



SANYO Semiconductors

# DATA SHEET

An ON Semiconductor Company

## 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

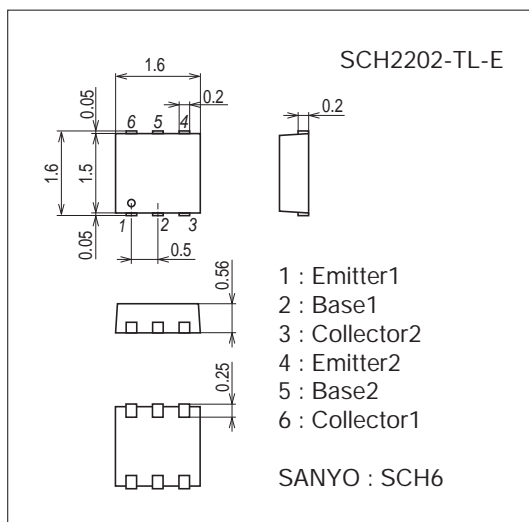
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	VCBO		20	V
Collector-to-Emitter Voltage	VCEO		15	V
Emitter-to-Base Voltage	VEBO		5	V
Collector Current	IC		600	mA
Collector Current (Pulse)	ICP		1.2	A
Collector Dissipation	PC	Mounted on a ceramic board (600mm <sup>2</sup> ×0.8mm)	0.4	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

#### Package Dimensions

unit : mm (typ)

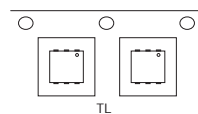
7028-004



#### Product & Package Information

- Package : SCH6
- JEITA, JEDEC : SOT-563
- Minimum Packing Quantity : 5,000 pcs./reel

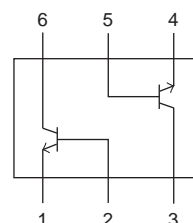
#### Packing Type : TL



#### Marking



#### Electrical Connection

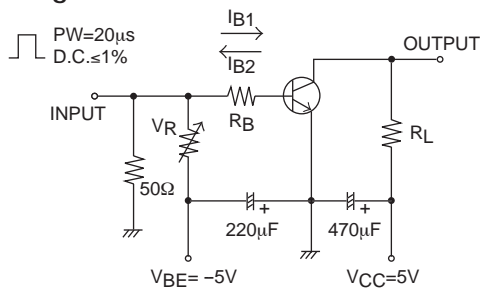


# SCH2202

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=15\text{V}, I_E=0\text{A}$			100	nA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=4\text{V}, I_C=0\text{A}$			100	nA
DC Current Gain	$h_{FE}$	$V_{CE}=2\text{V}, I_C=10\text{mA}$	300		800	
Gain-Bandwidth Product	$f_T$	$V_{CE}=2\text{V}, I_C=50\text{mA}$		330		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}, f=1\text{MHz}$		3.2		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=200\text{mA}, I_B=10\text{mA}$		150	300	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=200\text{mA}, I_B=10\text{mA}$		0.9	1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0\text{A}$	20			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, R_{BE}=\infty$	15			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0\text{A}$	10			V
Turn-On Time	$t_{on}$	See specified Test Circuit.		30		ns
Storage Time	$t_{stg}$			77		ns
Fall Time	$t_f$			40		ns

