	I_B		400	mA
Collector Dissipation	P_C	Mounted on ceramic board (250mm²×0.8mm) 1 unit	0.8	W
Total Power Dissipation	P_T	Mounted on ceramic board (250mm²×0.8mm)	1.1	W
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

Electrical Characteristics at Ta=25˚C

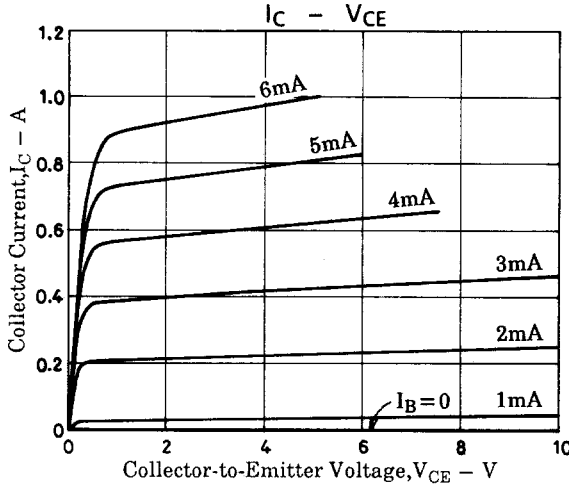
Parameter	Symbol	Conditons	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=20V, I_E=0			1	μA
DC Current Gain	$h_{FE}1$	V_{CE}=2V, I_C=0.5A	70			
	$h_{FE}2$	V_{CE}=2V, I_C=2A	50			
Gain-Bandwidth Product	f_T	V_{CE}=2V, I_C=0.5A		200		MHz
Output Capacitance	Cob	V_{CB}=10V, f=1MHz		25		pF
C-E Saturation Voltage	$V_{CE(sat)}$	I_C=1A, I_B=50mA		0.25	0.5	V
B-E Saturation Voltage	$V_{BE(sat)}$	I_C=1A, I_B=50mA			1.5	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C=10μA, I_E=0	25			V
C-E Breakdown Voltage	$V_{(BR)CEO}1$	I_C=10μA, R_{BE}=∞	25			V
	$V_{(BR)CEO}2$	I_E=10mA, R_{BE}=∞	20			V
Diode Forward Voltage	V_F	I_F=0.5A			1.5	V
Base-to-Emitter Resistance	R_{BE}			1.6		kΩ

Marking:214

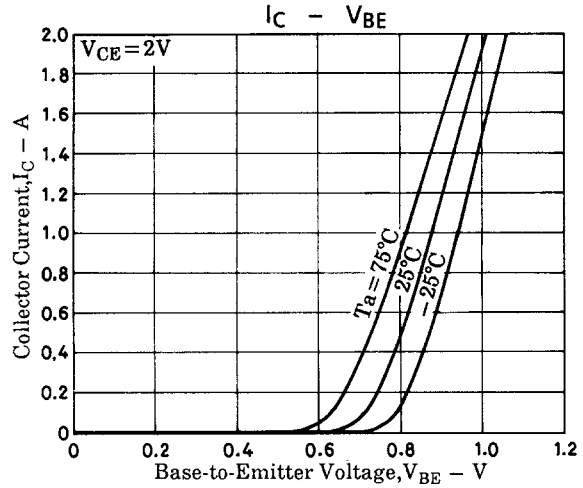
I_C – V_{CE}



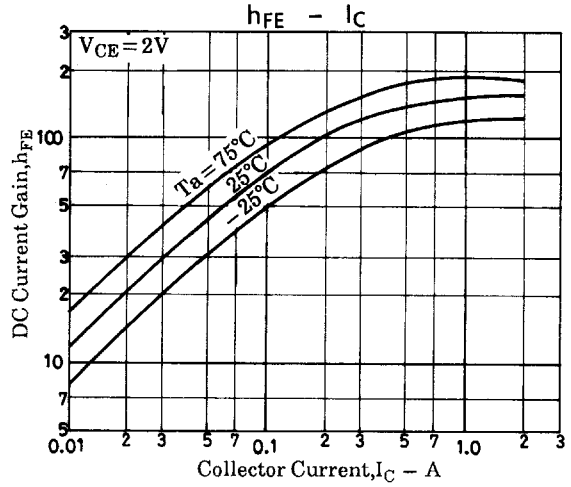
I_C – V_{CE}



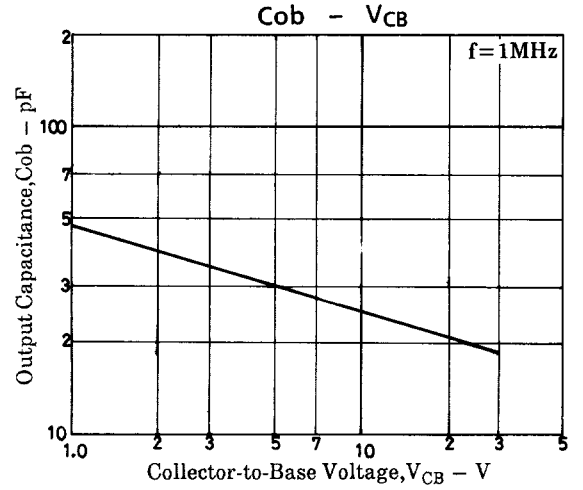
I_C – V_{BE}



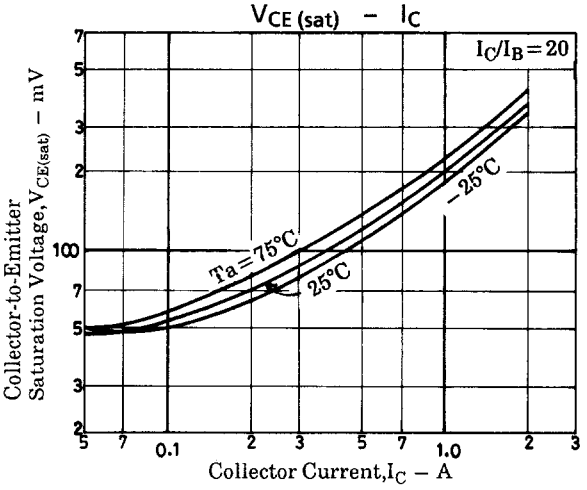
h_{FE} – I_C



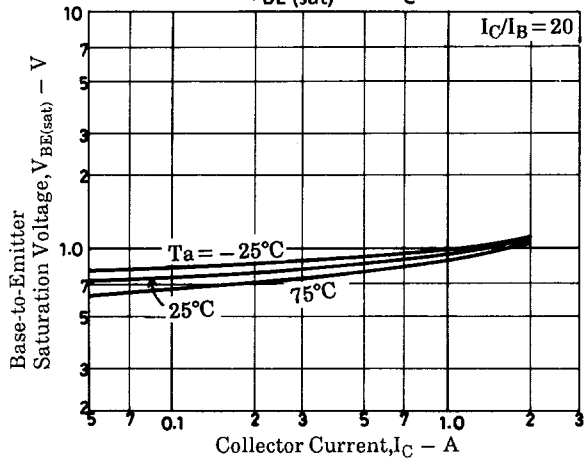
Cob – V_{CB}



$V_{CE(sat)}$ – I_C



$V_{BE(sat)}$ – I_C



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