



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

15C01SS — NPN Epitaxial Planar Silicon Transistor Low-Frequency General-Purpose Amplifier Applications

Applications

- Low-frequency Amplifier, muting circuit

Features

- Large current capacity
- Low collector-to-emitter saturation voltage (resistance) : $R_{CE(sat)}$ typ=0.58Ω [$I_C=0.7A$, $I_B=35mA$]
- Ultrasmall, slim flat-lead package (1.4mm×0.8mm×0.6mm)
- Small ON-resistance (Ron)

Specifications

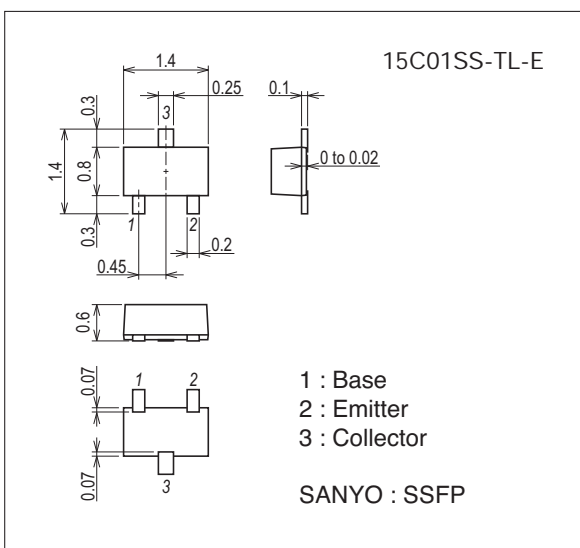
Absolute Maximum Ratings at $T_a=25^\circ C$

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 glass epoxy board (20×30×1.6mm)	200	mW
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Package Dimensions

unit : mm (typ)

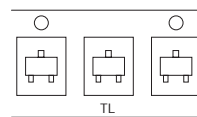
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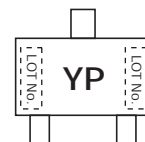
Product & Package Information

- Package : SSFP
- JEITA, JEDEC : SC-81
- Minimum Packing Quantity : 8,000 pcs./reel

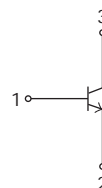
Packing Type: TL



Marking



Electrical Connection

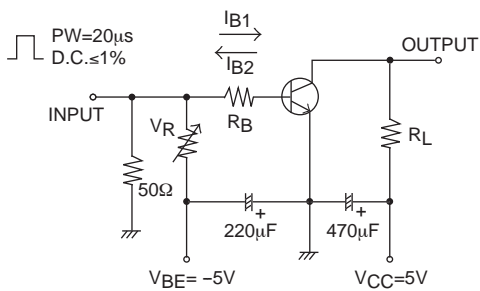


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Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	ICBO	V _{CB} =15V, I _E =0A			0.1	μA
Emitter Cutoff Current	IEBO	V _{EB} =4V, I _C =0A			0.1	μA
DC Current Gain	h _{FE}	V _{CE} =2V, I _C =10mA	300		800	
Gain-Bandwidth Product	f _T	V _{CE} =2V, I _C =50mA		330		MHz
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHz		3.2		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =200mA, I _B =10mA		150	300	mV
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =200mA, I _B =10mA		0.9	1.2	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C =10μA, I _E =0A	20			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =1mA, R _{BE} =∞	15			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =10μA, I _C =0A	5			V
Turn-ON Time	t _{on}	See specified Test Circuit.		30		ns
Storage Time	t _{stg}			77		ns
Fall Time	t _f			40		ns