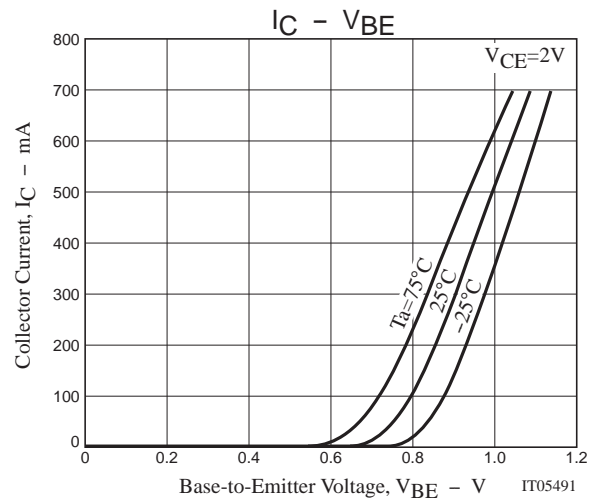
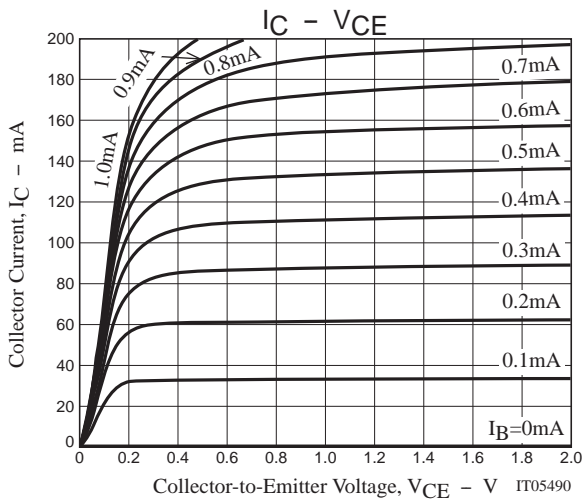
## Switching Time Test Circuit

