



SVC270

Varactor Diode

Monolithic dual Varactor Diode for FM Tuning 16V, 50nA, $C_R=1.65$, $Q=100$, MCPH3

ON Semiconductor®

<http://onsemi.com>

Features

- Twin type varactor diode having an excellent large input characteristic, for use in FM electronic tuning applications
- Small MCPH package permits SVC270-applied sets to be compact and slim
- Possible to be shipped in tape reel packaging, which facilitates automatic insertion
- High Q

Specifications

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

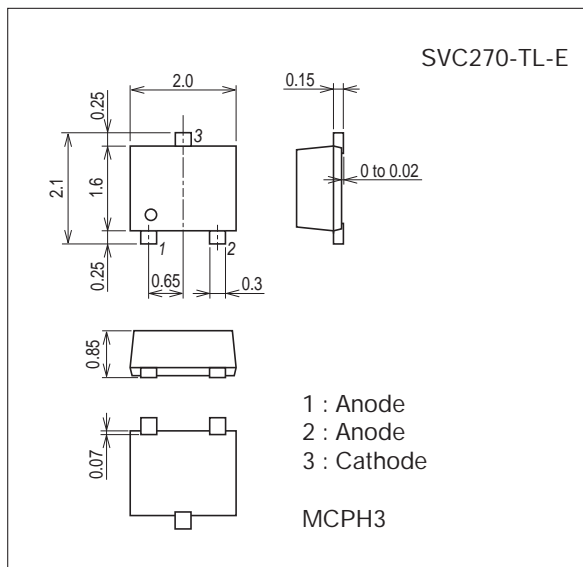
| Parameter | Symbol | Conditions | Ratings | Unit |
|----------------------|-----------|------------|-------------|------------------|
| Reverse Voltage | V_R | | 16 | V |
| Junction Temperature | T_j | | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | | -55 to +150 | $^\circ\text{C}$ |

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)

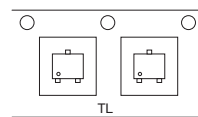
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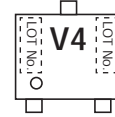
Product & Package Information

