



# SCH2202

## Bipolar Transistor 15V, 0.6A, Low $V_{CE(sat)}$ NPN Single SCH6

ON Semiconductor®

<http://onsemi.com>

### 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 ( $R_{on}$ )

### Specifications

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

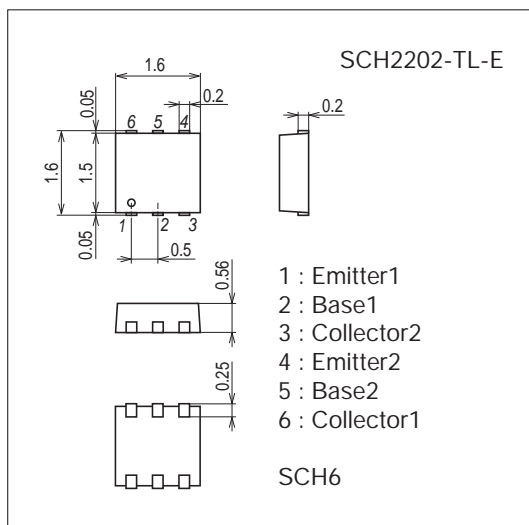
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CBO}$		20	V
Collector-to-Emitter Voltage	$V_{CEO}$		15	V
Emitter-to-Base Voltage	$V_{EBO}$		5	V
Collector Current	$I_C$		600	mA
Collector Current (Pulse)	$I_{CP}$		1.2	A
Collector Dissipation	PC	Mounted on a ceramic board (600mm <sup>2</sup> ×0.8mm)	0.4	W
Junction Temperature	$T_j$		150	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

### Package Dimensions

unit : mm (typ)

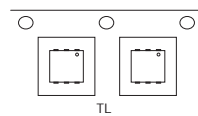
7028-004



### Product & Package Information

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

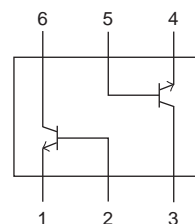
### Packing Type : TL



### Marking



### Electrical Connection

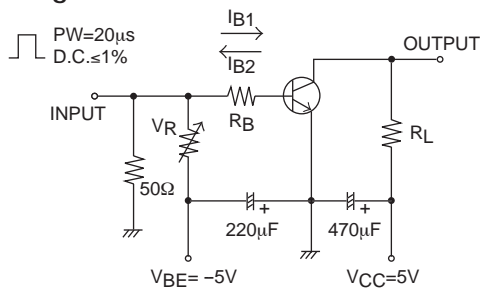


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## Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	ICBO	V <sub>CB</sub> =15V, I <sub>E</sub> =0A			100	nA
Emitter Cutoff Current	IEBO	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	10			V
Turn-On Time	t <sub>on</sub>	See specified Test Circuit.		30		ns
Storage Time	t <sub>stg</sub>			77		ns
Fall Time	t <sub>f</sub>			40		ns

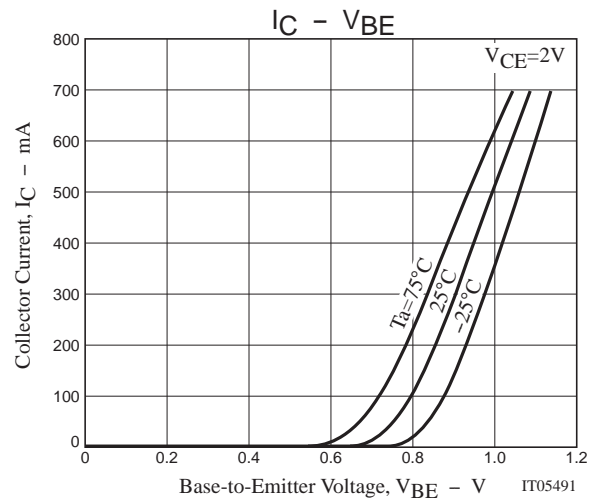
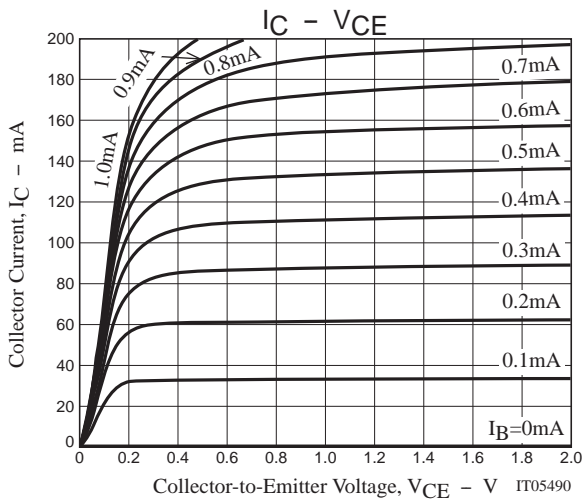
## Switching Time Test Circuit