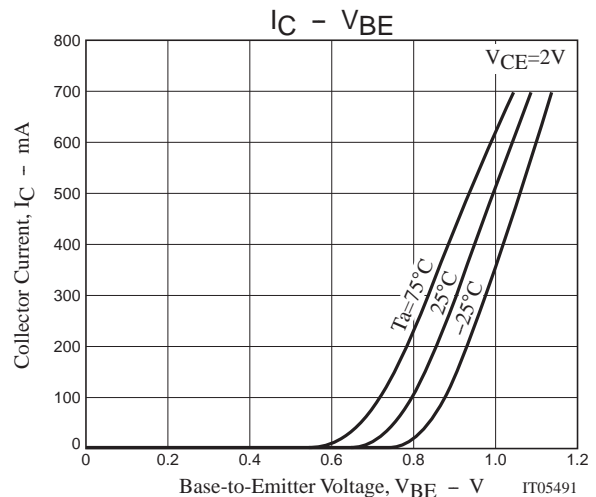
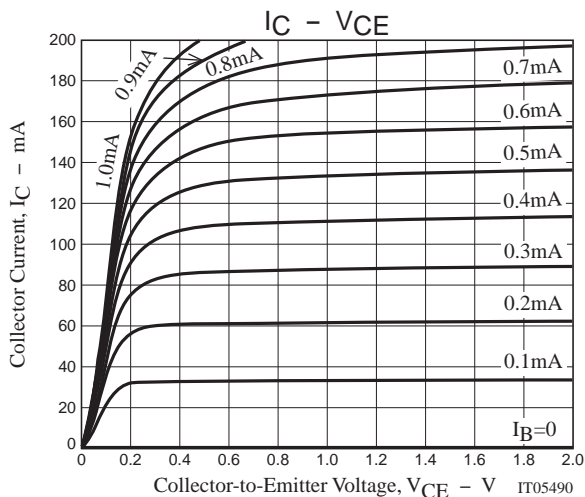
Switching Time Test Circuit

