



FP214

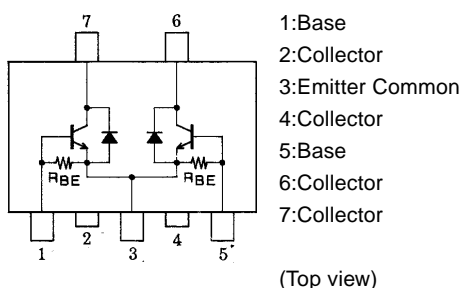
NPN Epitaxial Planar Silicon Transistor

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.

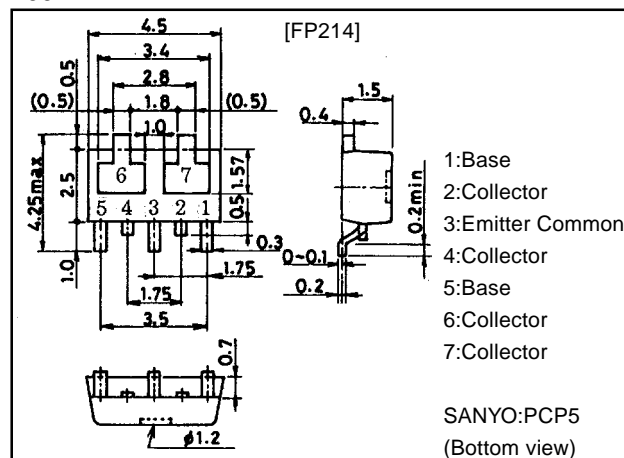
Electrical Connection



Package Dimensions

unit:mm

2097A



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 (250mm ² ×0.8mm) 1 unit	0.8	W
Total Power Dissipation	P_T	Mounted on ceramic board (250mm ² ×0.8mm)	1.1	W
Junction Temperature	T_j		150	°C
Storage Temperature	T_{stg}		−55 to +150	°C