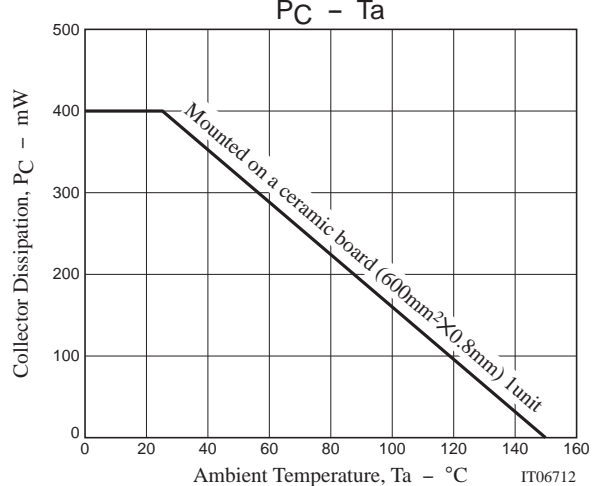
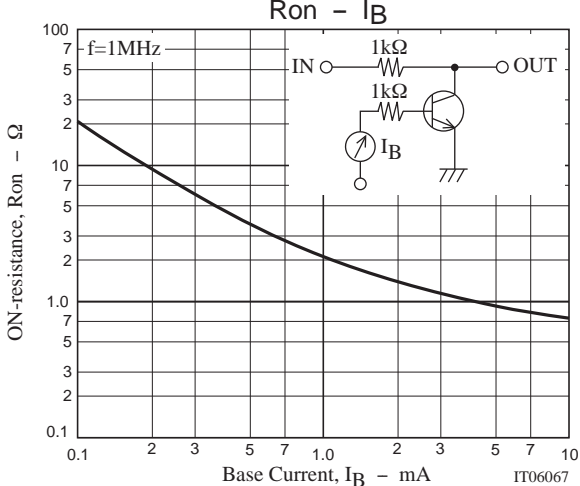
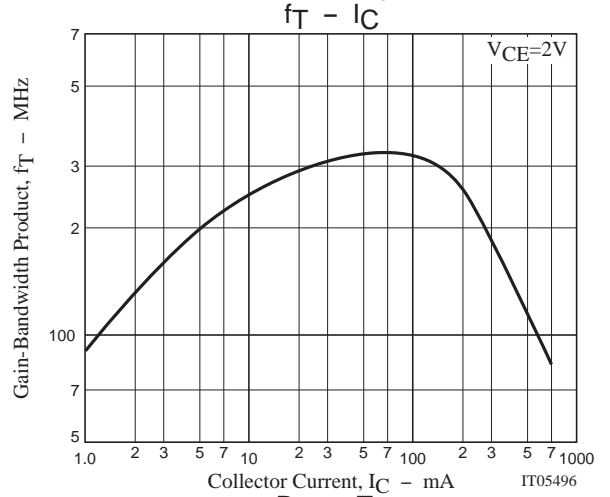
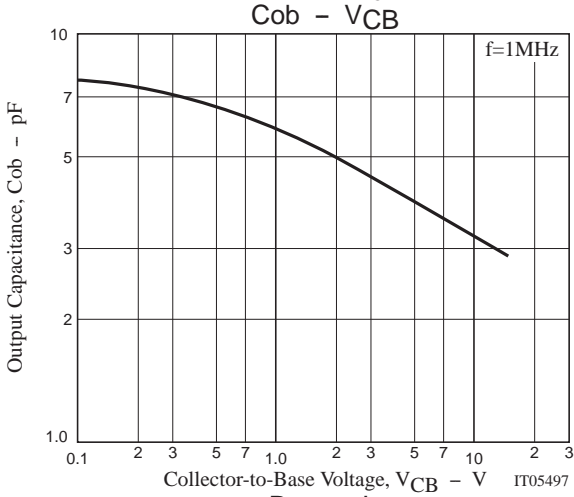