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

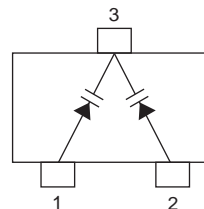
Packing Type : TL



Marking



Electrical Connection



SVC270

Electrical Characteristics at Ta=25°C

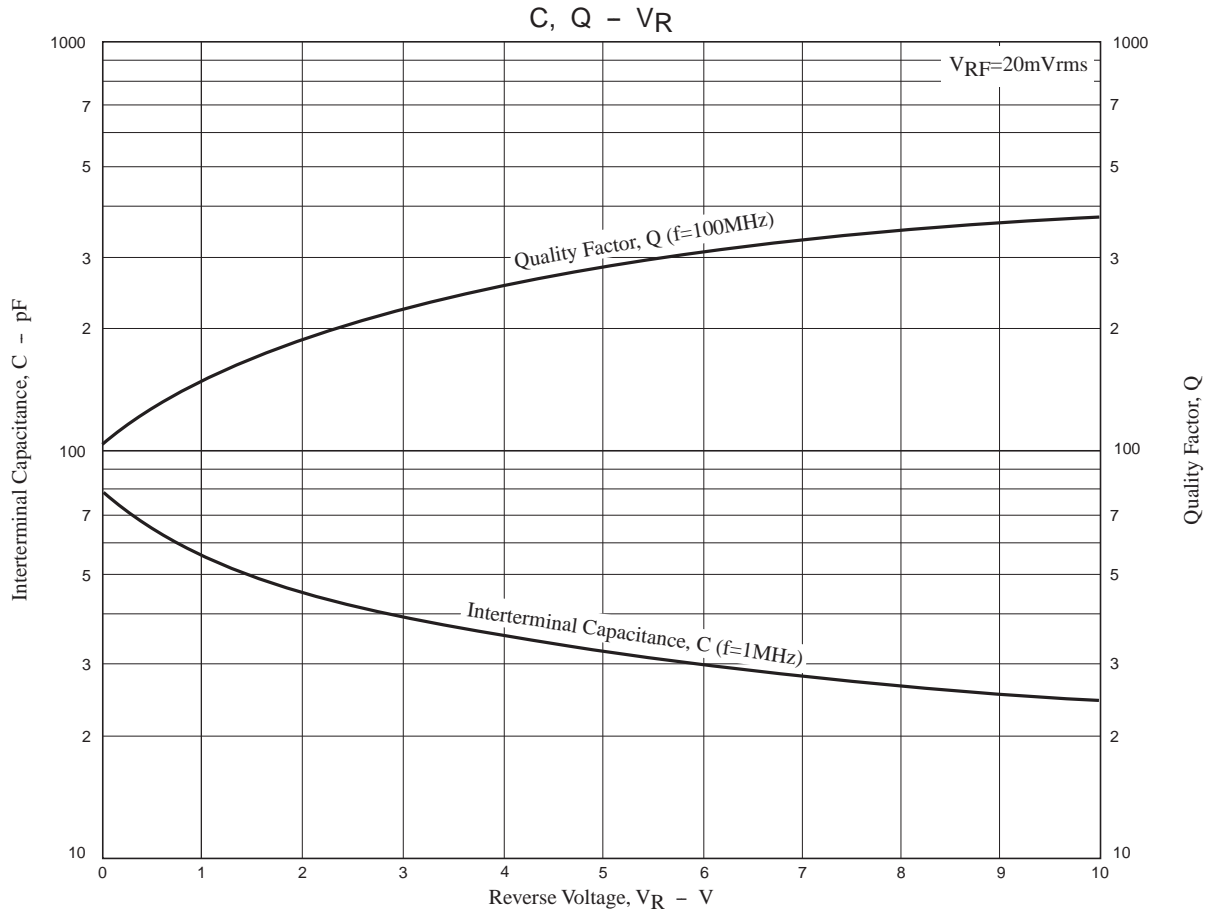
| Parameter | Symbol | Conditions | Ratings | | | Unit |
|----------------------------|-----------------|--|---------|-----|------|------|
| | | | min | typ | max | |
| Breakdown Voltage | V(BR)R | I _R =10μA | 16 | | | V |
| Reverse Current | I _R | V _R =10V | | | 50 | nA |
| Interterminal Capacitance* | C2.0V | V _R =2.0V, f=1MHz | 44.0 | | 46.5 | pF |
| | C8.0V | V _R =8.0V, f=1MHz | 25.1 | | 28.2 | pF |
| Quality Factor | Q | V _R =3.0V, f=100MHz | 100 | | | |
| Capacitance Ratio | C _R | C2.0V / C8.0V | 1.65 | | 1.75 | |
| Matching Tolerance*2 | ΔC _m | V _R =2.0V, f=1MHz (C _{max} -C _{min}) / C _{min} ×100 | | | 2.5 | % |

Note)*1 : Capacitance value per each diode.

*2 : Matching Tolerance is valid for the devices in one taping reel.

