



SVC230

Varactor Diode

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

ON Semiconductor®

<http://onsemi.com>

Features

- Twin type varactor diode having an excellent large input characteristic, for use in FM electronic tuning applications
- Small CP package permits SVC230 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 $T_a=25^\circ\text{C}$

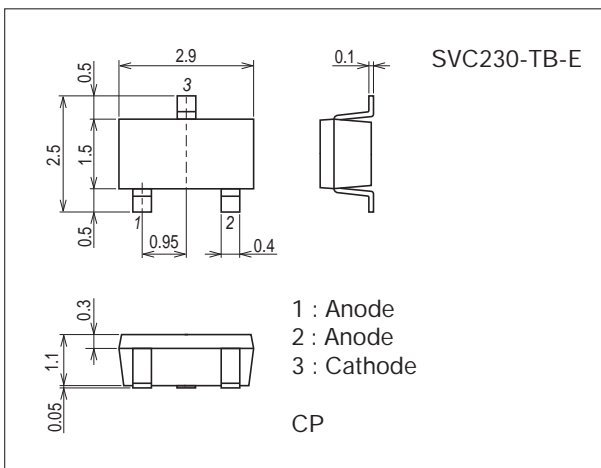
| Parameter | Symbol | Conditions | Ratings | Unit |
|----------------------|-----------|------------|-------------|------------------|
| Reverse Voltage | V_R | | 16 | V |
| Junction Temperature | T_j | | 125 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | | -55 to +125 | $^\circ\text{C}$ |

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)

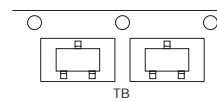
7013A-006



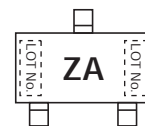
Product & Package Information

- Package : CP
- JEITA, JEDEC : SC-59, TO-236, SOT-23, TO-236AB
- Minimum Packing Quantity : 3,000 pcs./reel

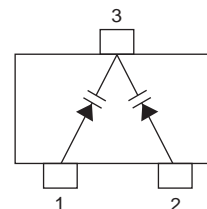
Packing Type: TB



Marking



Electrical Connection



SVC230

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 | *1 C2V | V _R =2.0V, f=1MHz | 44.0 | | 46.5 | pF |
| | C8V | 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 | | | 3 | % |

Note) *1 : Capacitance value of one diode

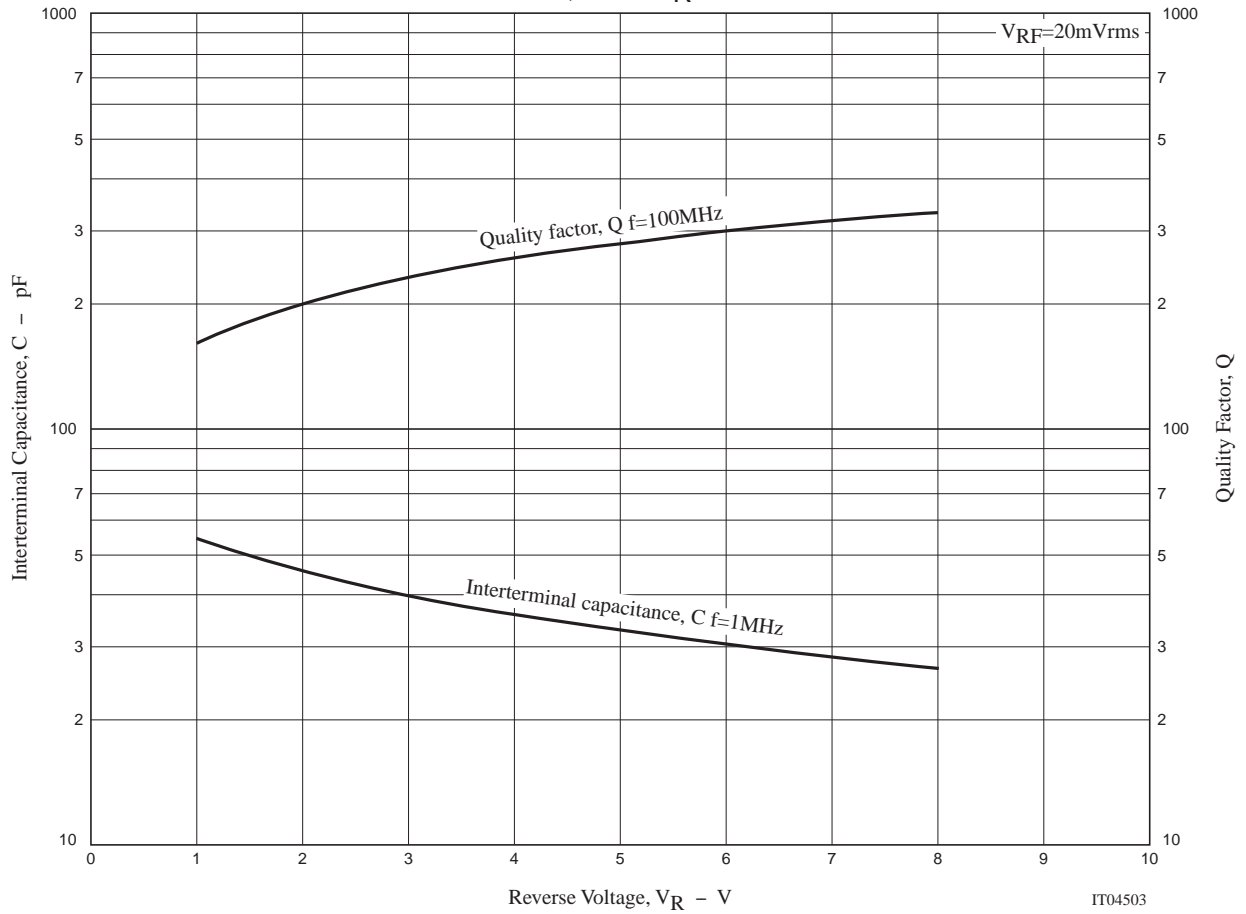
*2 : Matching Tolerance is valid for the devices in one taping reel.