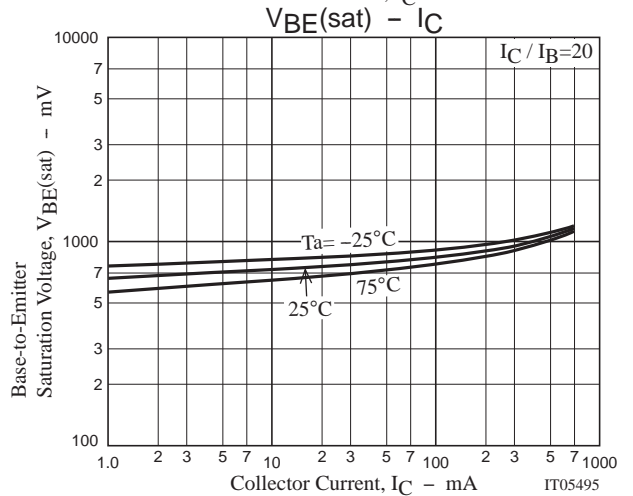
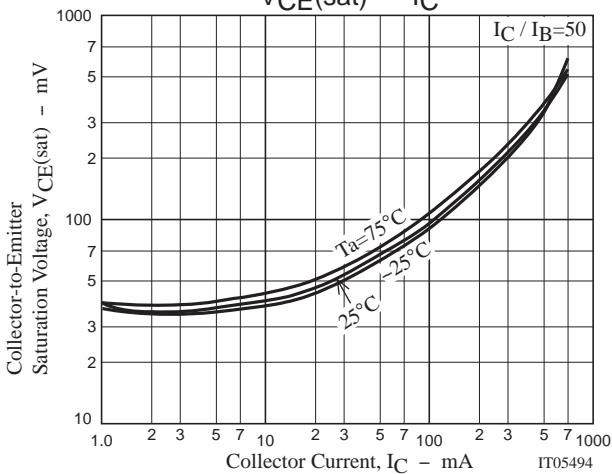
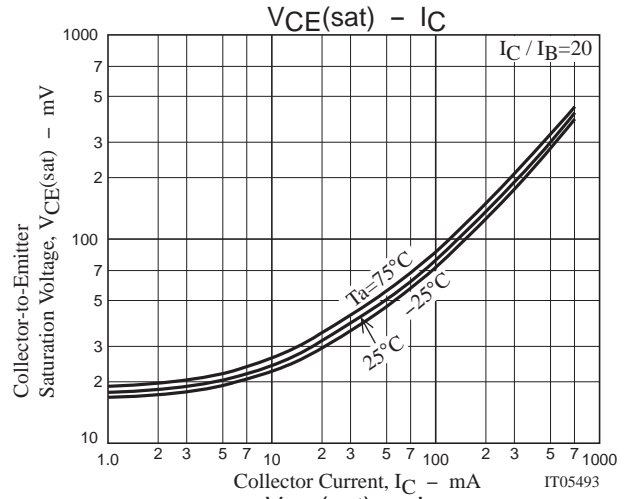
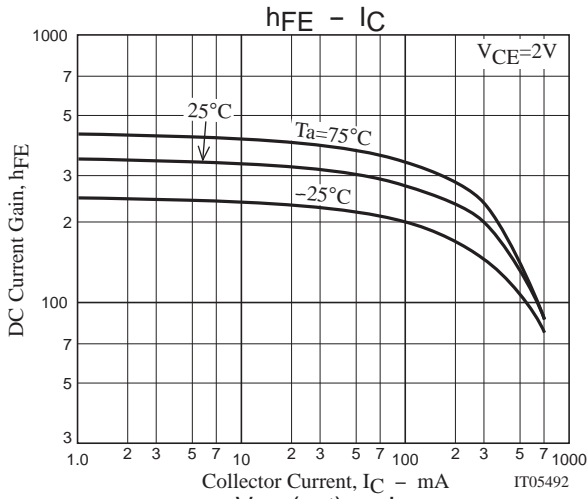


