

**FP214** 

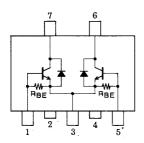
NPN Epitaxial Planar Silicon Transistor

## **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**



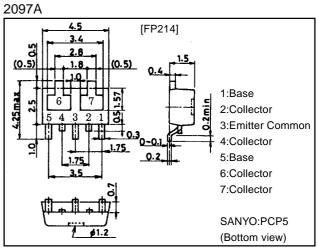
1:Base 2:Collector 3:Emitter Common 4:Collector 5:Base 6:Collector 7:Collector

(Top view)

### Specifications

#### Absolute Maximum Ratings at Ta = 25°C

# Package Dimensions



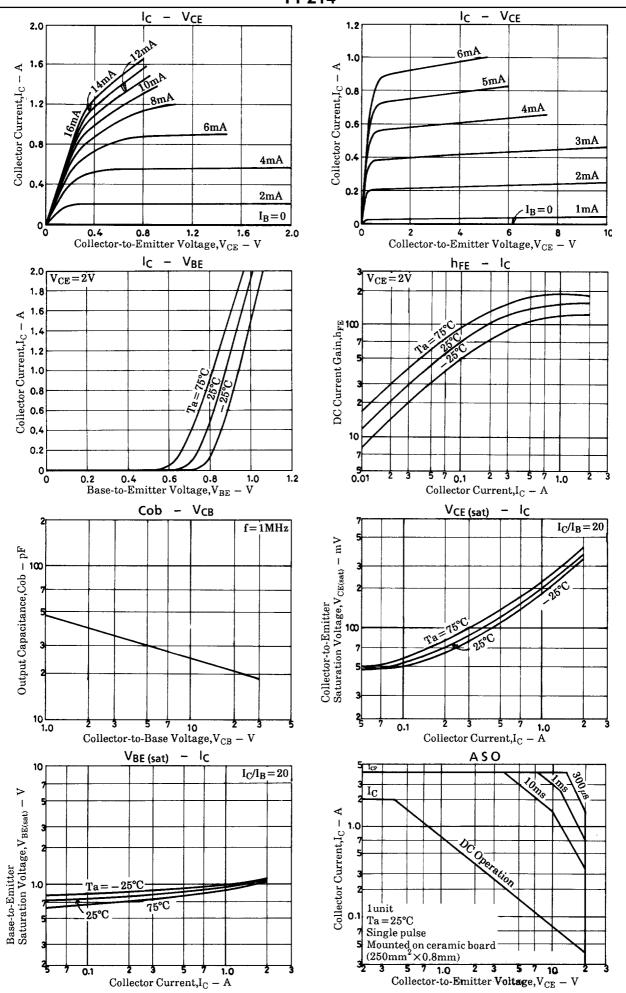
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	VCBO		25	V
Collector-to-Emitter Voltage	VCEO		20	V
Emitter-to-Base Voltage	VEBO		6	V
Collector Current	IC		2	А
Collector Current (Pulse)	ICP		4	А
Base Current	Ι <sub>Β</sub>		400	mA
Collector Dissipation	PC	Mounted on ceramic board (250mm <sup>2</sup> ×0.8mm) 1 unit	0.8	W
Total Power Dissipation	PT	Mounted on ceramic board (250mm <sup>2</sup> ×0.8mm)	1.1	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

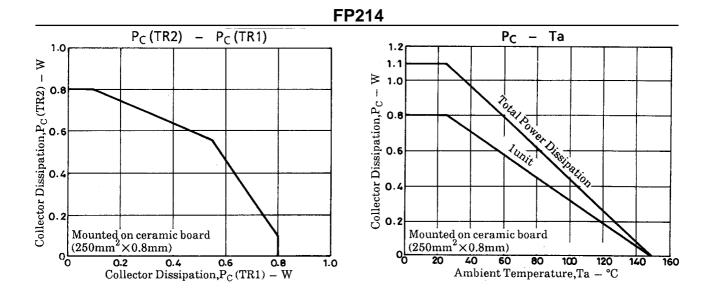
#### Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditons	Ratings			Unit
Falanelei	Symbol		min	typ	max	Unit
Collector Cutoff Current	ICBO	V <sub>CB</sub> =20V, I <sub>E</sub> =0			1	μΑ
DC Current Gain	h <sub>FE</sub> 1	V <sub>CE</sub> =2V, I <sub>C</sub> =0.5A	70			
	h <sub>FE</sub> 2	V <sub>CE</sub> =2V, I <sub>C</sub> =2A	50			
Gain-Bandwidth Product	fT	V <sub>CE</sub> =2V, I <sub>C</sub> =0.5A		200		MHz
Output Capacitance	Cob	V <sub>CB</sub> =10V, f=1MHz		25		pF
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =1A, I <sub>B</sub> =50mA		0.25	0.5	V
B-E Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =1A, I <sub>B</sub> =50mA			1.5	V
C-B Breakdown Voltage	V(BR)CBO	I <sub>C</sub> =10µA, I <sub>E</sub> =0	25			V
C-E Breakdown Voltage	V(BR)CEO <sup>1</sup>	I <sub>C</sub> =10µA, R <sub>BE</sub> =∞	25			V
	V <sub>(BR)</sub> CEO <sup>2</sup>	I <sub>E</sub> =10mA, R <sub>BE</sub> =∞	20			V
Diode Forward Voltage	VF	I <sub>F</sub> =0.5A			1.5	V
Base-to-Emitter Resistance	R <sub>BE</sub>			1.6		kΩ

#### Marking:214

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