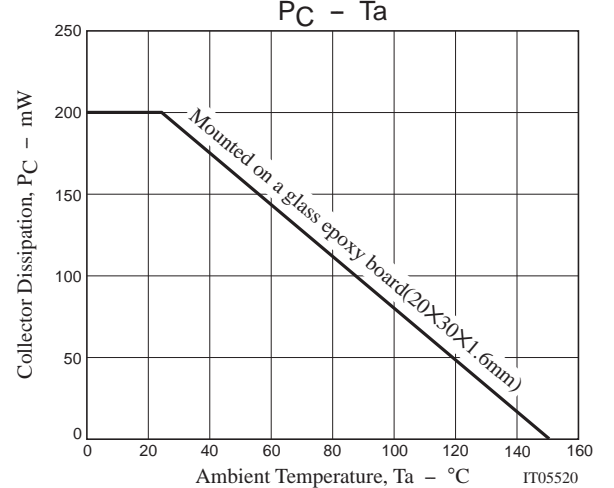
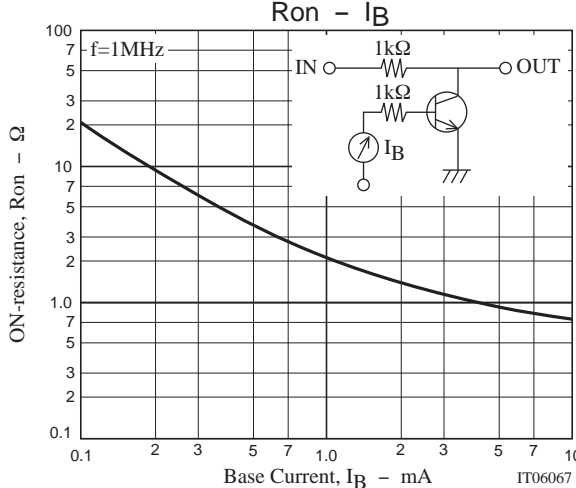
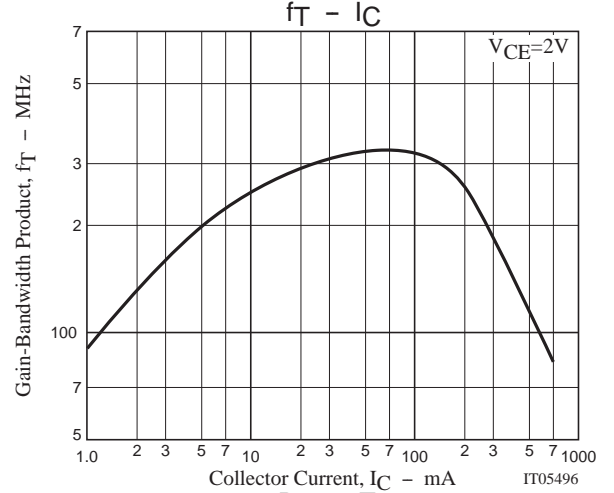
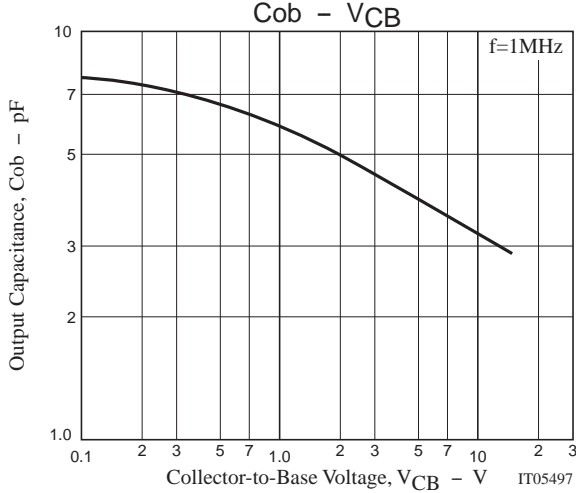
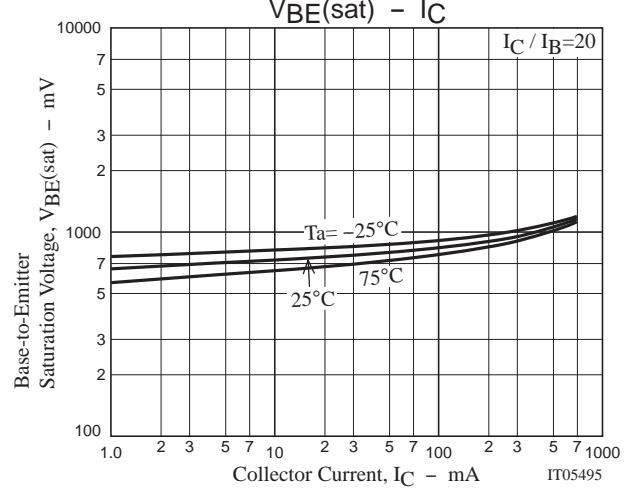
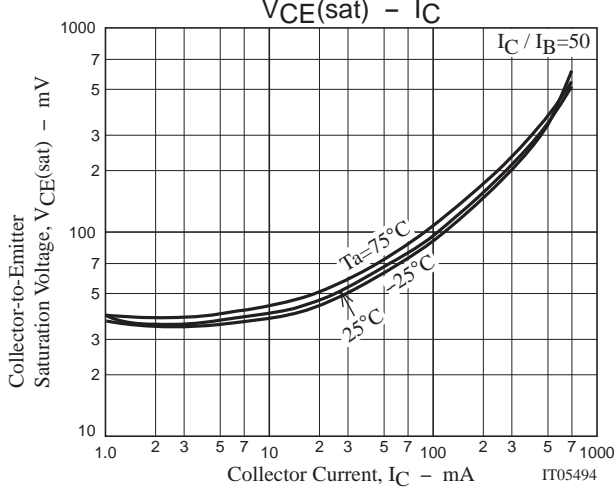
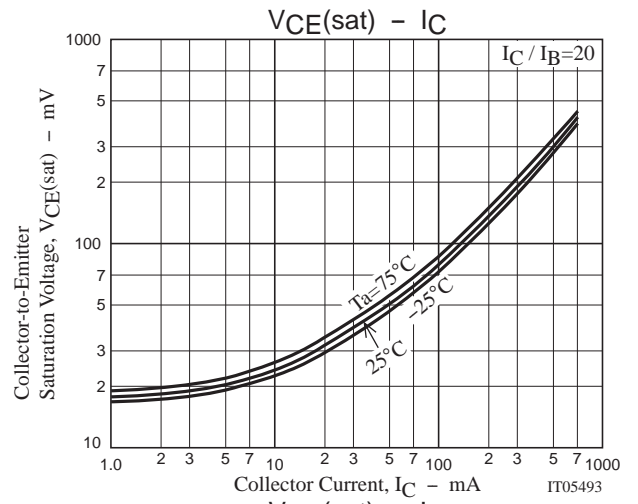
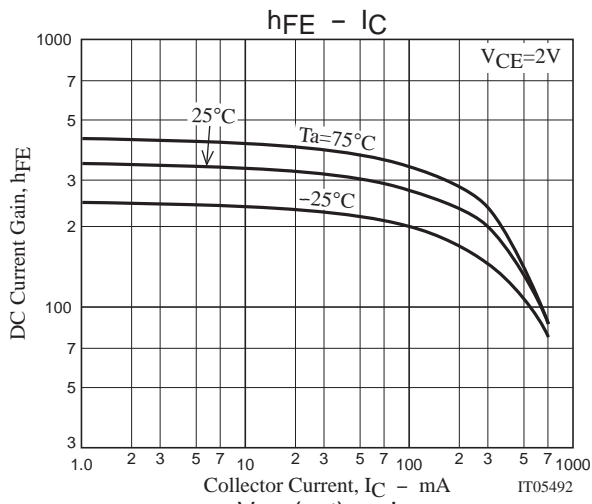


