



SVC704

Varactor Diode Single Varactor Diode for VCO 16V, 50nA, CR=6.0, $r_s=0.8\Omega$, MCPH3

ON Semiconductor®

<http://onsemi.com>

Features

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

Specifications

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

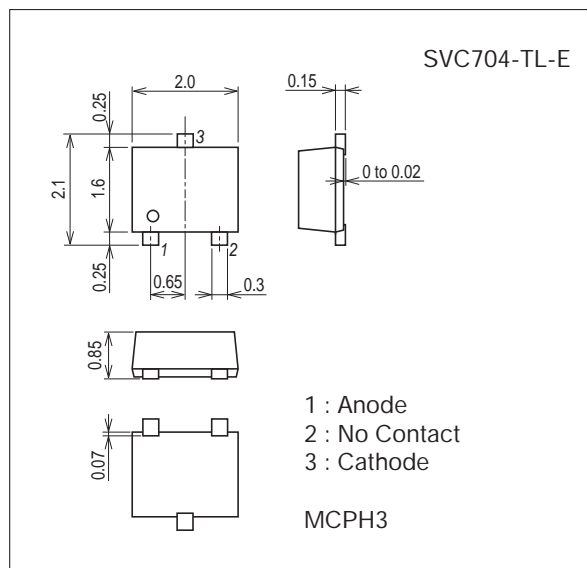
| Parameter | Symbol | Conditions | Ratings | Unit |
|----------------------|-----------|------------|-------------|------------|
| Reverse Voltage | V_R | | 16 | V |
| Junction Temperature | T_j | | 150 | $^\circ C$ |
| Storage Temperature | T_{stg} | | -55 to +150 | $^\circ C$ |

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)

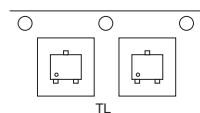
7019A-001



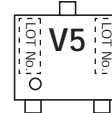
Product & Package Information

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

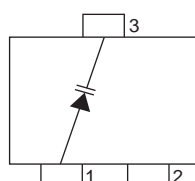
Packing Type : TL



Marking



Electrical Connection



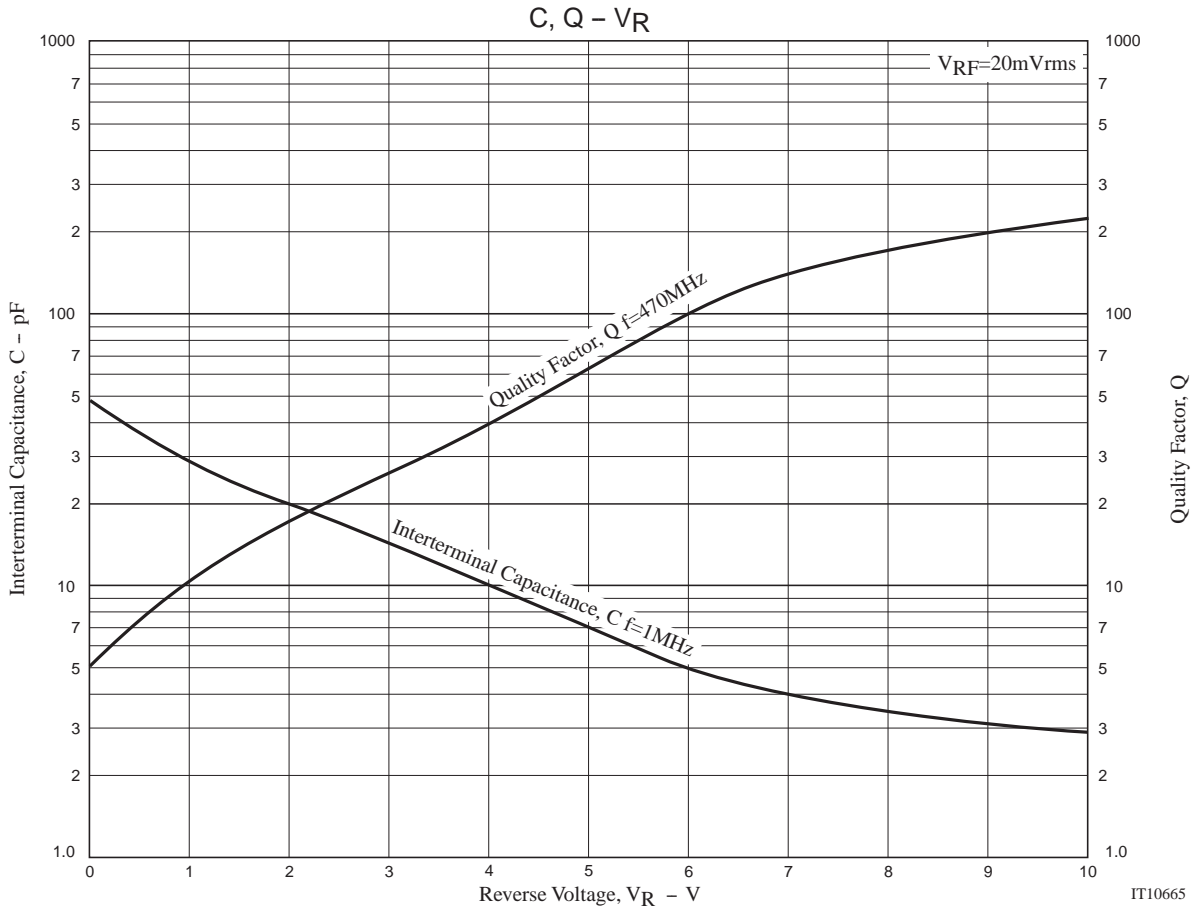
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Electrical Characteristics at Ta=25°C

