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## Varactor Diode

### Single Varactor Diode for VCO

16V, 50nA, CR=6.0,  $r_s=0.8\Omega$ , MCPH3

- High capacitance ratio ( $V_R=1.0$  to  $7.0V$ )
- Small-sized package
- Low series resistance

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

Parameter	Symbol	Conditions	Ratings	Unit
Reverse Voltage	V <sub>R</sub>		16	V
Junction Temperature	T <sub>J</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

The drawing shows three views of the SVC704-TL-E component:

- Top View:** A rectangular component with a central square pad (3) and two side pads (1 and 2). Dimensions include a total width of 2.0, a central pad width of 0.25, a distance of 1.6 from the top edge to the center of pad 3, a distance of 0.25 from the bottom edge to the center of pad 1, a distance of 0.65 from the center of pad 1 to the center of pad 2, and a distance of 0.3 from the center of pad 2 to the right edge.
- Side View:** Shows the component's profile with a thickness of 0.15 and a gap of 0 to 0.02 between the component and the surface it sits on.
- End View:** Shows the component's width of 0.85 and the positions of pads 1 and 2.
- Bottom View:** Shows the component's footprint with a width of 0.07 and the positions of pads 1 and 2.

**Legend:**

- 1 : Anode
- 2 : No Contact
- 3 : Cathode

**Model:** MCPH3

- Package : MCPH3
- JEITA, JEDEC : SC-70, SOT-323
- Minimum Packing Quantity : 3,000 pcs./reel

Diagram of a V5 label with dashed boxes for "LOT No.1" and "O".