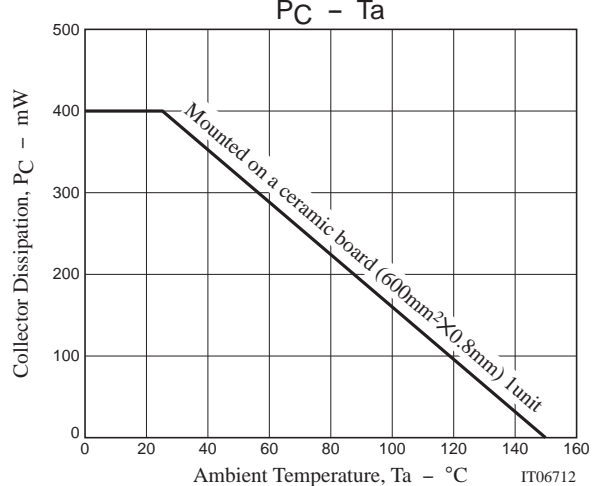
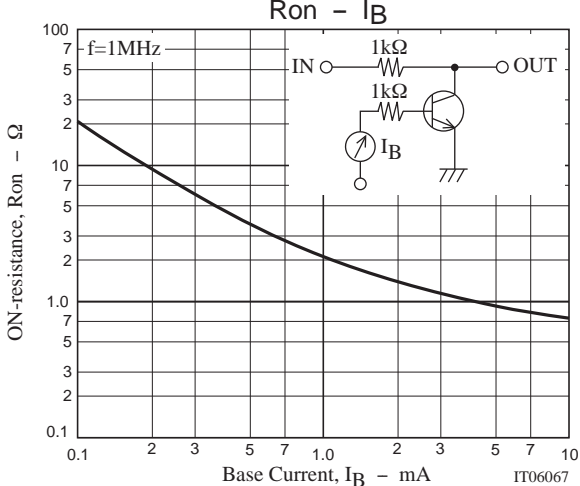
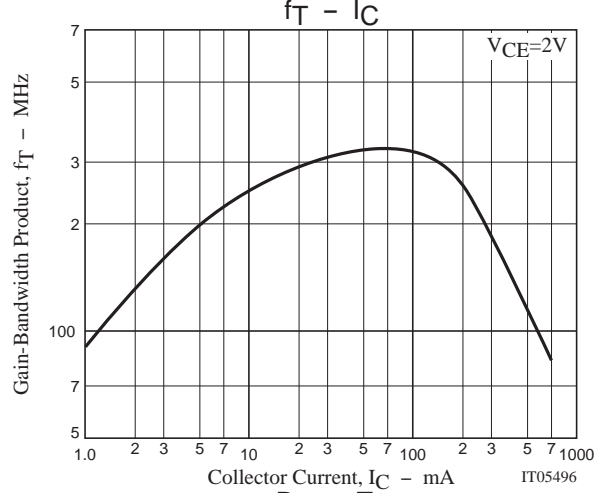
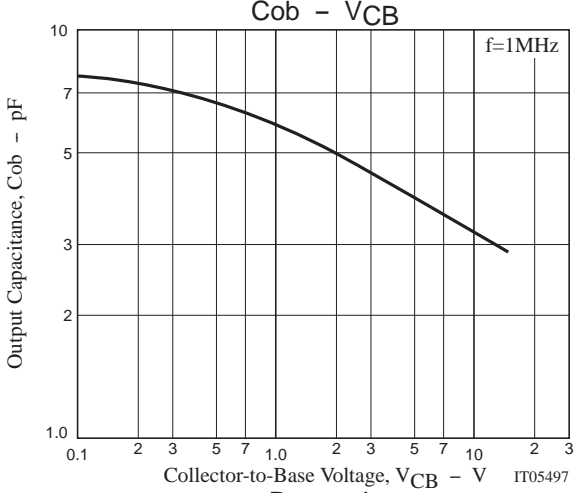
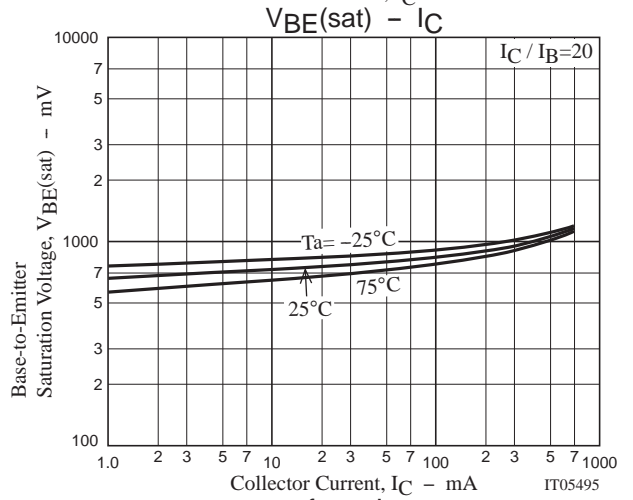
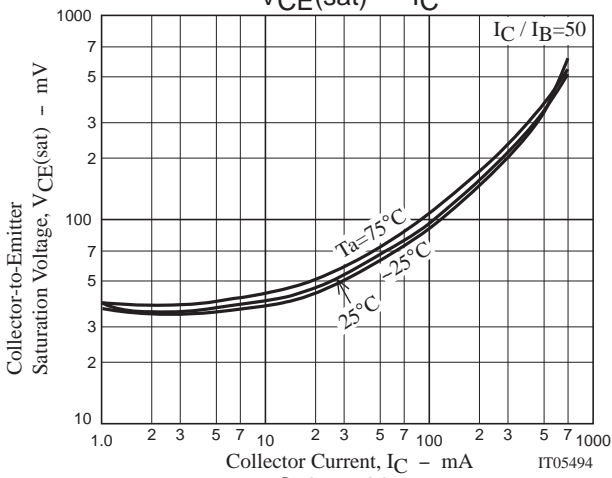
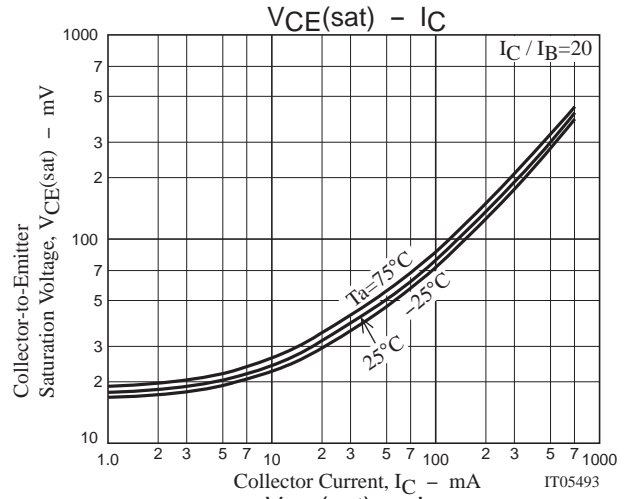
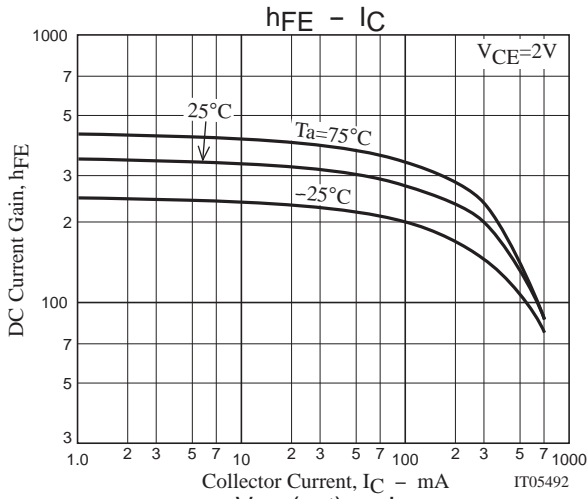