$$I_C = 20I_{B1} = -20I_{B2} = 400\text{mA}$$

## Ordering Information

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





Taping Specification

SCH2202-TL-E

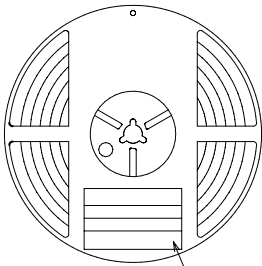
1. Packing Format

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

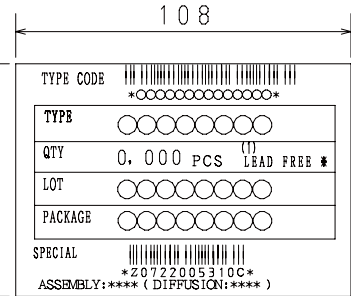
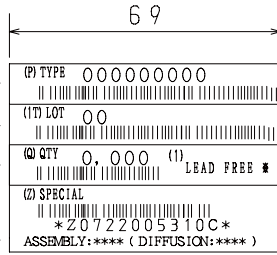
Reel label, Inner box label  
(unit: mm)

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

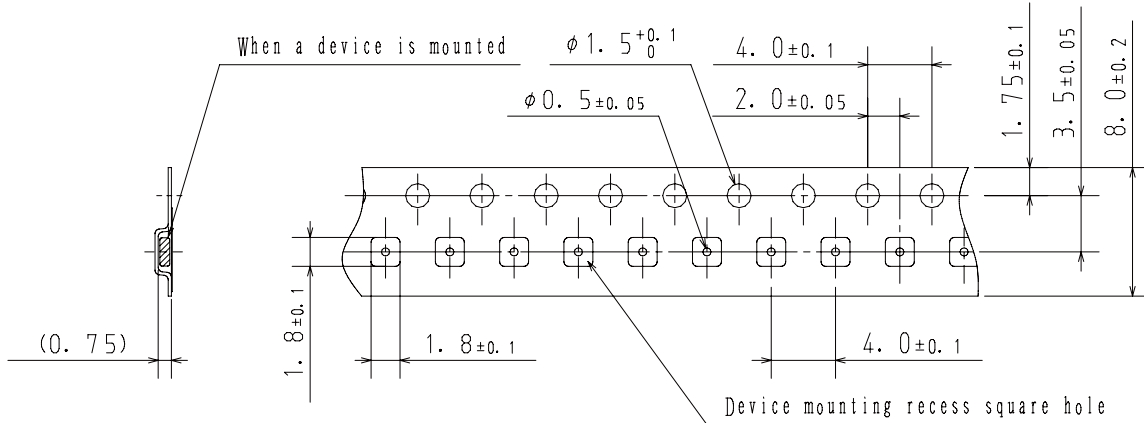
NOTE (1)

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

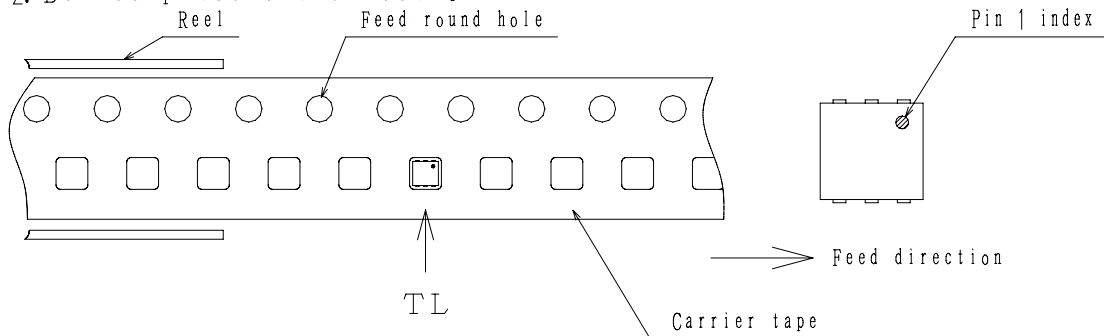
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