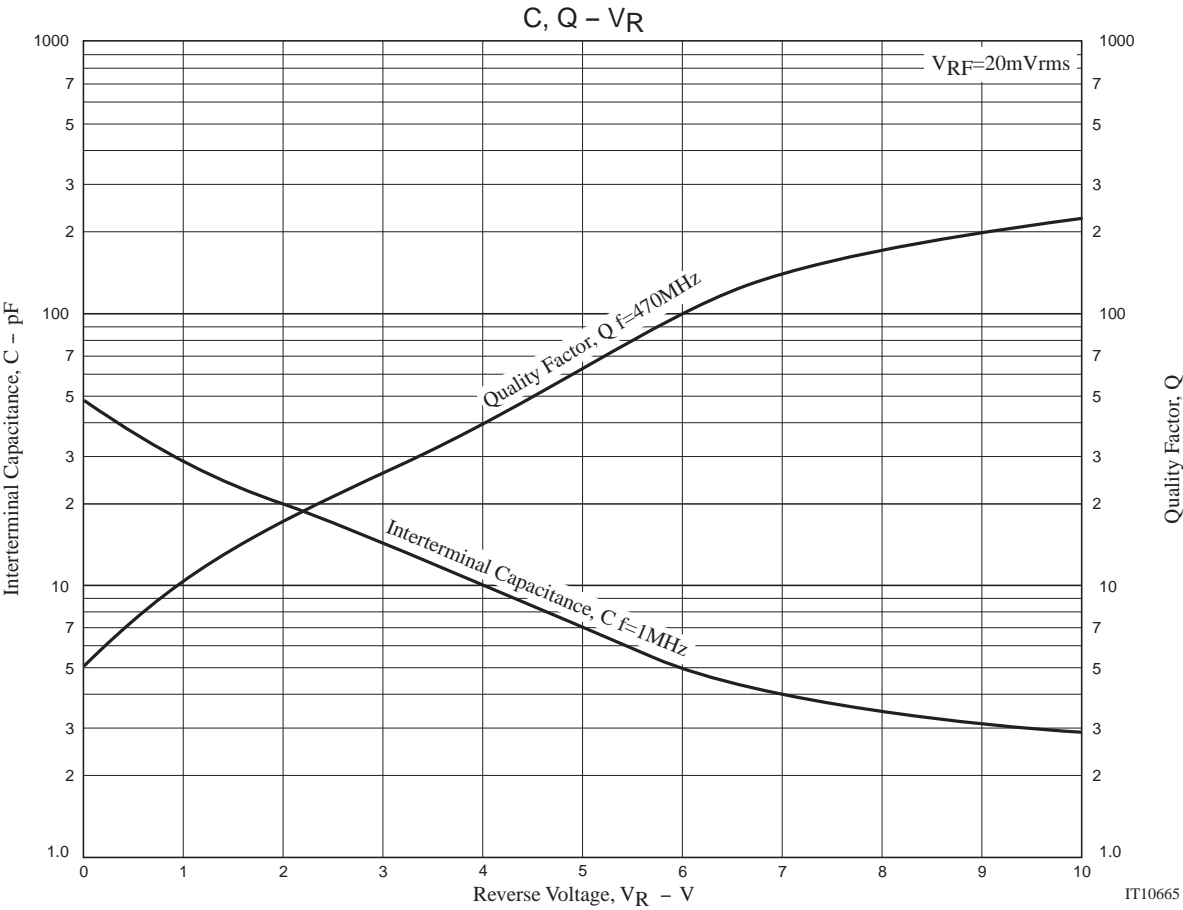
SVC704

Electrical Characteristics at Ta=25°C

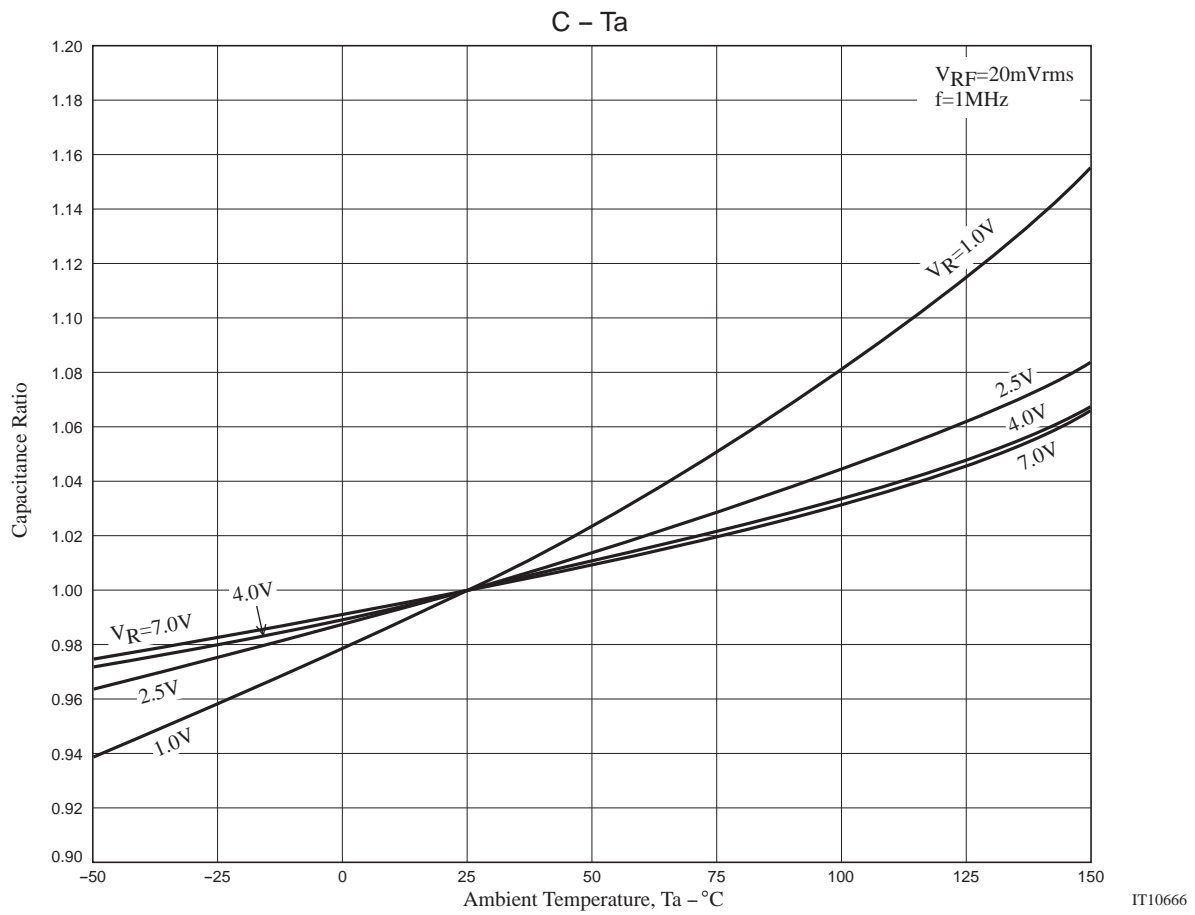
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Breakdown Voltage	V(BR)R	I <sub>R</sub> =10μA	16			V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =10V			50	nA
Interterminal Capacitance*	C1.0V	V <sub>R</sub> =1.0V, f=1MHz	26.0		30.0	pF
	C7.0V	V <sub>R</sub> =7.0V, f=1MHz	3.4		4.6	pF
Series Resistance	r <sub>s</sub>	V <sub>R</sub> =1.0V, f=470MHz			0.8	Ω
Capacitance Ratio	CR	C1.0V / C7.0V	6.0			

