



ON Semiconductor®

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# SVC272

## Varactor Diode

Monolithic dual Varactor Diode for FM Tunin  
14V, 50nA, CR=2.3, Q=150, MCPH3

### Features

- Twin type varactor diode with good large-signal characteristics for FM receiver electronic tuning use
- Small package permits SVC272-applied sets to be compact and slim
- Can be also provided in tape reel package thereby automatic insertion is supported
- High Quality Factor

### Specifications

Absolute Maximum Ratings at Ta=25°C

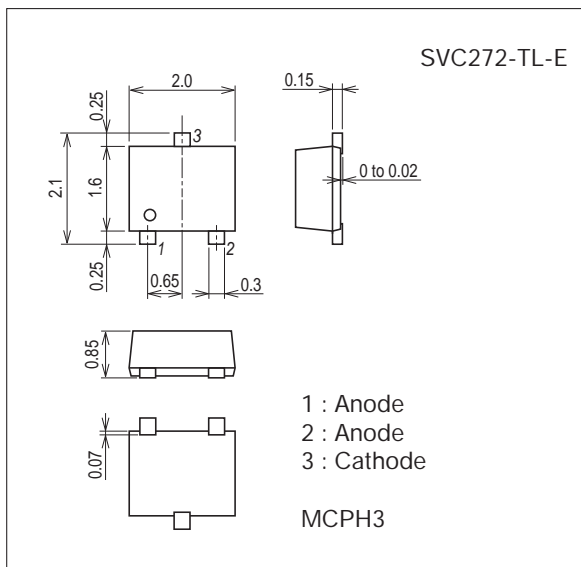
| Parameter            | Symbol    | Conditions | Ratings     | Unit |
|----------------------|-----------|------------|-------------|------|
| Reverse Voltage      | $V_R$     |            | 16          | V    |
| Junction Temperature | $T_J$     |            | 125         | °C   |
| Storage Temperature  | $T_{stg}$ |            | -55 to +125 | °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)