2-2. Device placement direction

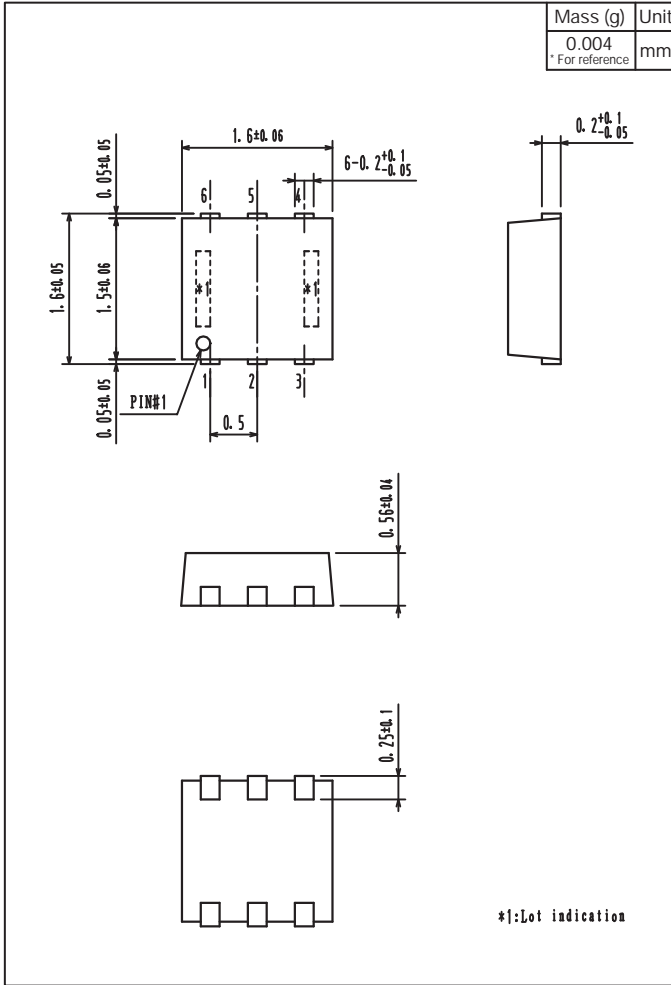


Those with pin 1 index on the feed hole side.....TL

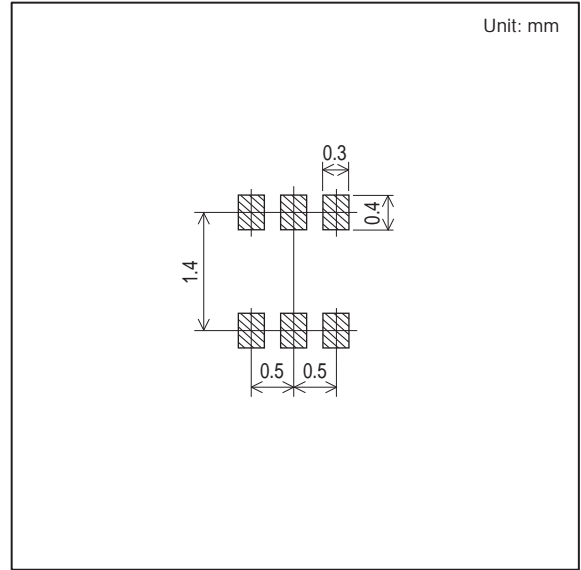
# SCH2202

## Outline Drawing

SCH2202-TL-E



## Land Pattern Example



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