



# SCH2102

PNP Epitaxial Planar Silicon Transistor

## Switching, Driver Applications

### Applications

- Low-frequency power amplifier, high-speed switching, motor drivers, muting.

### Features

- Composite type with 2 PNP transistors contained in a single package, facilitating high-density mounting.
- Ultrasmall package permitting applied sets to be small and slim.
- Low Ron.

### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CB0</sub>		-15	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>		-12	V
Emitter-to-Base Voltage	V <sub>EBO</sub>		-5	V
Collector Current	I <sub>C</sub>		-500	mA
Collector Current (Pulse)	I <sub>CP</sub>		-1.0	A
Collector Dissipation	P <sub>C</sub>	Mounted on a ceramic board (600mm <sup>2</sup> X0.8mm) 1unit	0.4	W
Junction Temperature	T <sub>J</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> =-12V, I <sub>E</sub> =0			-100	nA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =-4V, I <sub>C</sub> =0			-100	nA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =-2V, I <sub>C</sub> =-10mA	300		700	
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =-2V, I <sub>C</sub> =-50mA		490		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-10V, f=1MHz		4		pF
Collector-to-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-200mA, I <sub>B</sub> =-10mA		-150	-300	mV
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =-200mA, I <sub>B</sub> =-10mA		-0.9	-1.2	V
Collector-to-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =-10μA, I <sub>E</sub> =0	-15			V
Collector-to-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =-1mA, R <sub>BE</sub> =∞	-12			V
Emitter-to-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =-10μA, I <sub>C</sub> =0	-5			V

Marking : EF

Continued on next page.

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# SCH2102

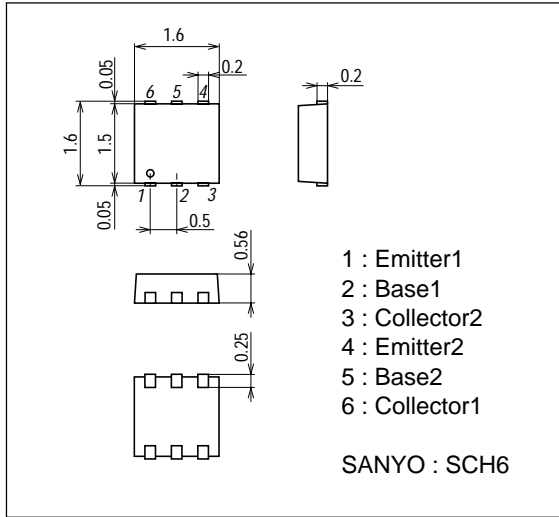
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Time	$t_{on}$	See specified test circuit.		30		ns
Storage Time	$t_{stg}$	See specified test circuit.		57		ns
Fall Time	$t_f$	See specified test circuit.		15		ns

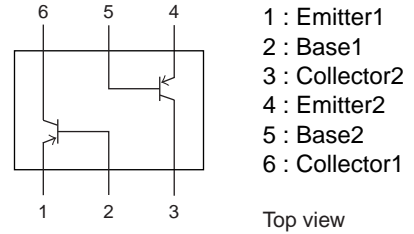
## Package Dimensions

unit : mm

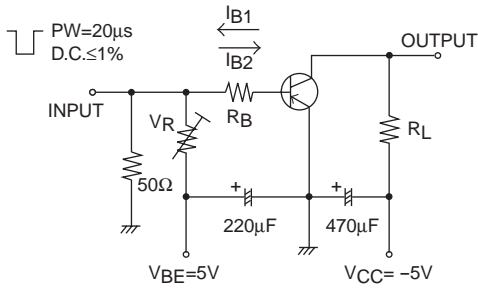
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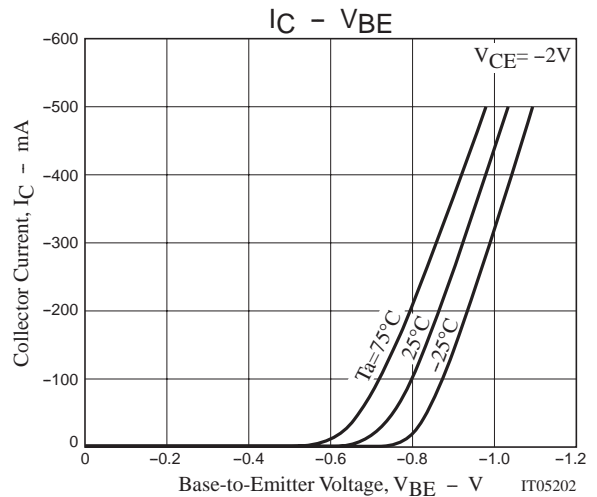
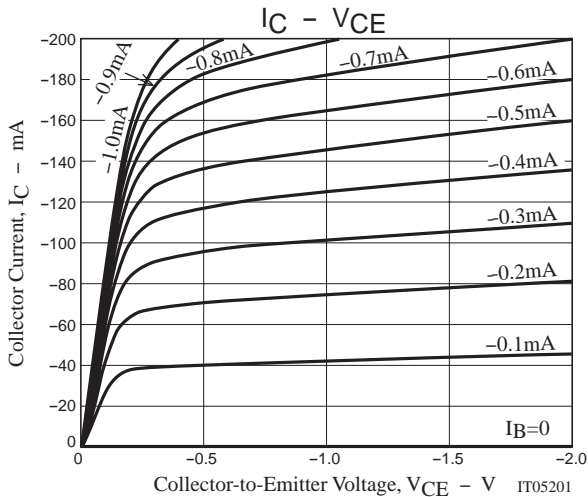
## Electrical Connection