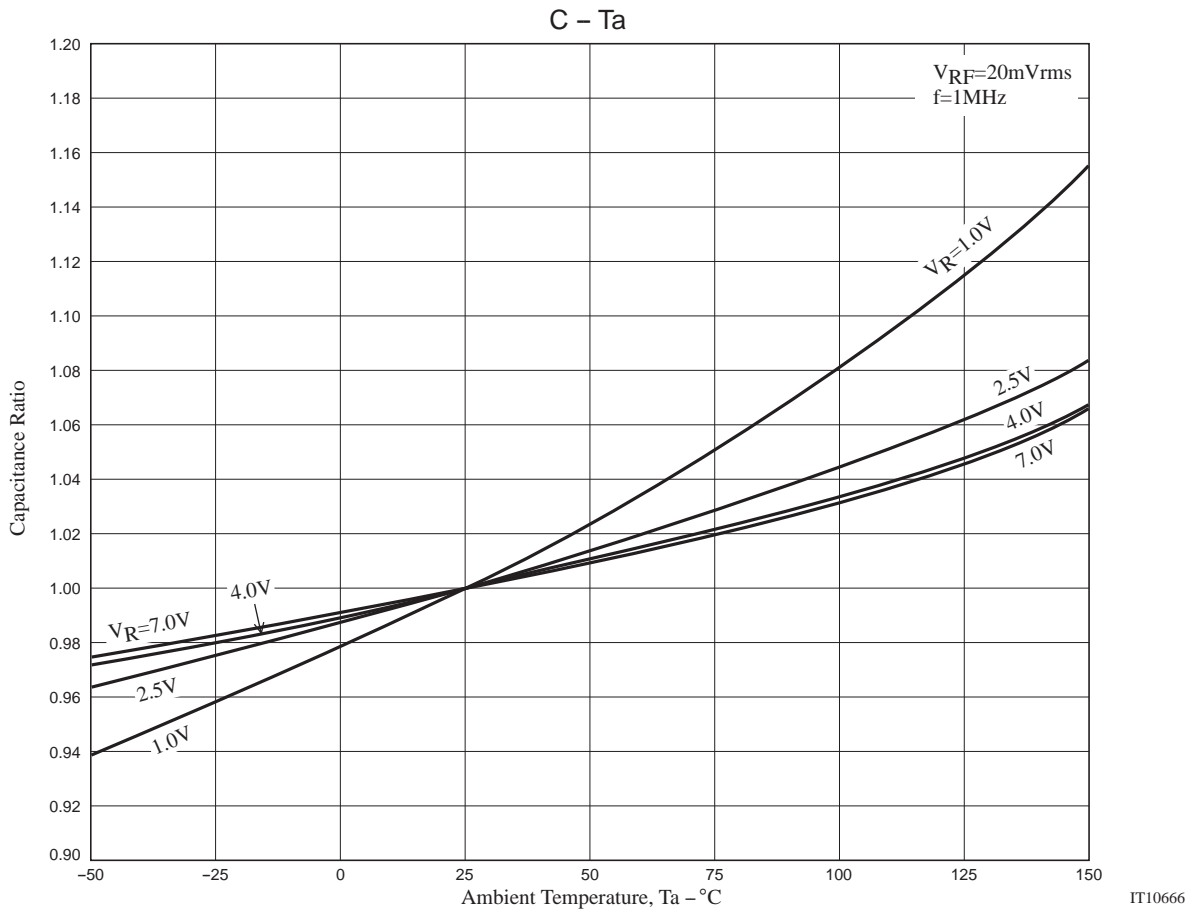
| Parameter | Symbol | Conditions | Ratings | | | Unit |
|----------------------------|----------------|--------------------------------|---------|-----|------|------|
| | | | min | typ | max | |
| Breakdown Voltage | V(BR)R | I _R =10μA | 16 | | | V |
| Reverse Current | I _R | V _R =10V | | | 50 | nA |
| Interterminal Capacitance* | C1.0V | V _R =1.0V, f=1MHz | 26.0 | | 30.0 | pF |
| | C7.0V | V _R =7.0V, f=1MHz | 3.4 | | 4.6 | pF |
| Series Resistance | r _S | V _R =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 |



