



# SCH2202

— NPN Epitaxial Planar Silicon Transistor

## Switching, Driver Applications

### Applications

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

### Features

- Composite type with 2 NPN transistor contained in a single package, facilitating high-density mounting.
- Ultrasmall package permitting applied sets to be small and slim.
- Small ON-resistance (Ron).

### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CB0</sub>		20	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>		15	V
Emitter-to-Base Voltage	V <sub>EBO</sub>		5	V
Collector Current	I <sub>C</sub>		600	mA
Collector Current (Pulse)	I <sub>CP</sub>		1.2	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> =15V, I <sub>E</sub> =0A			100	nA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =4V, I <sub>C</sub> =0A			100	nA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =10mA	300		800	
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =50mA		330		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, f=1MHz		3.2		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> =0A	20			V
Collector-to-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =1mA, R <sub>BE</sub> =∞	15			V
Emitter-to-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =10μA, I <sub>C</sub> =0A	5			V

Marking : EF

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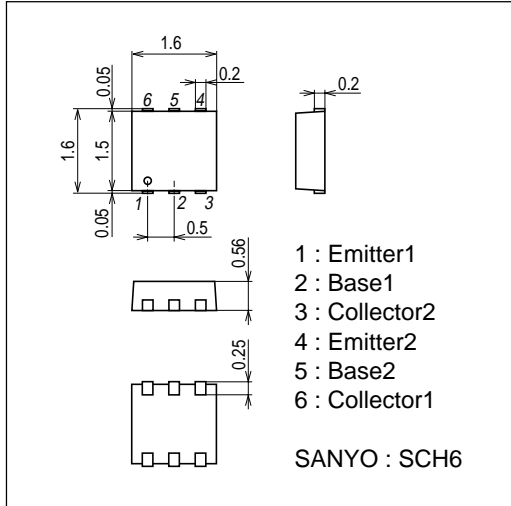
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Time	$t_{on}$	See specified test circuit.		30		ns
Storage Time	$t_{stg}$	See specified test circuit.		77		ns
Fall Time	$t_f$	See specified test circuit.		40		ns

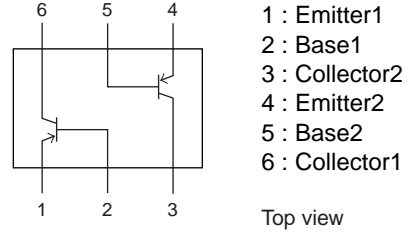
## Package Dimensions

unit : mm

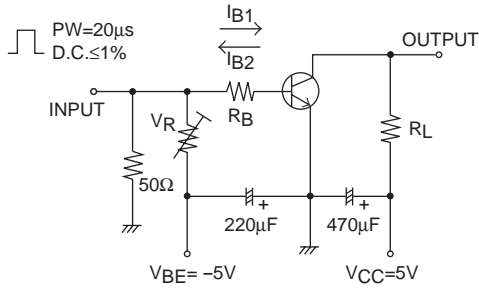
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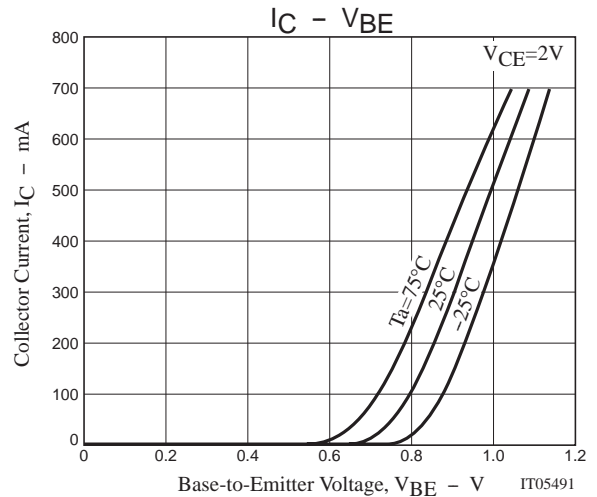
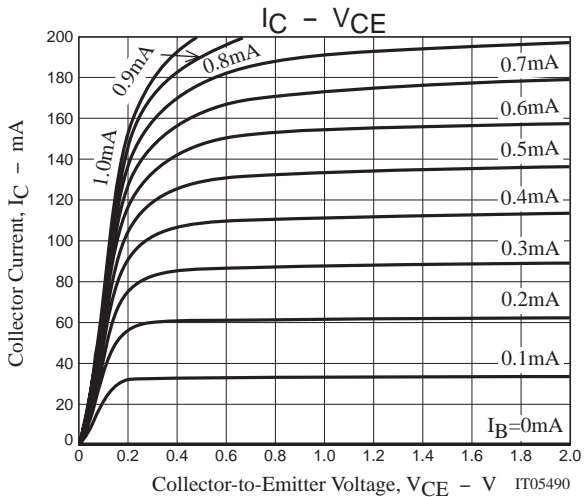
## Electrical Connection