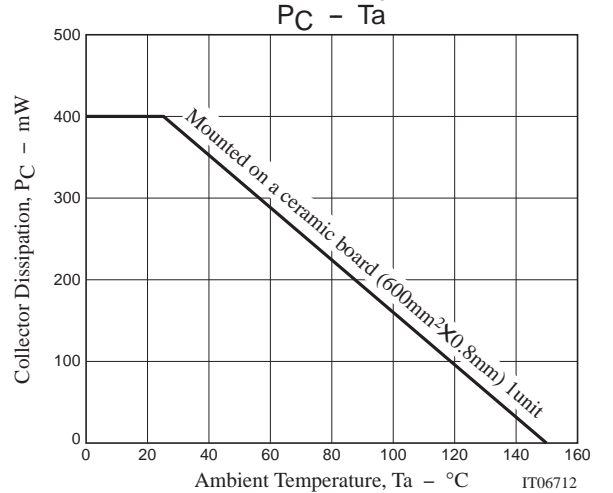
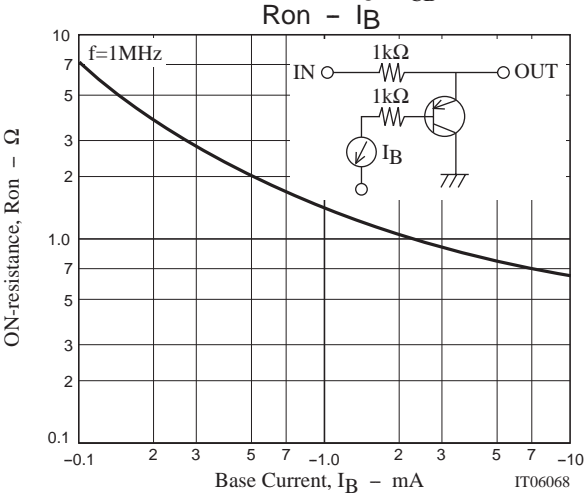
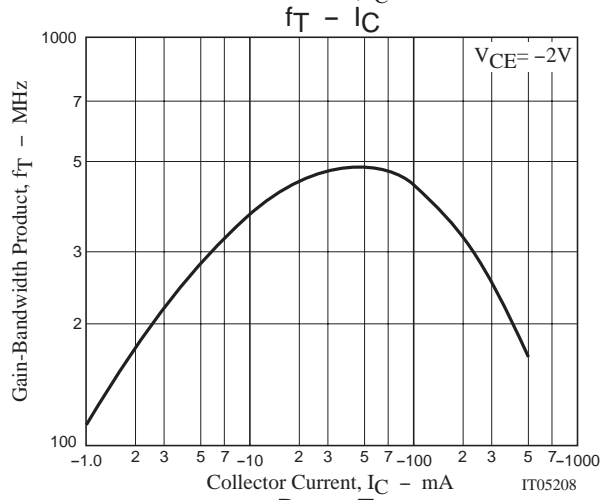
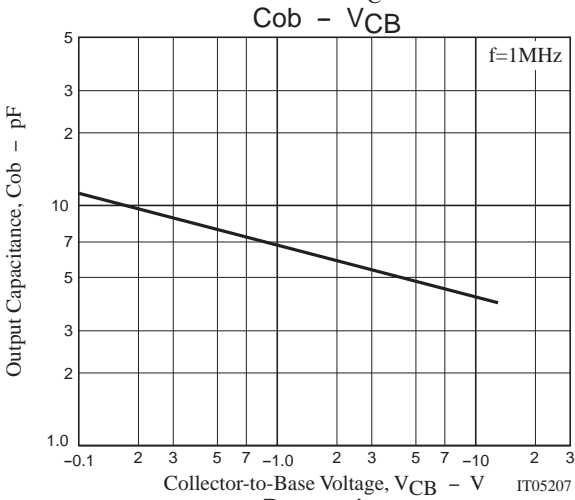
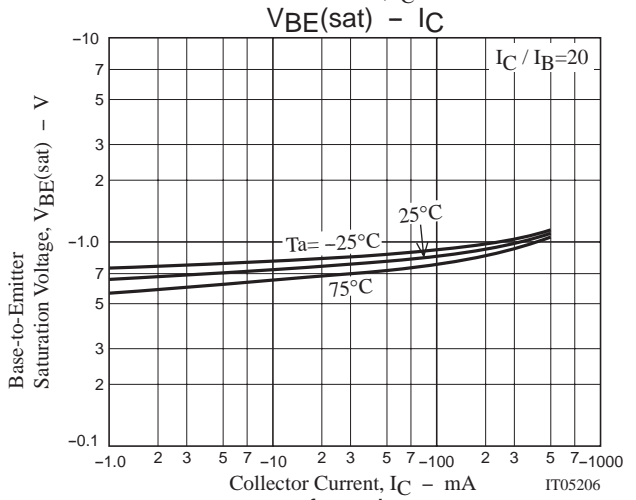
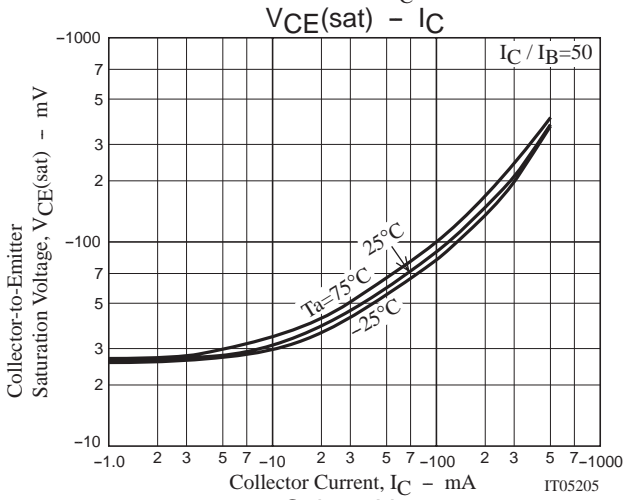
