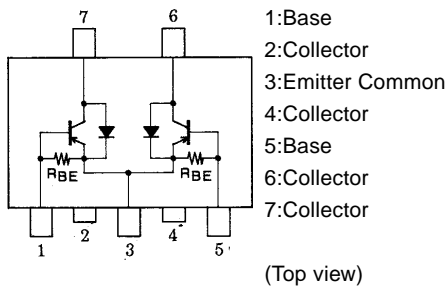


**SANYO****FP213**

PNP Epitaxial Planar Silicon Transistor

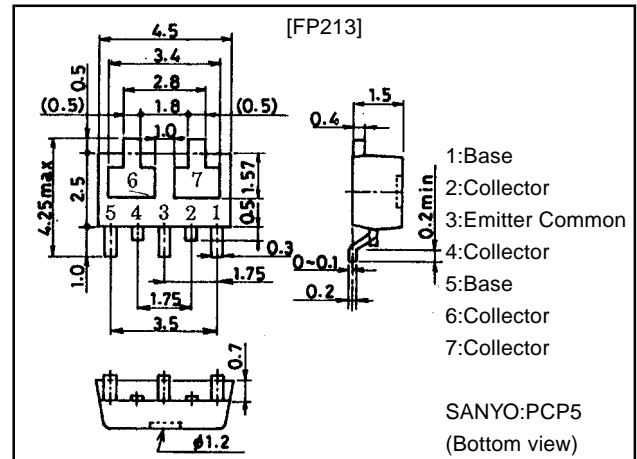
**Motor Driver Applications****Features**

- Composite type with 2 PNP transistors facilitating high-density mounting.
- The FP213 is composed of 2 chips, each being equivalent to the 2SB1397, placed in one package.

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

unit:mm

2097A

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CB0}$		-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 $\times$ 0.8mm) 1 unit	0.8	W
Total Power Dissipation	$P_T$	Mounted on ceramic board (250mm $\times$ 0.8mm)	1.1	W
Junction Temperature	$T_J$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