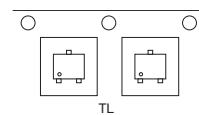
7019A-002



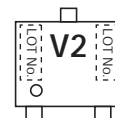
### Product & Package Information

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

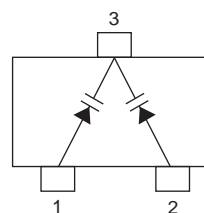
### Packing Type : TL



### Marking



### Electrical Connection



## SVC272

### Electrical Characteristics at Ta=25°C

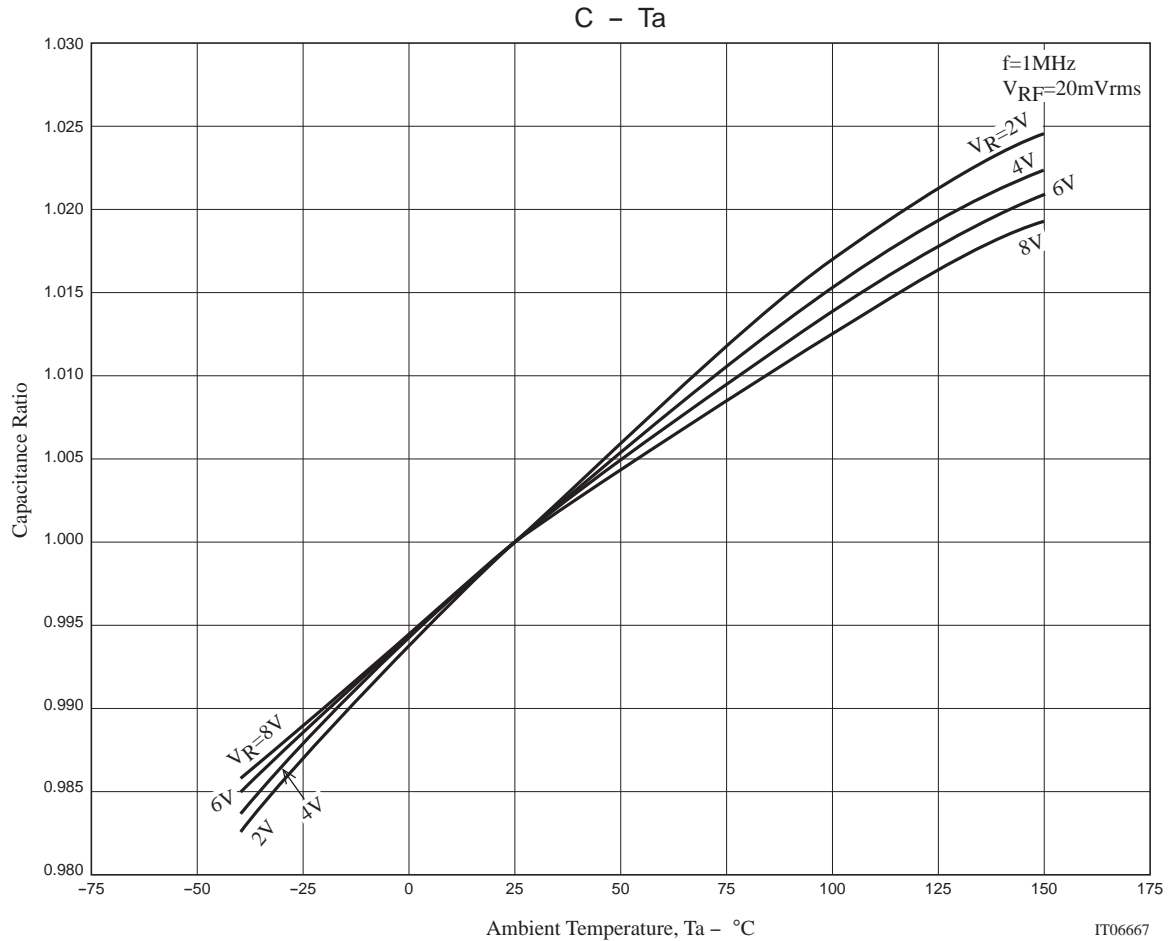
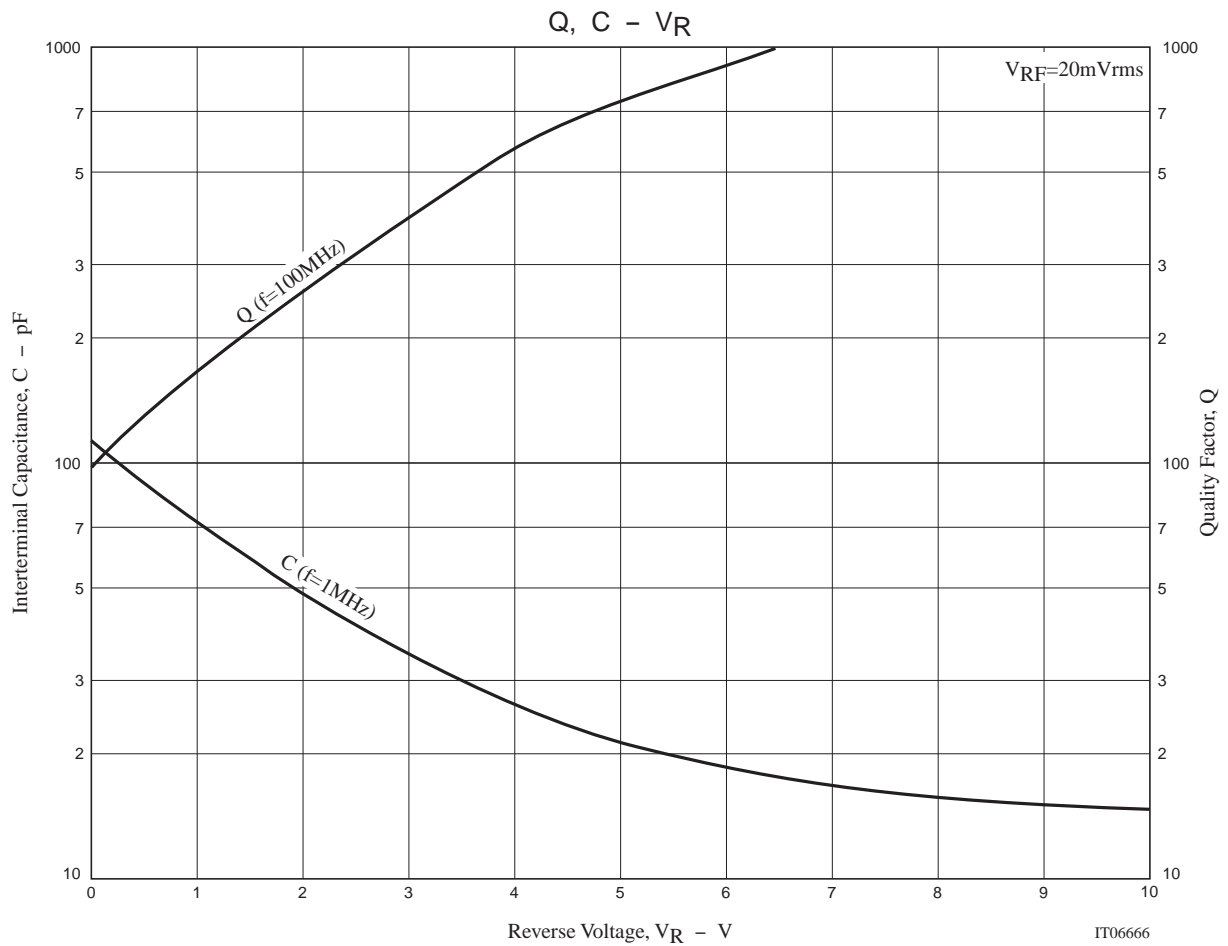
| Parameter                  | Symbol         | Conditions  | Ratings |     |       | Unit |
|----------------------------|----------------|---|---------|-----|-------|------|
|                            |                |   | min     | typ | max   |      |
| Breakdown Voltage          | V(BR)R         | I <sub>R</sub> =10μA  | 14      |     |       | V    |
| Reverse Current            | I <sub>R</sub> | V <sub>R</sub> =10V   |         |     | 50    | nA   |
| Interterminal Capacitance* | C2.0V          | V <sub>R</sub> =2.0V, f=1MHz                                | 44.91   |     | 49.82 | pF   |
|                            | C8.0V          | V <sub>R</sub> =8.0V, f=1MHz                                | 14.07   |     | 18.55 | pF   |
| Quality Factor             | Q              | V <sub>R</sub> =2.0V, f=100MHz                              | 150     |     |       |      |
| Capacitance Ratio          | C <sub>R</sub> | C2.0V / C8.0V   | 2.3     |     |       |      |
| Matching Tolerance         | ΔCm            | V <sub>R</sub> =2.0V, 8.0, f=1MHz (C max-C min) / C min×100 |         |     | 3.0   | %    |