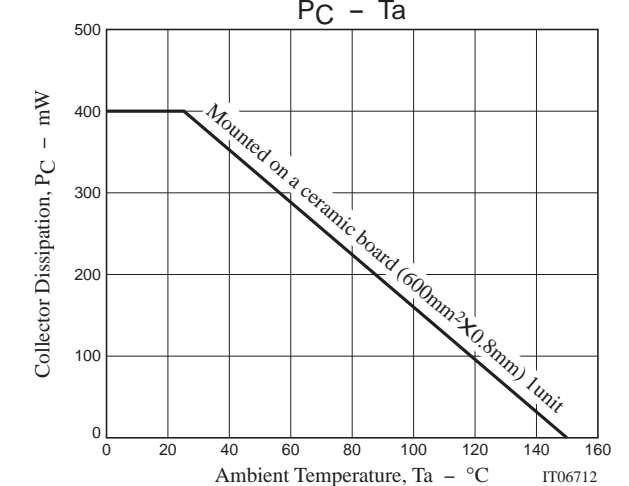
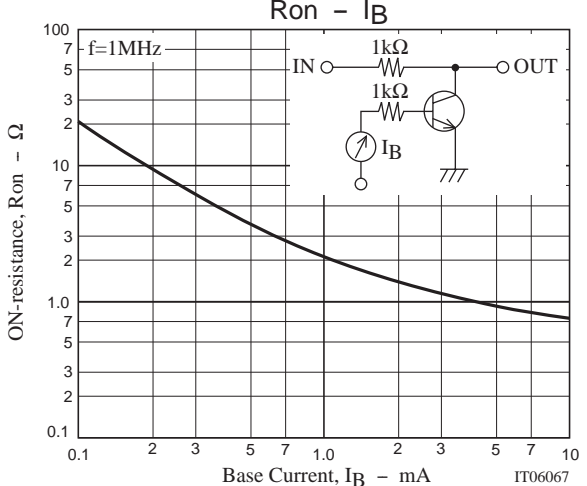
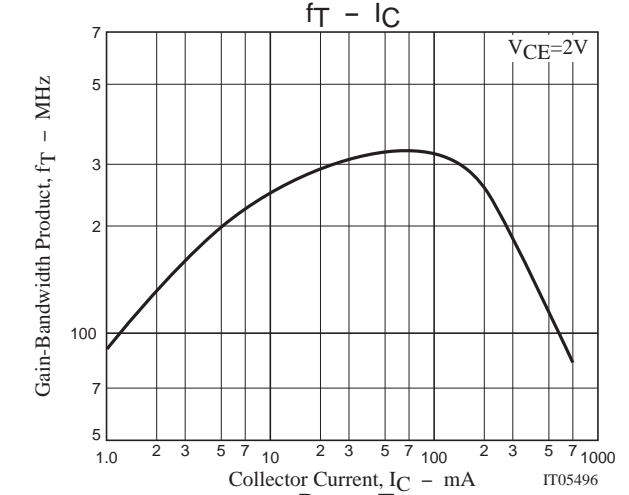
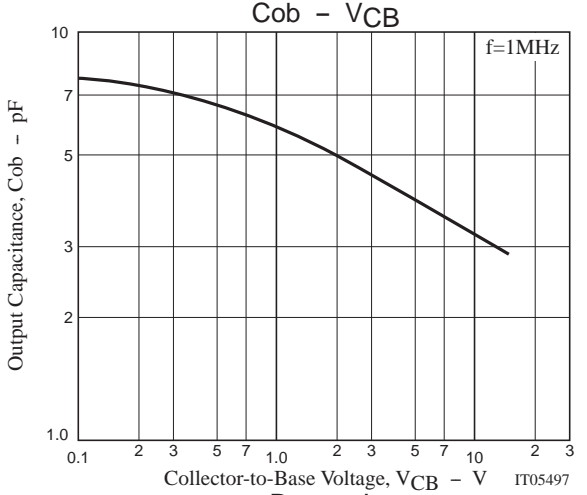
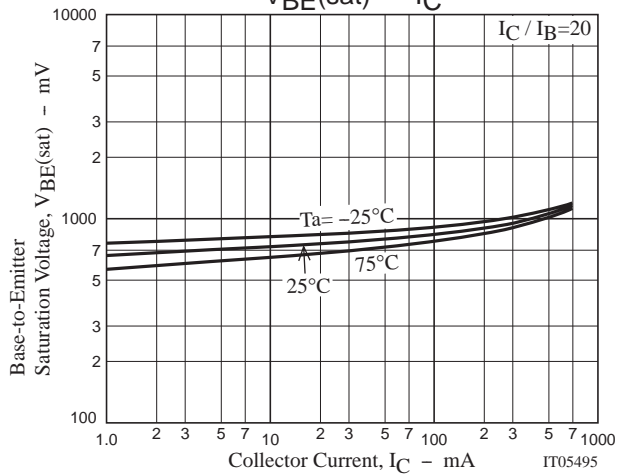
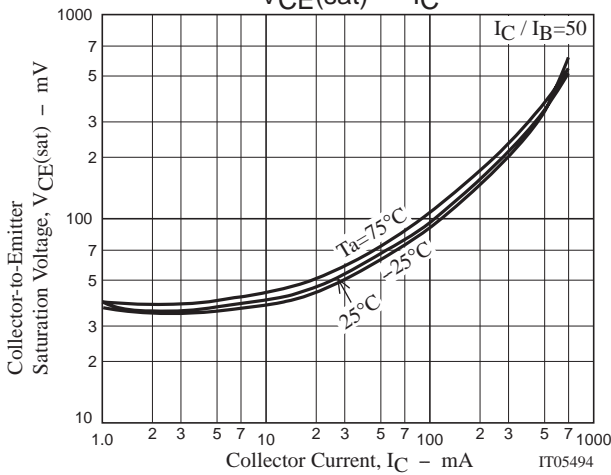