Ordering Information

Device	Package	Shipping	memo
SVC704-TL-E	MCPH3	3,000pcs./reel	Pb Free



# SVC704



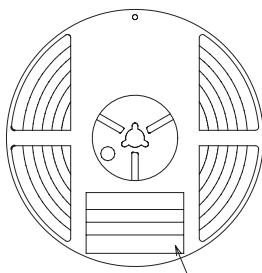
## Taping Specification

## SVC704-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)
MCPH3	MCPH3	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

## Packing method



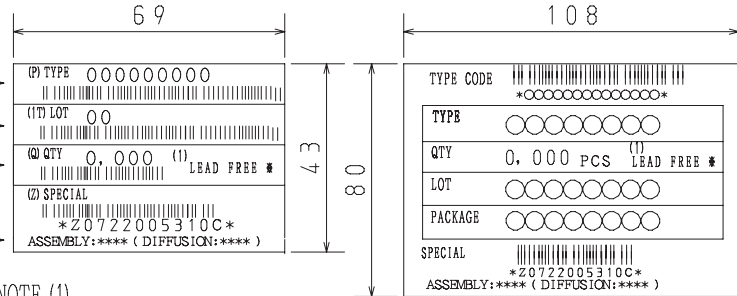
Type No.  
LOT No.  
Quantity  
Origin

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.



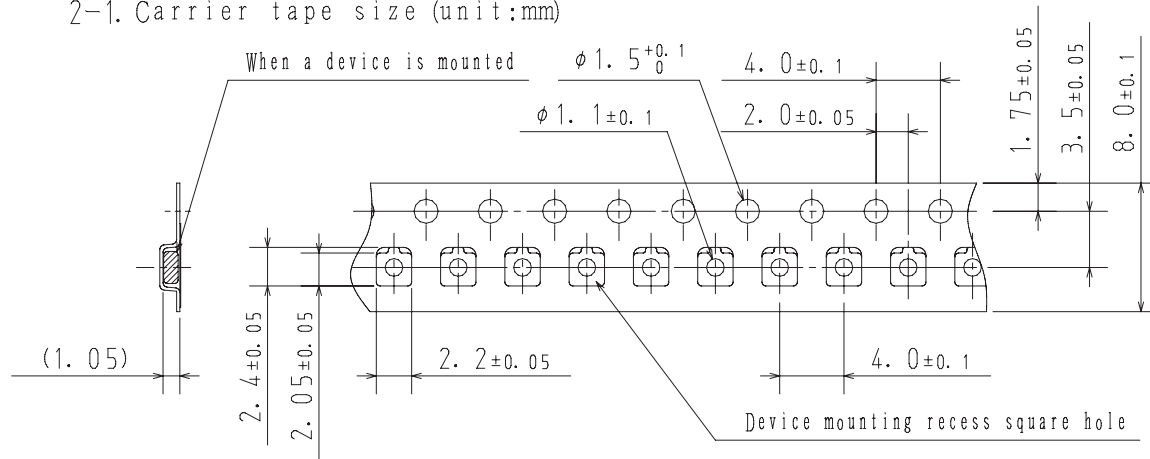
NOTE (1)