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Taping Specification

SVC704-TL-E

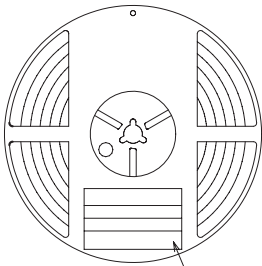
1. Packing Format

| 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 |

Reel label, Inner box label
(unit: mm)

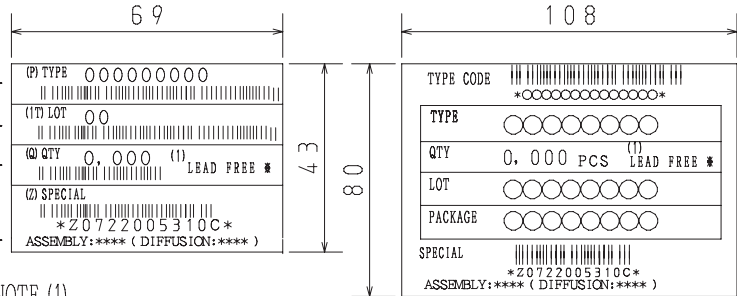
Outer box label
It is a label at the time of factory shipments.
The form of a label may change in physical distribution process.

Packing method



Type No.
LOT No.
Quantity
Origin

Reel label



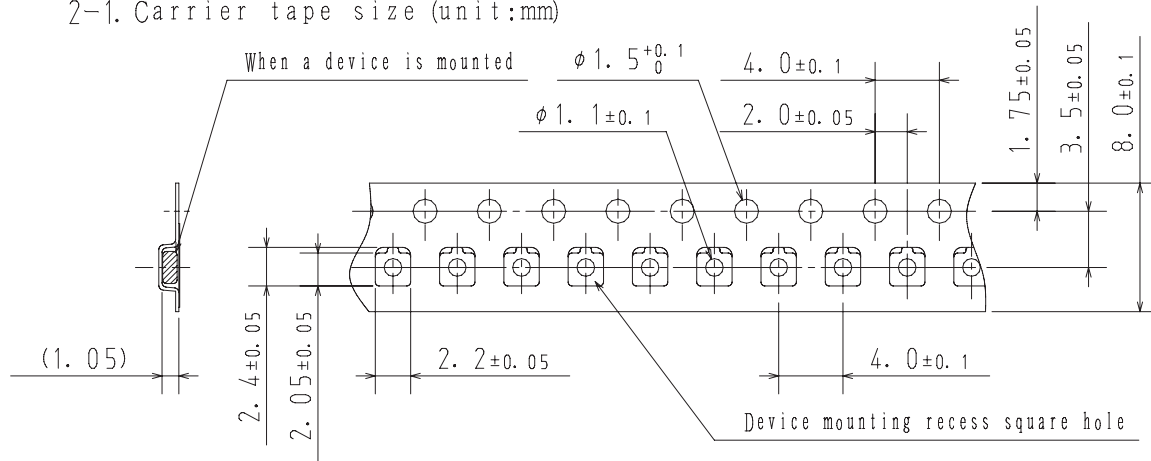
NOTE (1)