Ordering Information

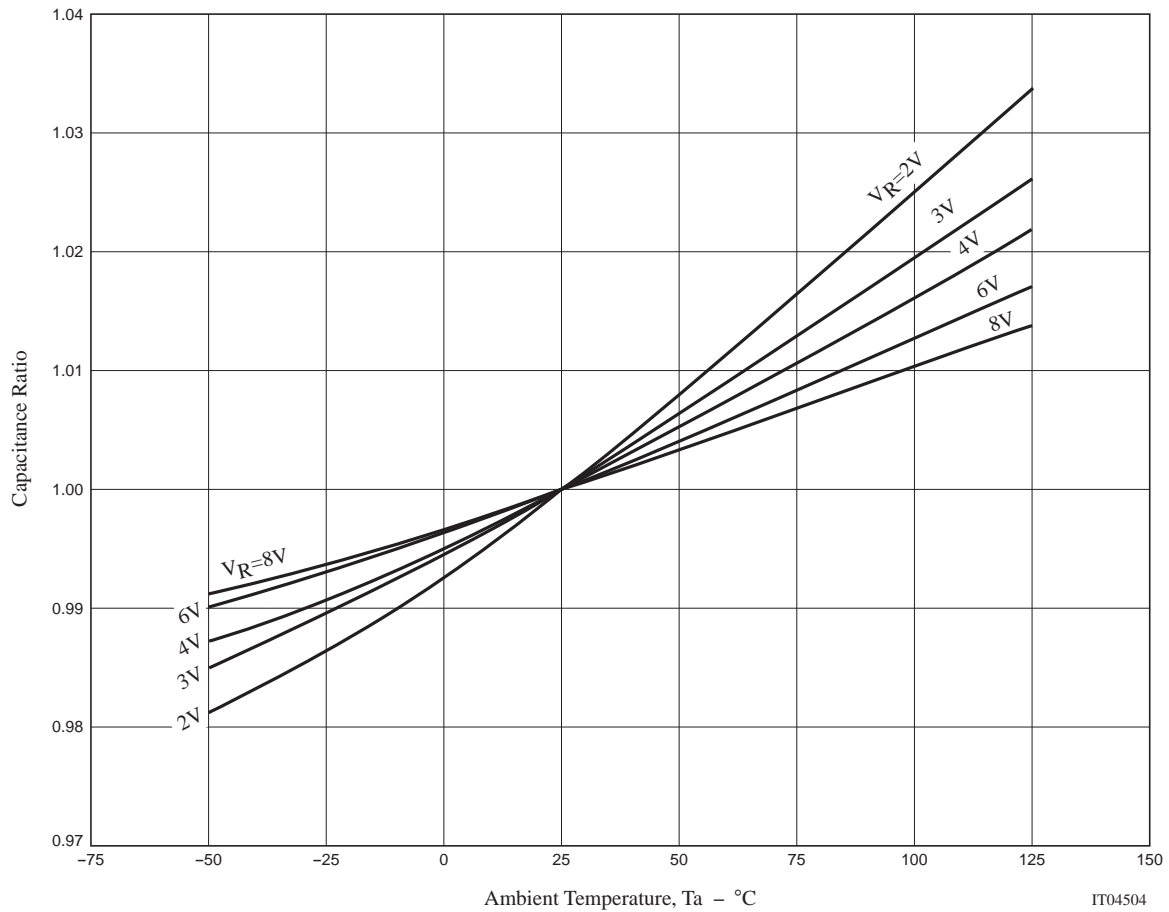
| Device | Package | Shipping | memo |
|-------------|---------|----------------|---------|
| SVC230-TB-E | CP | 3,000pcs./reel | Pb Free |