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

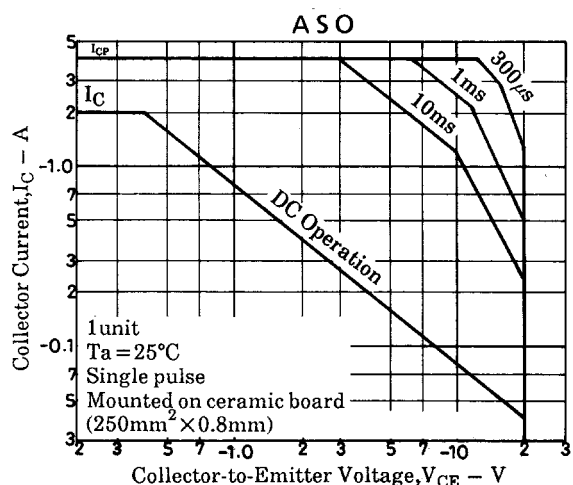
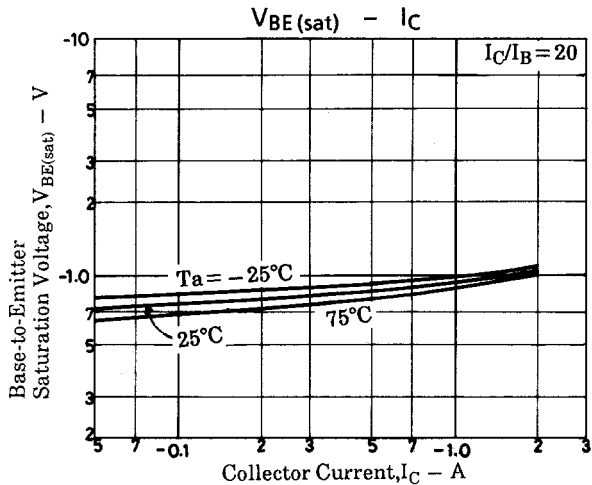
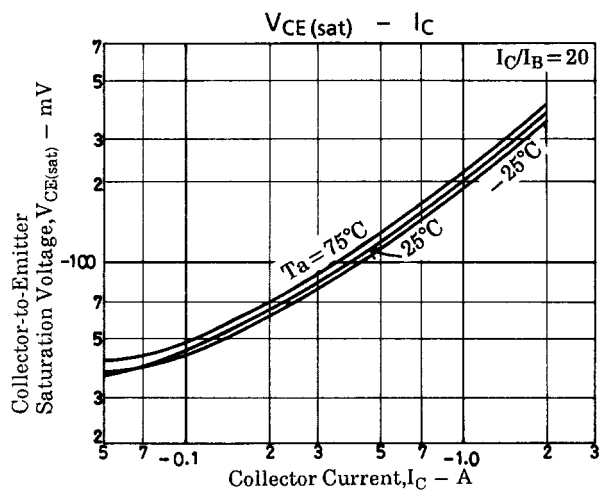
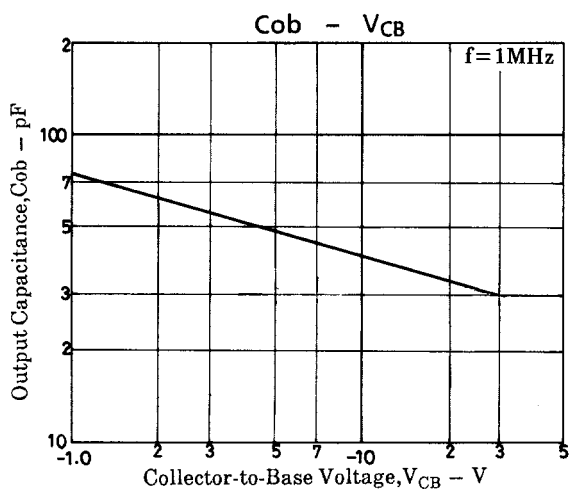
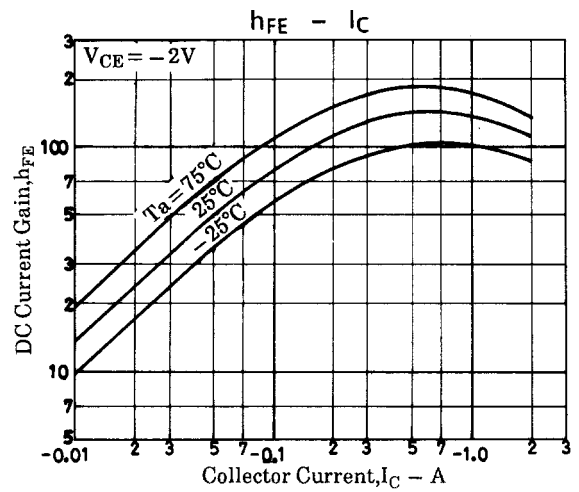
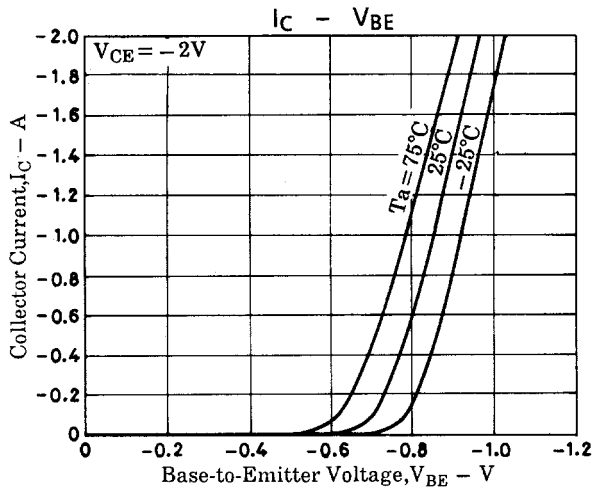
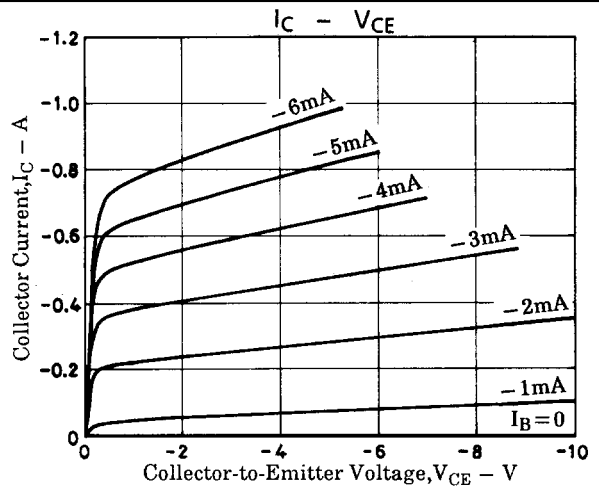
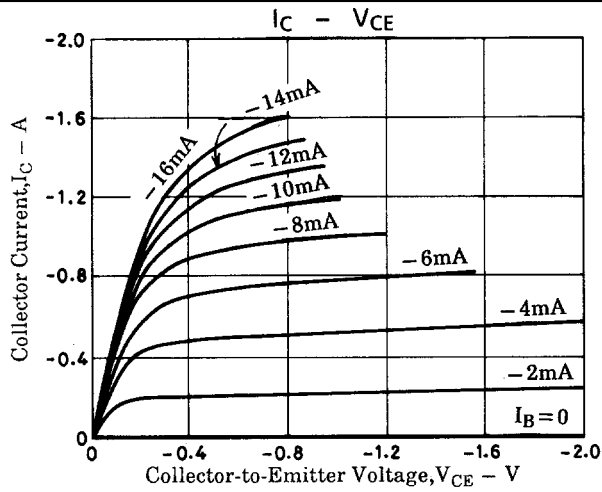
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CB0}$	$V_{CB}=-20\text{V}, I_E=0$			-1	$\mu\text{A}$
DC Current Gain	$h_{FE1}$	$V_{CE}=-2\text{V}, I_C=-0.5\text{A}$	70			
	$h_{FE2}$	$V_{CE}=-2\text{V}, I_C=-2\text{A}$	50			
Gain-Bandwidth Product	$f_T$	$V_{CE}=-2\text{V}, I_C=-0.5\text{A}$		300		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=-10\text{V}, f=1\text{MHz}$		40		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=-1\text{A}, I_B=-50\text{mA}$		-0.25	-0.5	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=-1\text{A}, I_B=-50\text{mA}$			-1.5	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-10\mu\text{A}, I_E=0$	-25			V
C-E Breakdown Voltage	$V_{(BR)CEO1}$	$I_C=-10\text{mA}, R_{BE}=\infty$	-25			V
	$V_{(BR)CEO2}$	$I_E=-10\text{mA}, R_{BE}=\infty$	-20			V
Diode Forward Voltage	$V_F$	$I_F=0.5\text{A}$			-1.5	V
Base-to-Emitter Resistance	$R_{BE}$			1.6		k $\Omega$