Electrical Characteristics at Ta=25°C

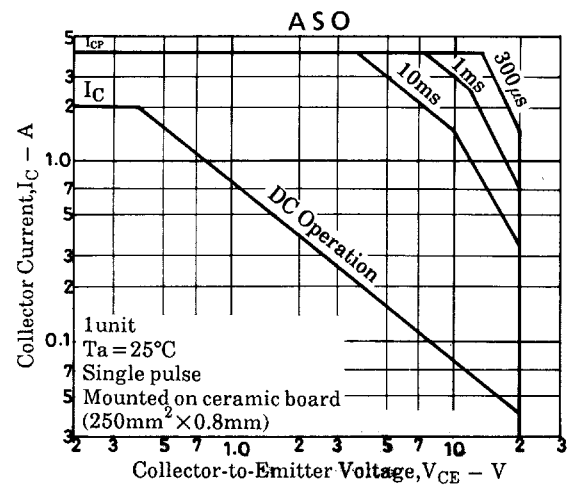
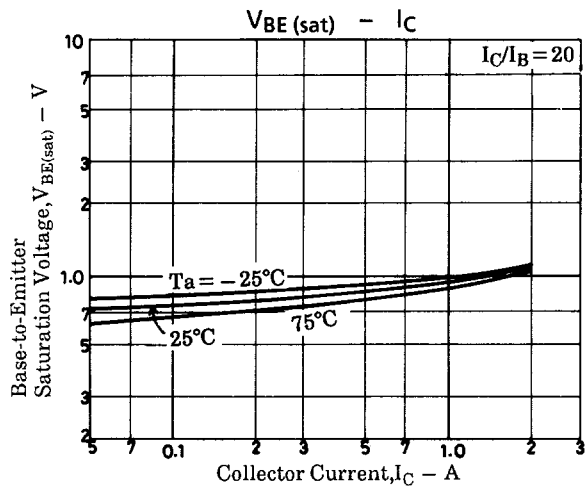
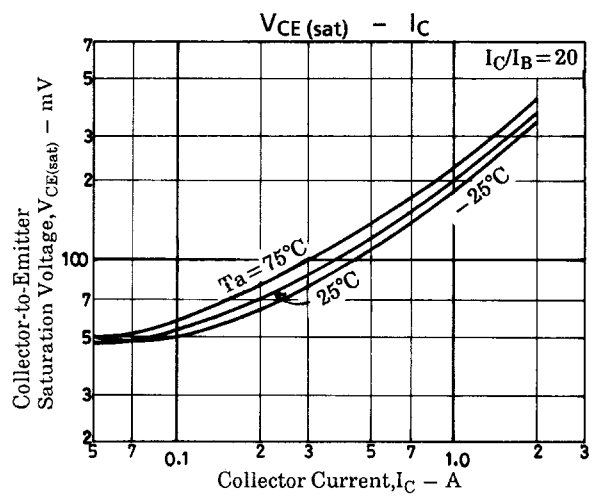
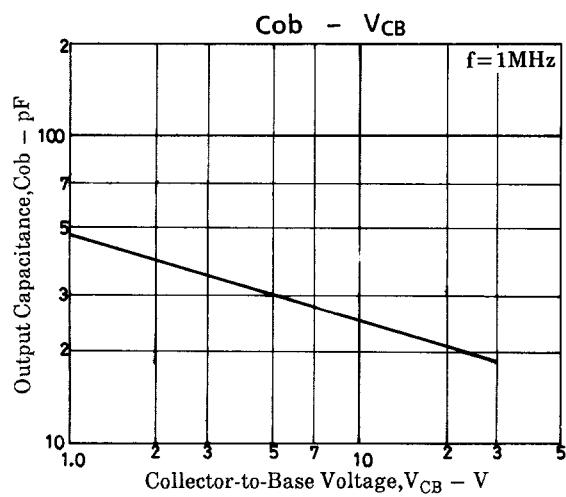
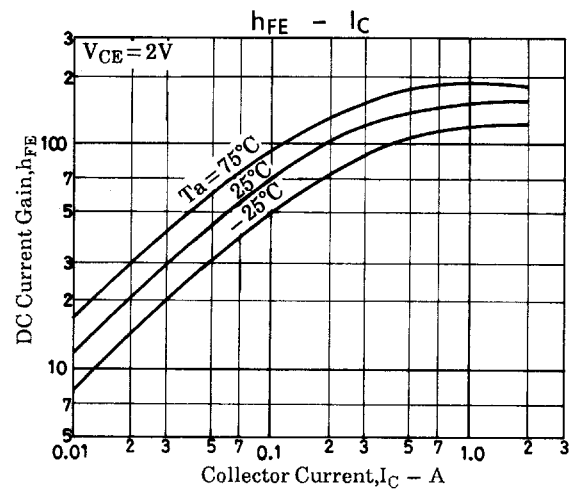
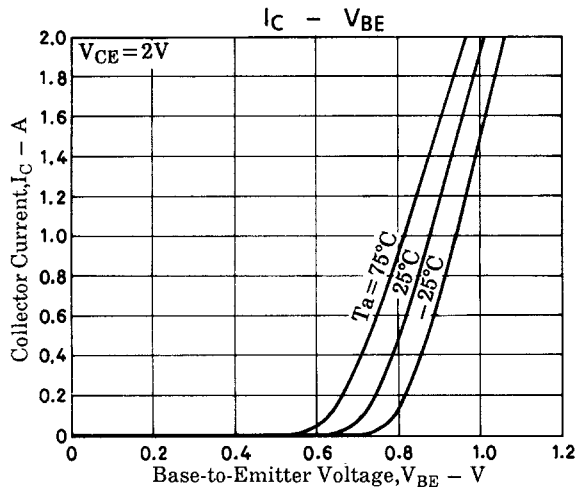
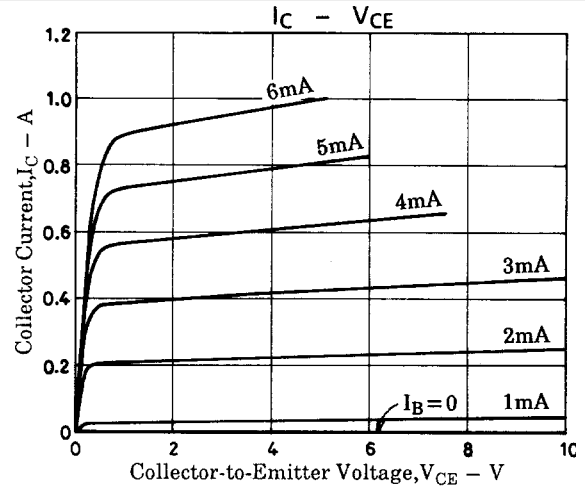
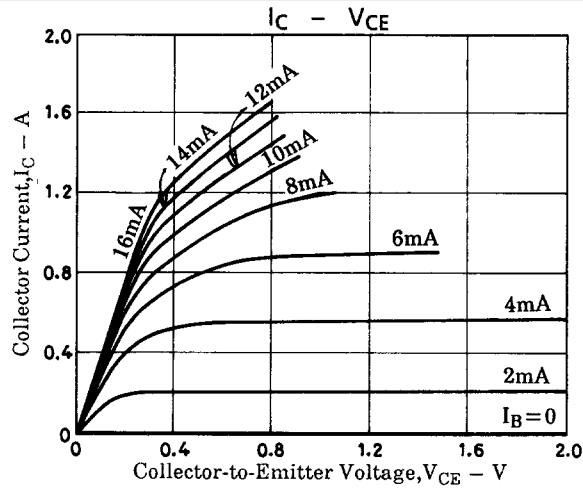
Parameter	Symbol	Conditons	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CB0}	$V_{CB}=20V, I_E=0$			1	μA
DC Current Gain	h_{FE1}	$V_{CE}=2V, I_C=0.5A$	70			
	h_{FE2}	$V_{CE}=2V, I_C=2A$	50			
Gain-Bandwidth Product	f_T	$V_{CE}=2V, I_C=0.5A$		200		MHz
Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$		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	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	25			V
C-E Breakdown Voltage	$V_{(BR)CEO1}$	$I_C=10\mu A, R_{BE}=\infty$	25			V
	$V_{(BR)CEO2}$	$I_E=10mA, R_{BE}=\infty$	20			V
Diode Forward Voltage	V_F	$I_F=0.5A$			1.5	V
Base-to-Emitter Resistance	R_{BE}			1.6		k Ω