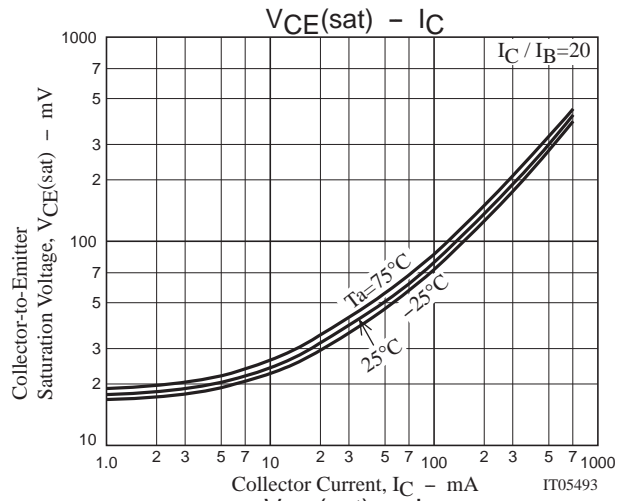
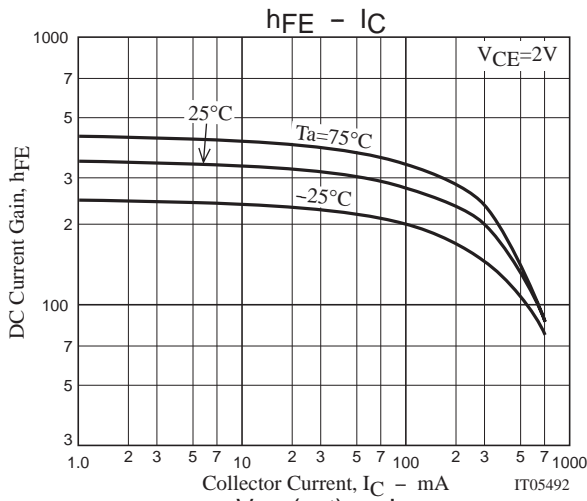
## Switching Time Test Circuit



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



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