Marking:213

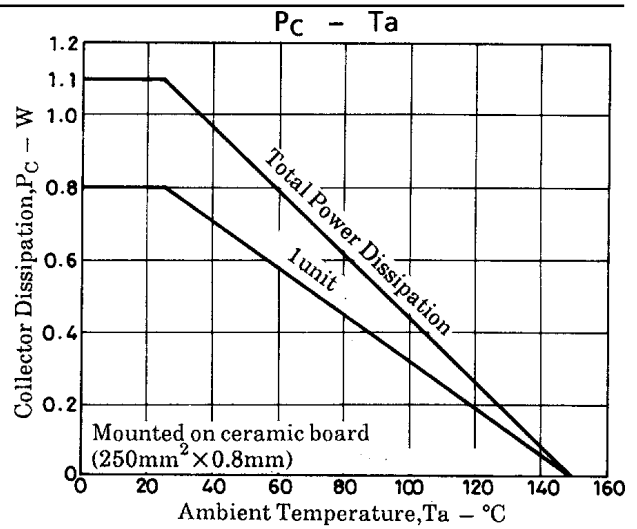
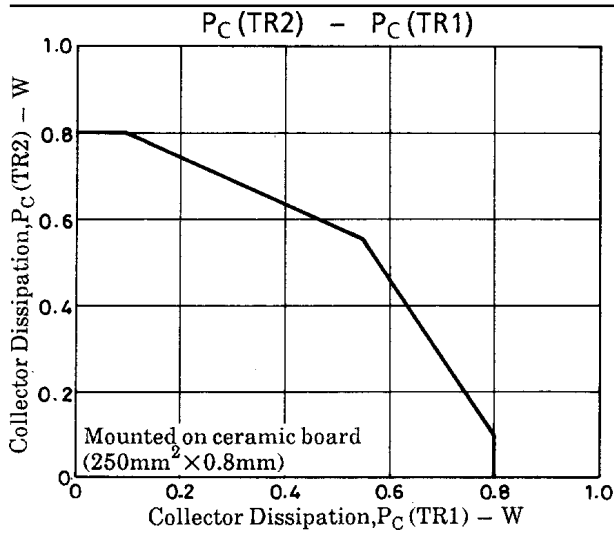
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FP213



## FP213



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