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

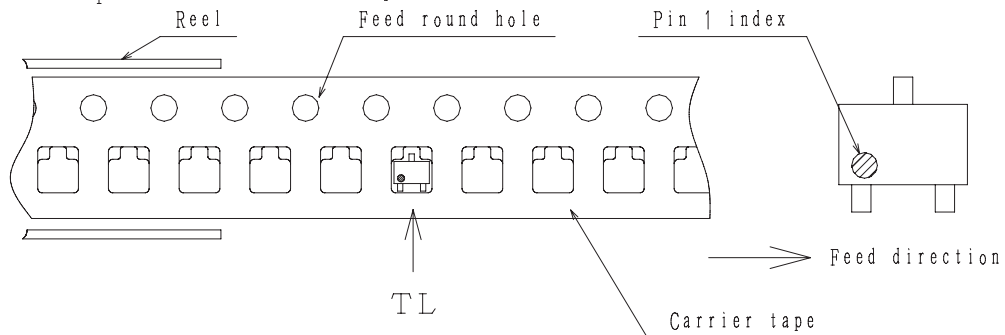
| Label | JEITA Phase |
|-------------|----------------|
| LEAD FREE 3 | JEITA Phase 3A |
| LEAD FREE 4 | JEITA Phase 3 |

2. Taping configuration

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



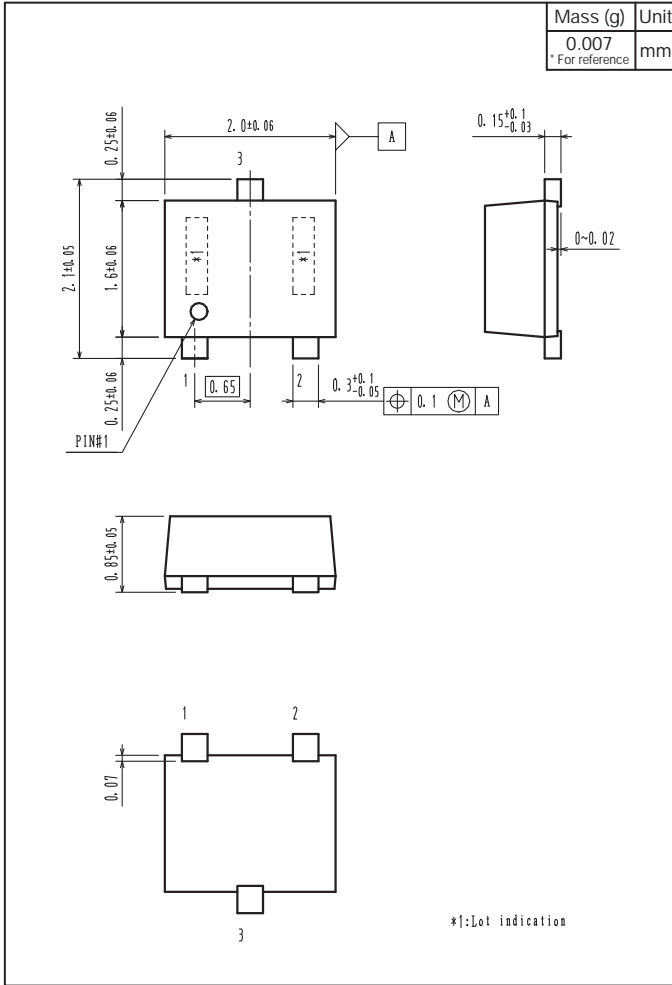
2-2. Device placement direction



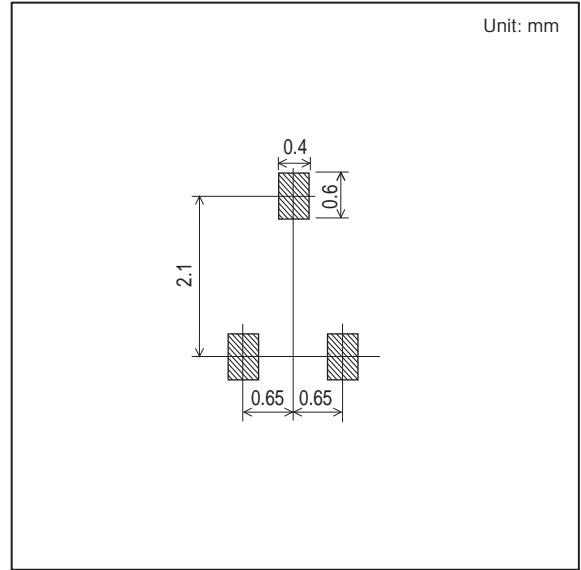
Those with pin 1 index on the feed hole side.....TL

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Outline Drawing SVC704-TL-E



Land Pattern Example



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