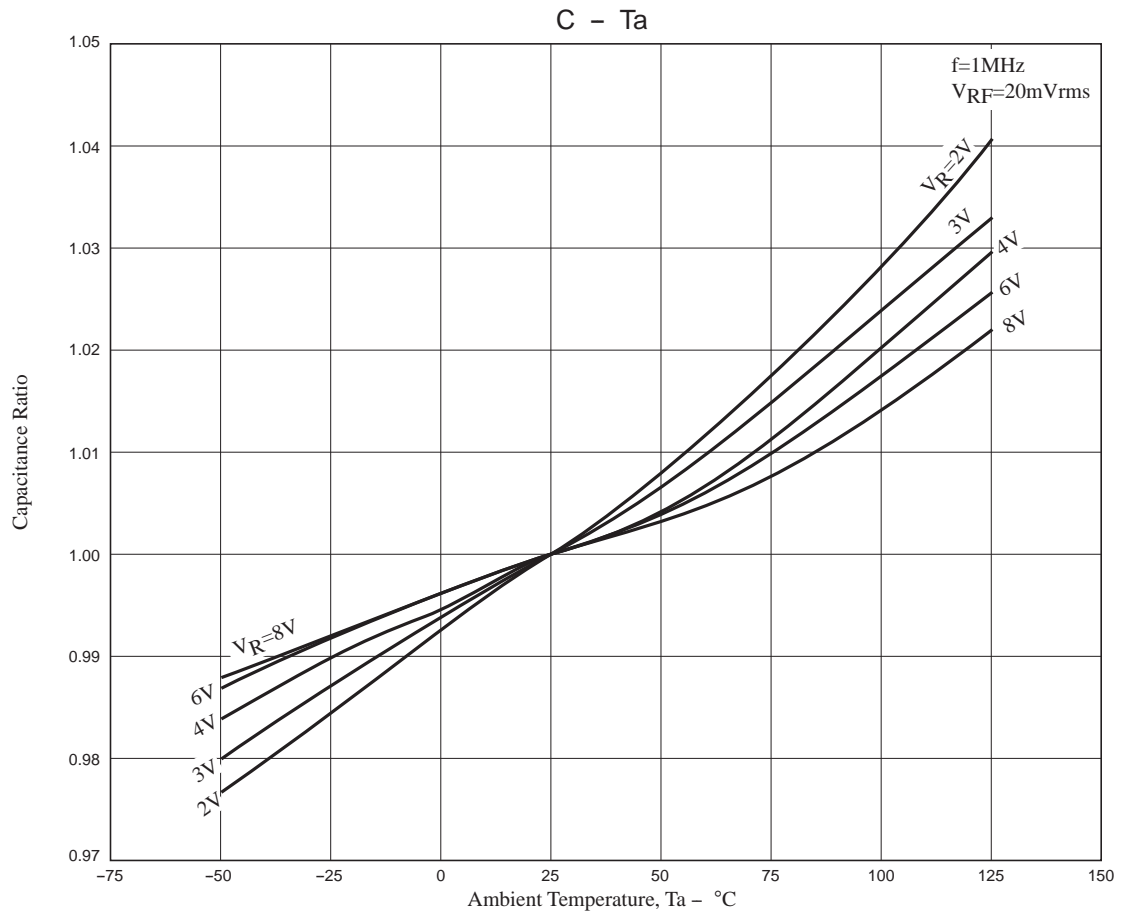
Ordering Information

| Device | Package | Shipping | memo |
|-------------|---------|----------------|---------|
| SVC270-TL-E | MCPH3 | 3,000pcs./reel | Pb Free |



IT10094

SVC270



Taping Specification

SVC270-TL-E

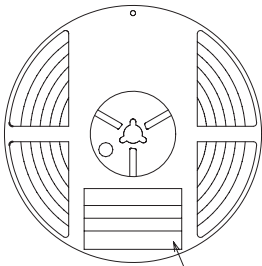
1. Packing Format

| 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)

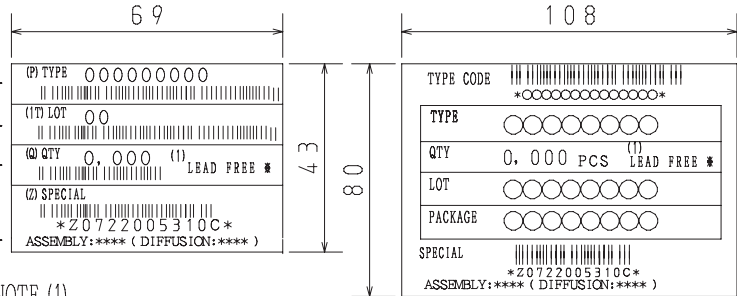
Outer box label
It is a label at the time of factory shipments.
The form of a label may change in physical distribution process.

Packing method



Type No.
LOT No.
Quantity
Origin

Reel label



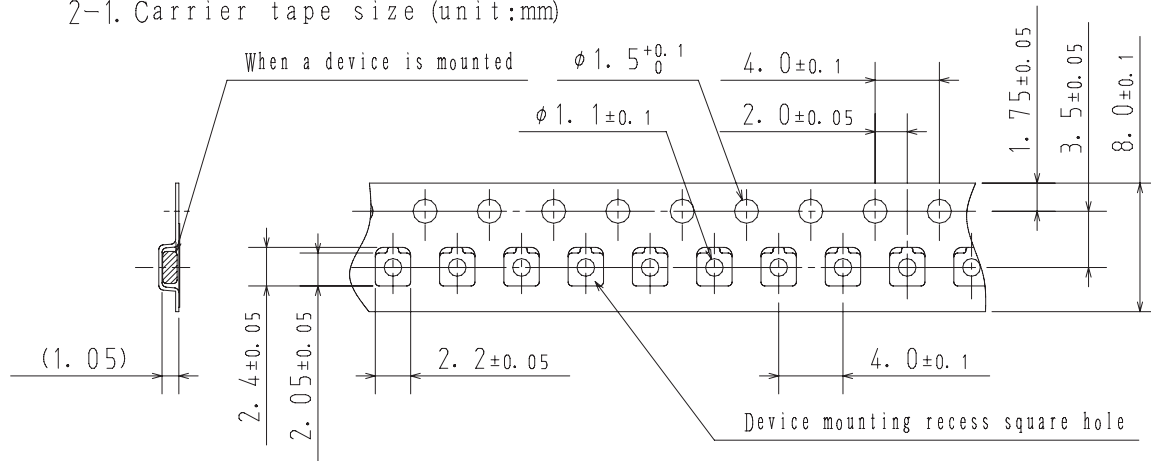
NOTE (1)