Note)\* : Capacitance value per each diode.

### Ordering Information

| Device      | Package | Shipping       | memo    |
|-------------|---------|----------------|---------|
| SVC272-TL-E | MCPH3   | 3,000pcs./reel | Pb Free |

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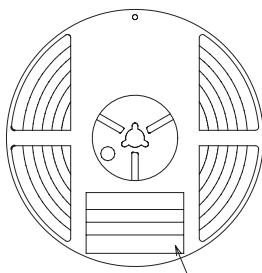
## Taping Specification

## SVC272-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<br>Dimensions:mm (external)<br>183×72×185 | 6 inner boxes contained<br>Dimensions:mm (external)<br>440×195×210 |

## Packing method



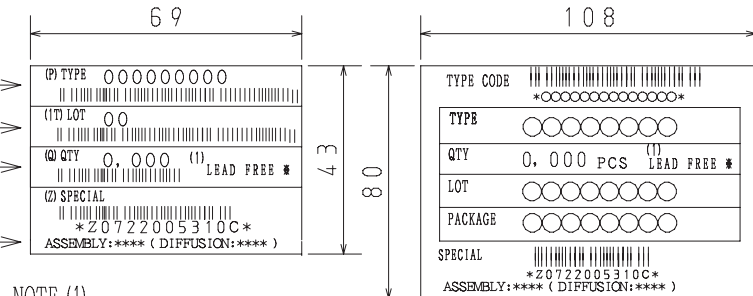
Reel label

Type No.  
LOT No.  
Quantity  
Origin

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.



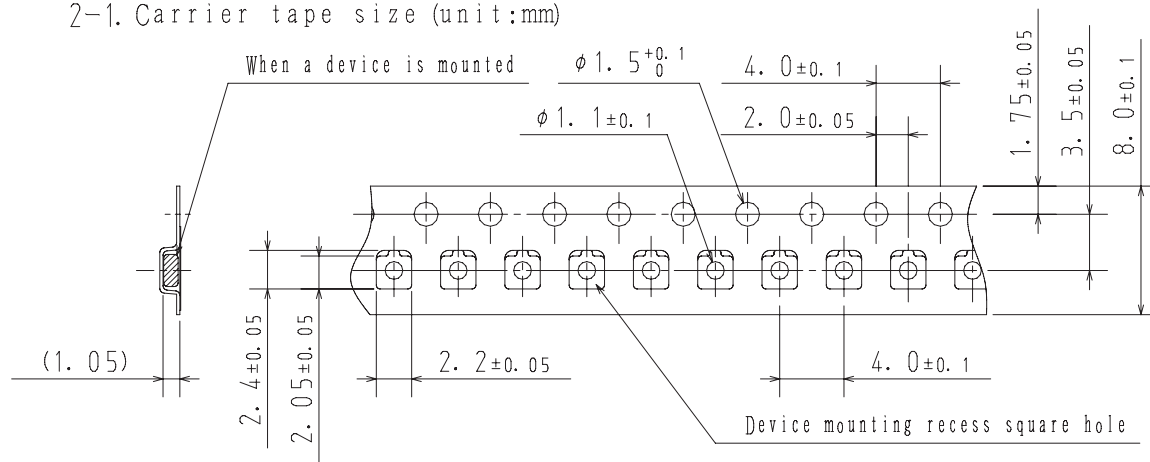
NOTE (1)