$$I_C = 20I_{B1} = -20I_{B2} = 500\text{mA}$$

Ordering Information

Device	Package	Shipping	memo
15C01SS-TL-E	SSFP	8,000pcs./reel	Pb Free





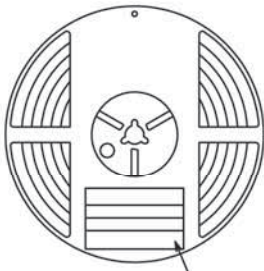
Embossed Taping Specification

15C01SS-TL-E

1. Packing Format

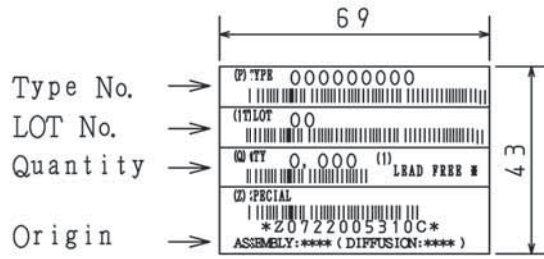
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
SSFP	SSFP	8,000	40,000	240,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimension::mm (external) 440×195×210

Packing method

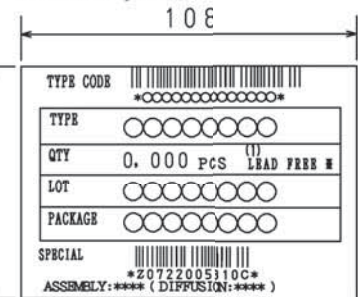


Reel label

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.



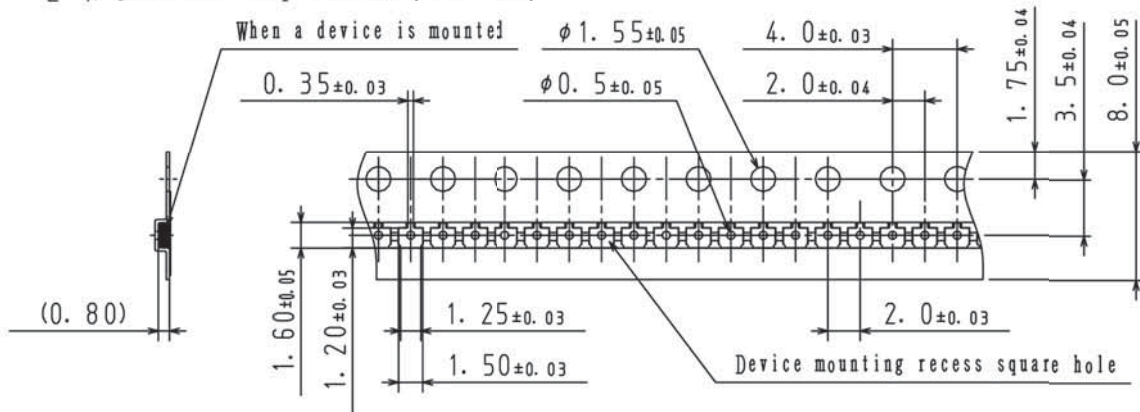
NOTE (1)