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

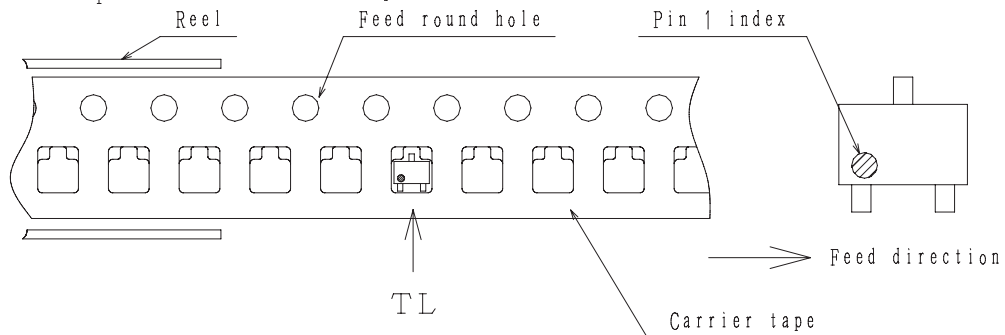
| Label | JEITA Phase |
|-------------|----------------|
| LEAD FREE 3 | JEITA Phase 3A |
| LEAD FREE 4 | JEITA Phase 3 |

2. Taping configuration

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



2-2. Device placement direction

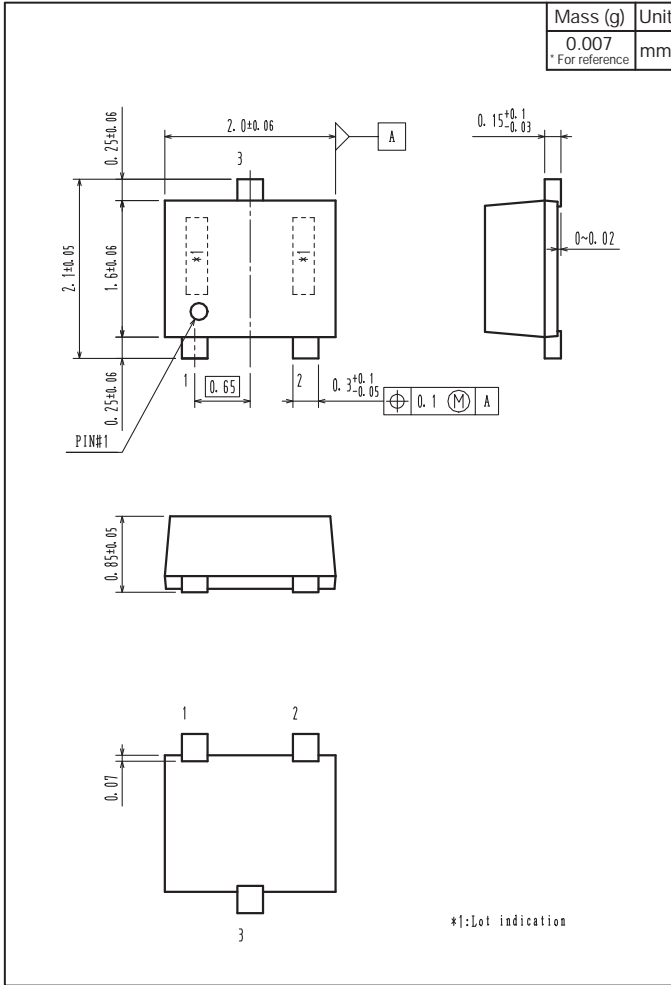


Those with pin 1 index on the feed hole side.....TL

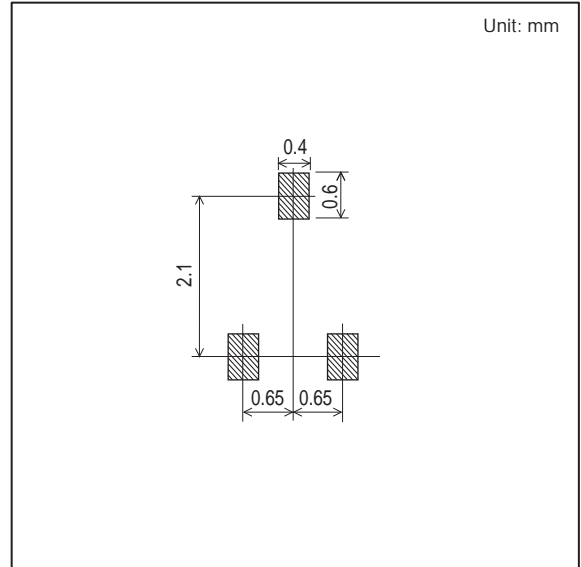
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Outline Drawing

SVC270-TL-E



Land Pattern Example



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