Marking:214

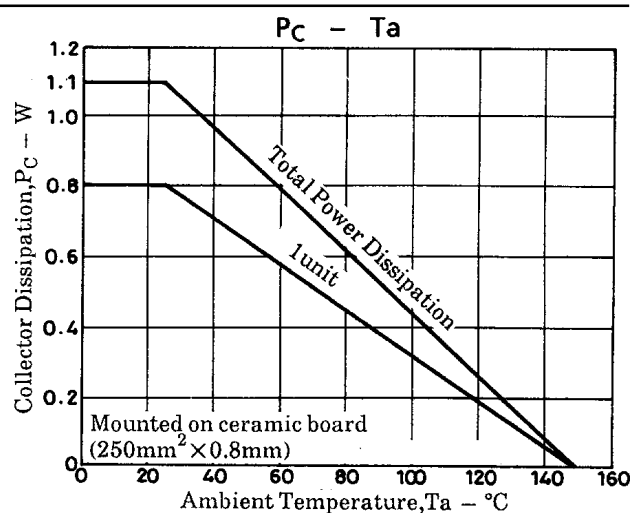
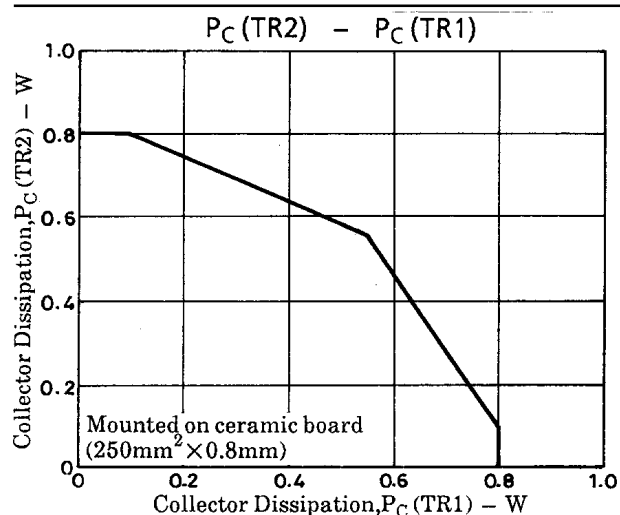
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