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

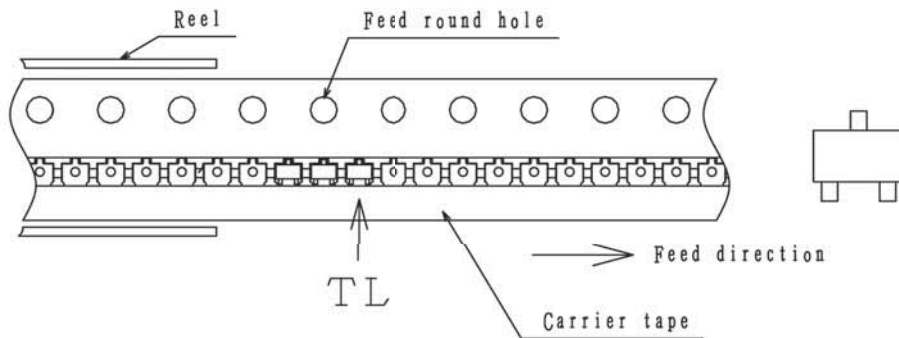
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



2-2. Device placement direction

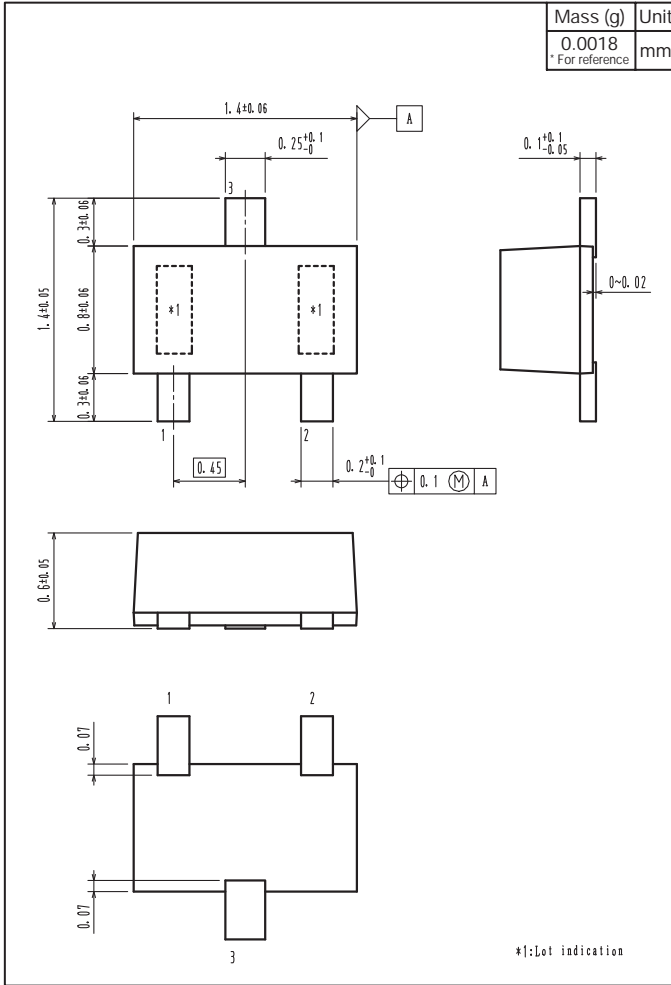


Those with pin 1 index on the feed hole side.....TL

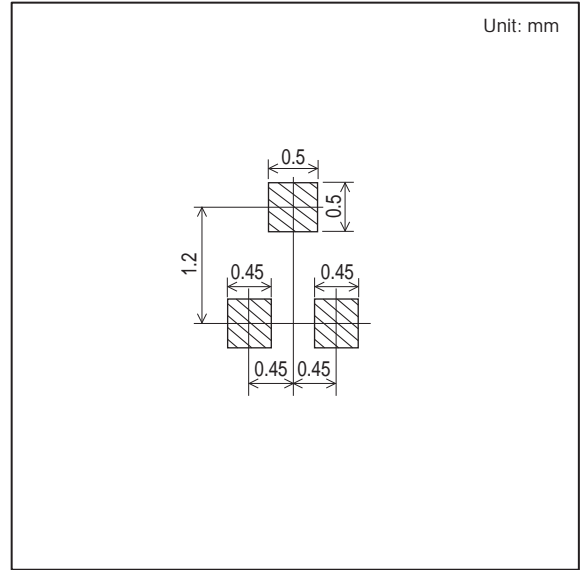
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Outline Drawing

15C01SS-TL-E



Land Pattern Example



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