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

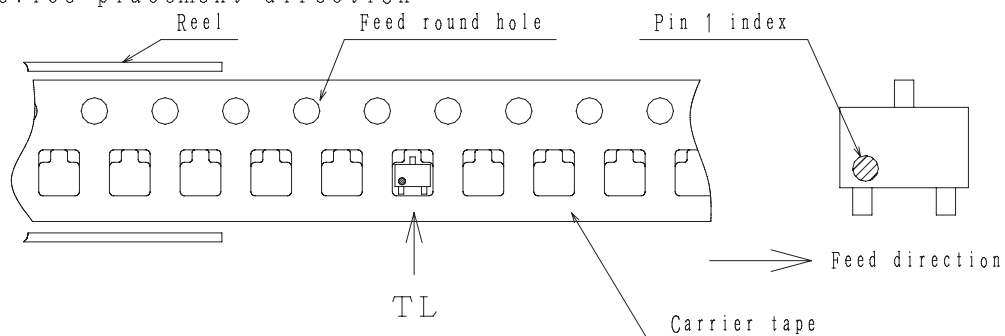
| Label       | JEITA Phase    |
|-------------|----------------|
| LEAD FREE 3 | JEITA Phase 3A |
| LEAD FREE 4 | JEITA Phase 3  |

## 2. Taping configuration

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

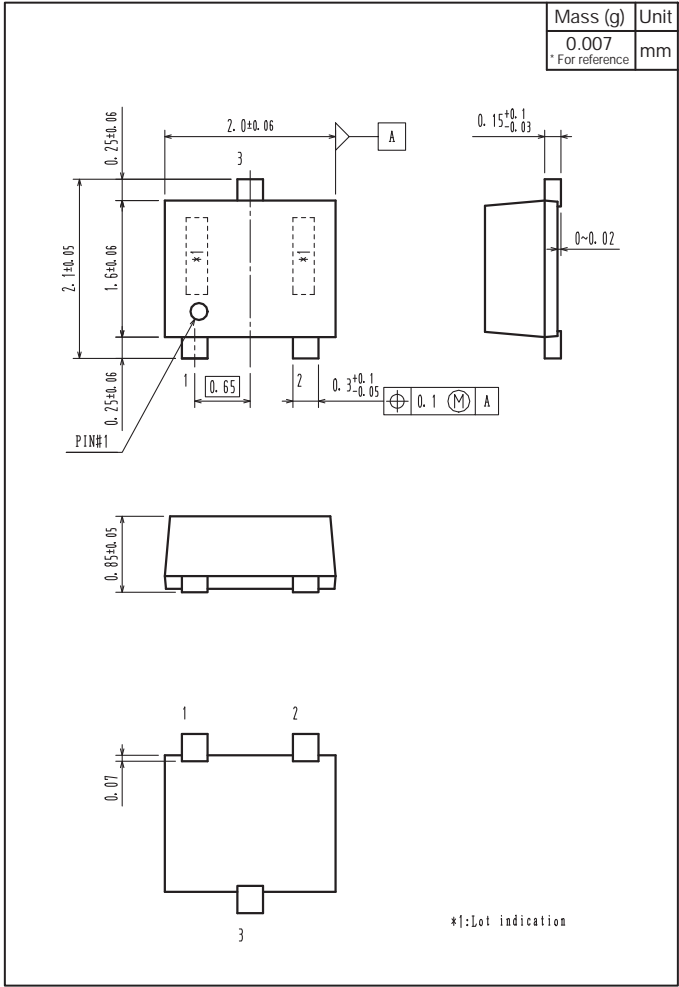


## 2-2. Device placement direction

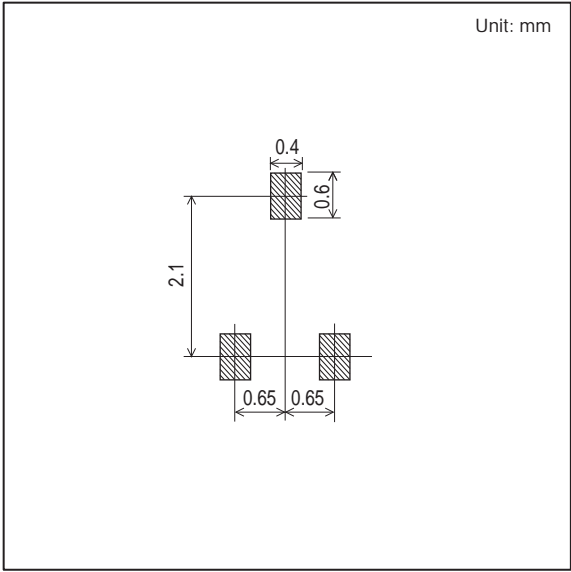


Those with pin 1 index on the feed hole side.....TL

Outline Drawing  
SVC272-TL-E



Land Pattern Example



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