$$I_C=20I_{B1} = -20I_{B2}=400\text{mA}$$

## Ordering Information

Device	Package	Shipping	memo
SCH2202-TL-E	SCH6	5,000pcs./reel	Pb Free and Halogen Free





Taping Specification

SCH2202-TL-E

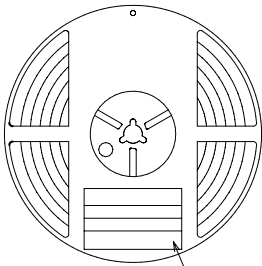
1. Packing Format

Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
SCH6	SCH6	5,000	25,000	150,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

Reel label, Inner box label  
(unit:mm)

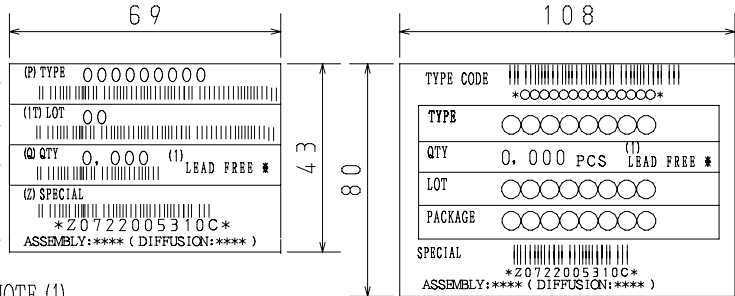
Outer box label  
It is a label at the time of factory shipments.  
The form of a label may change in physical distribution process.

Packing method



Type No. →  
LOT No. →  
Quantity →  
Origin →

Reel label



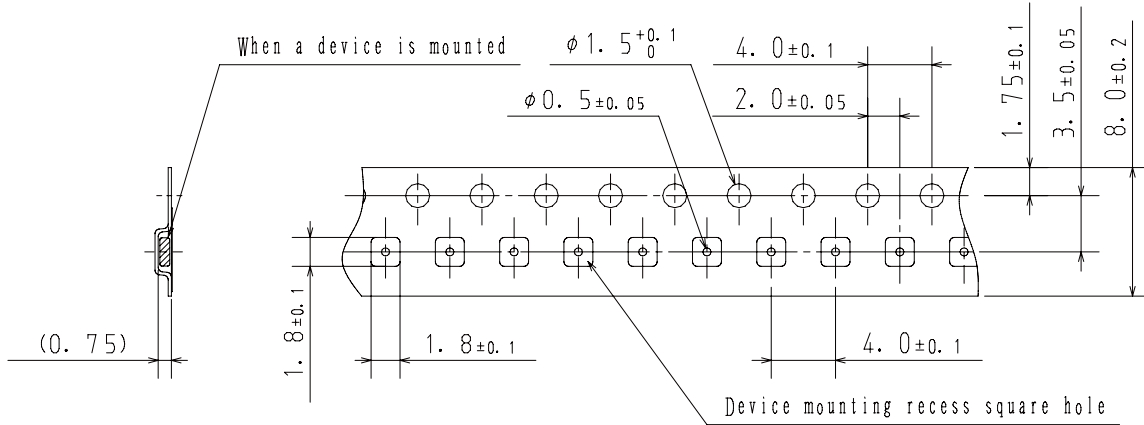
NOTE (1)

The LEAD FREE \* description shows that the surface treatment of the terminal is lead free.