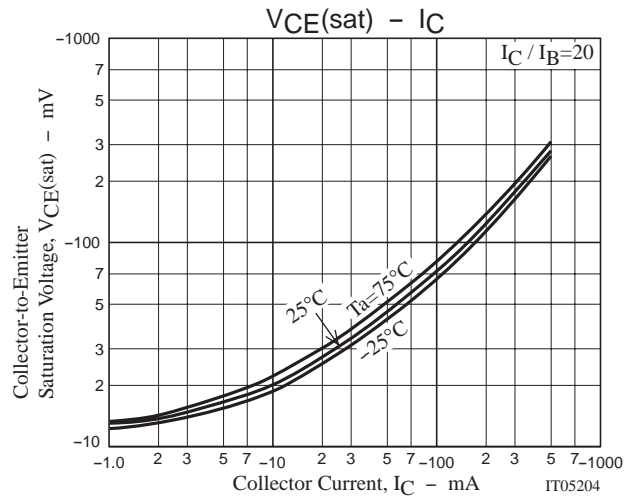
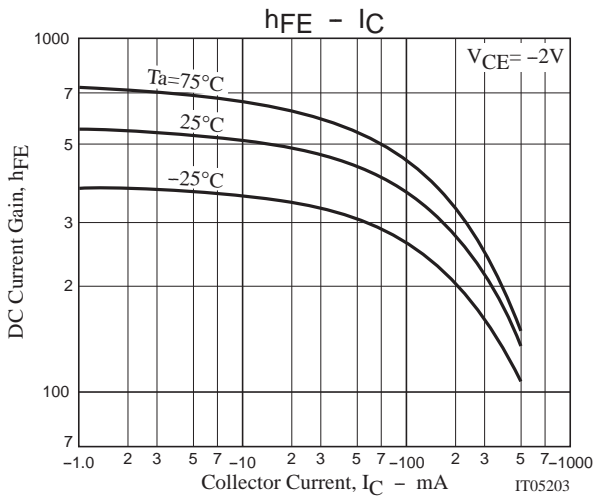
## Switching Time Test Circuit



$$I_C = 20I_{B1} = -20I_{B2} = -400mA$$



# SCH2102



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