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

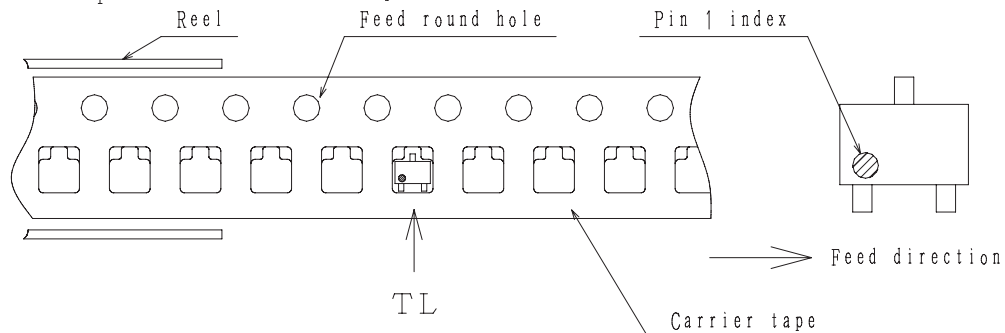
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

## 2. Taping configuration

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

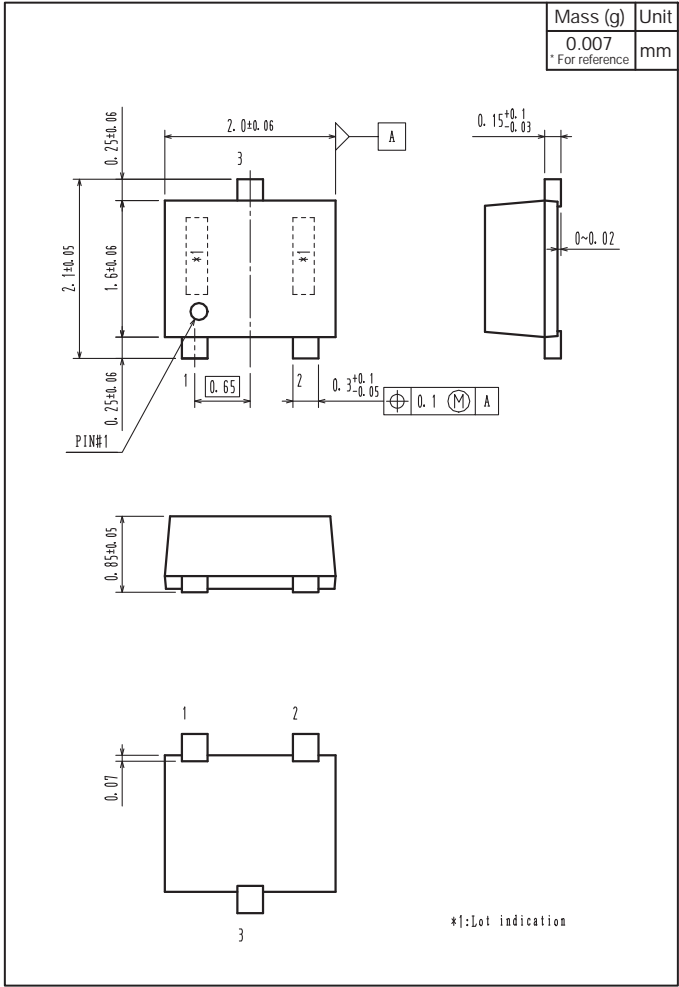


## 2-2. Device placement direction

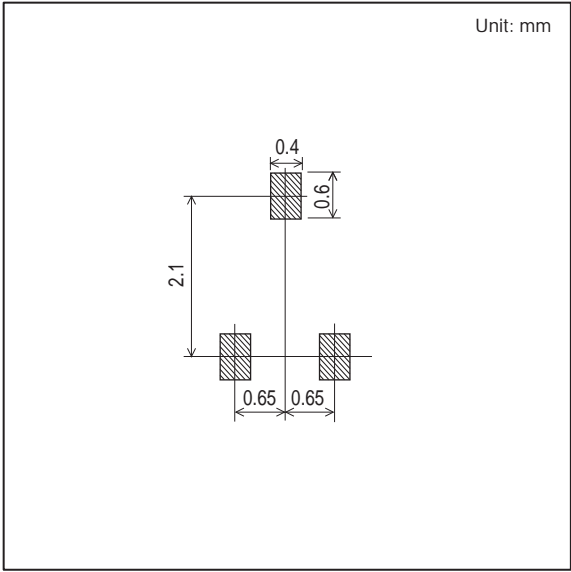


Those with pin 1 index on the feed hole side.....TL

Outline Drawing  
SVC704-TL-E



Land Pattern Example



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