SVC230

C, Q - V_R



C - T_a



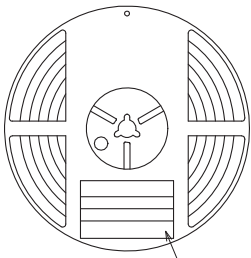
Taping Specification

SVC230-TB-E

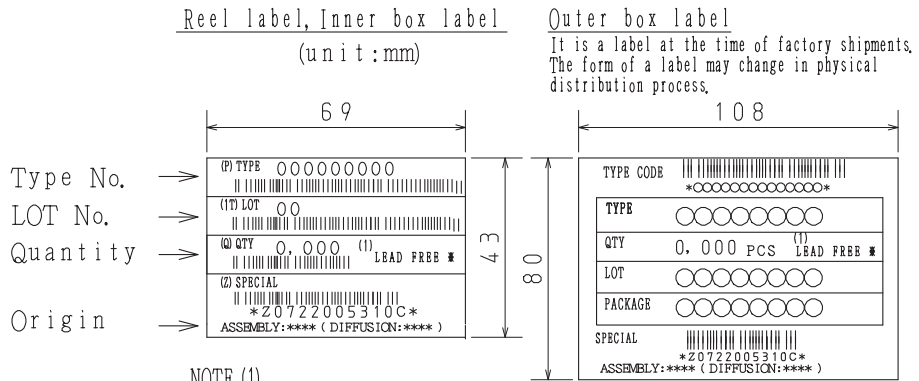
1. Packing Format

| 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) |
| CP | CP | 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



Reel label



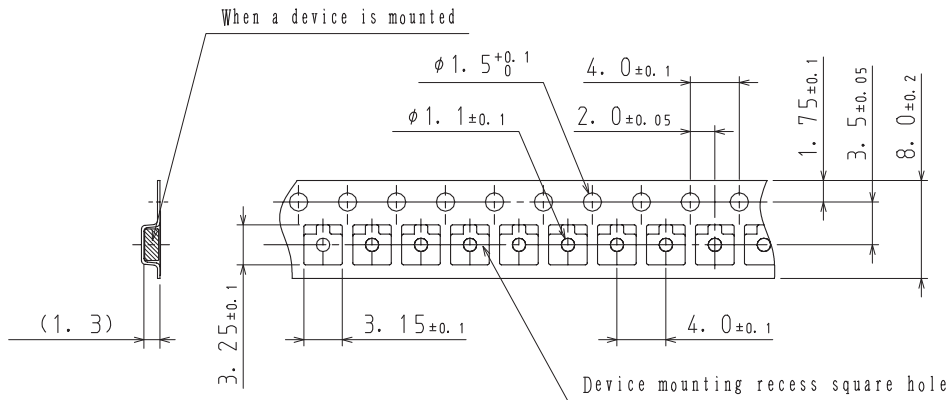
NOTE (1)