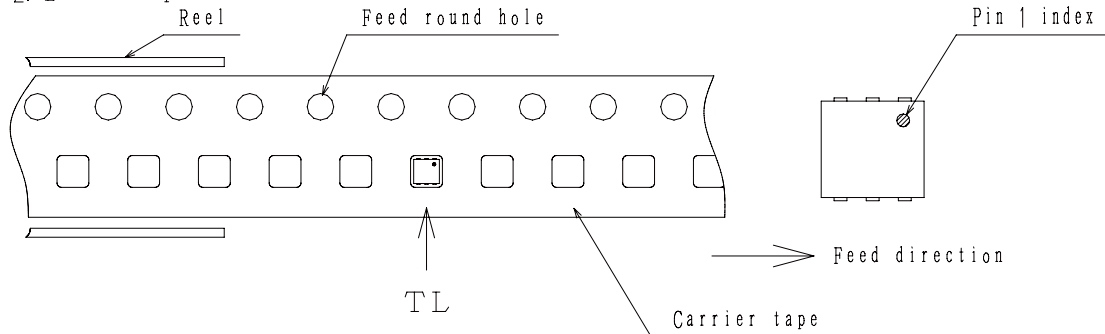
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

2-1. Carrier tape size (unit:mm)



2-2. Device placement direction

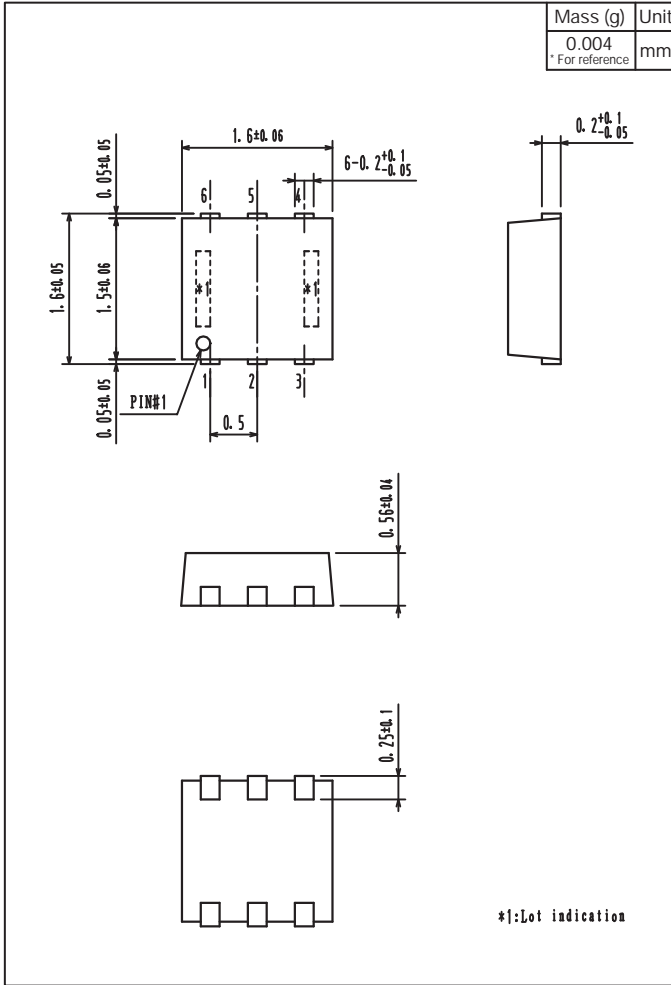


Those with pin 1 index on the feed hole side.....TL

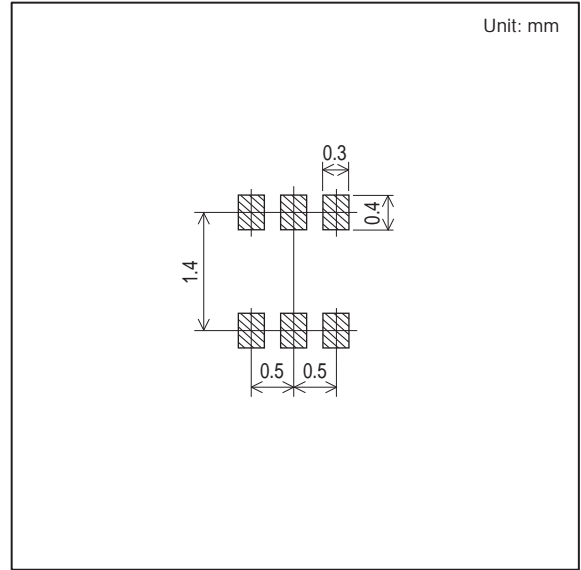
# SCH2202

## Outline Drawing

SCH2202-TL-E



## Land Pattern Example



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