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

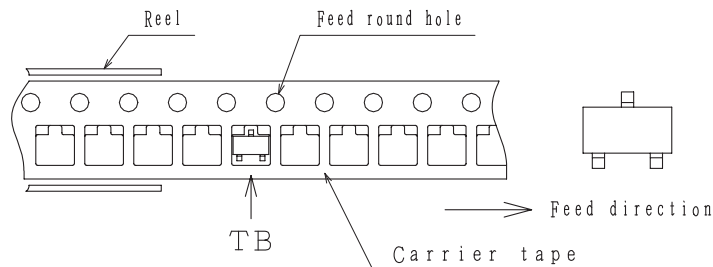
| Label | JEITA Phase |
|-------------|----------------|
| LEAD FREE 3 | JEITA Phase 3A |
| LEAD FREE 4 | JEITA Phase 3 |

2. Taping configuration

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



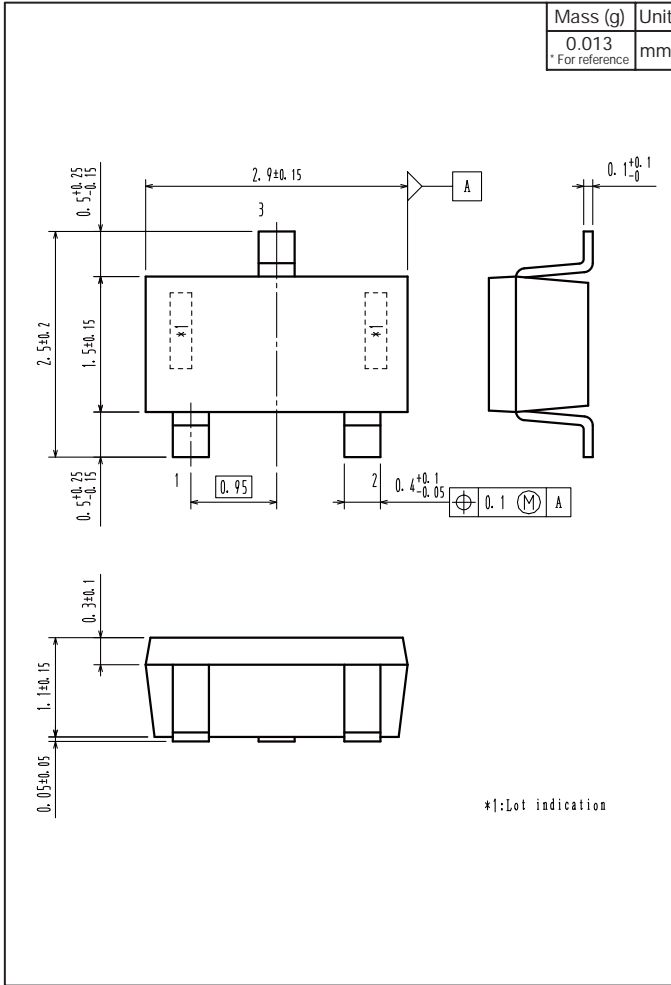
2-2. Device placement direction



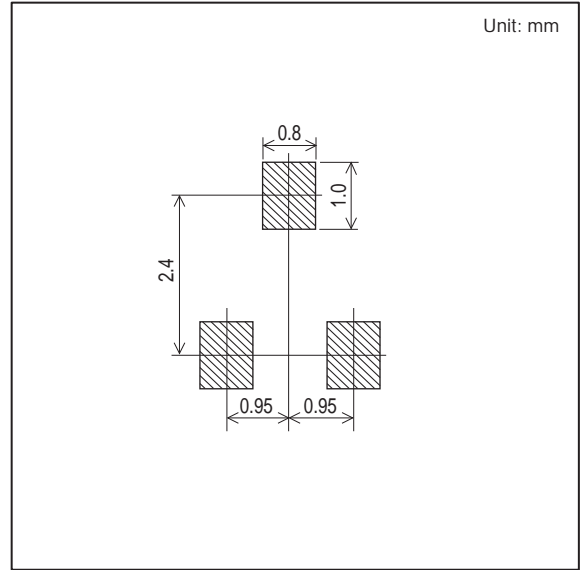
Those with one electrode terminal on the feed hole side.....TB

Outline Drawing

SVC230-TB-E



Land Pattern Example



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