Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

Ordering number : ENA0605A

SVC710

Varactor Diode
Single Varactor Diode for VCO
15V, 20nA, C_R=4.8, r_s=1.6Ω, MCPH3

ON Semiconductor®

http://onsemi.com

Features

- High capacitance ratio
- Low voltage drive
- Small-sized package : MCPH

Specifications

Absolute Maximum Ratings at Ta=25°C

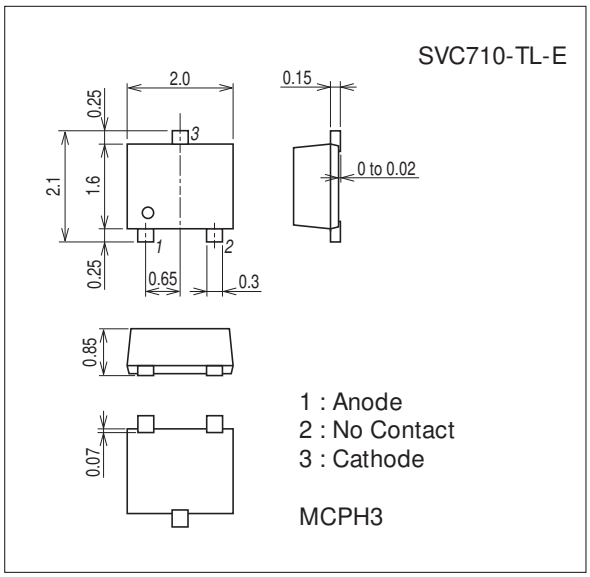
Parameter	Symbol	Conditions	Ratings	Unit
Reverse Voltage	V_R		15	V
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		−55 to +150	°C

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)

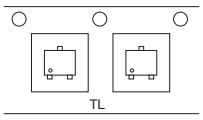
7019A-001



Product & Package Information

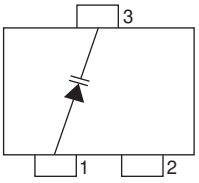
- Package : MCPH3
- JEITA, JEDEC : SC-70, SOT-323
- Minimum Packing Quantity : 3,000 pcs./reel

Packing Type : TL



Marking

Electrical Connection

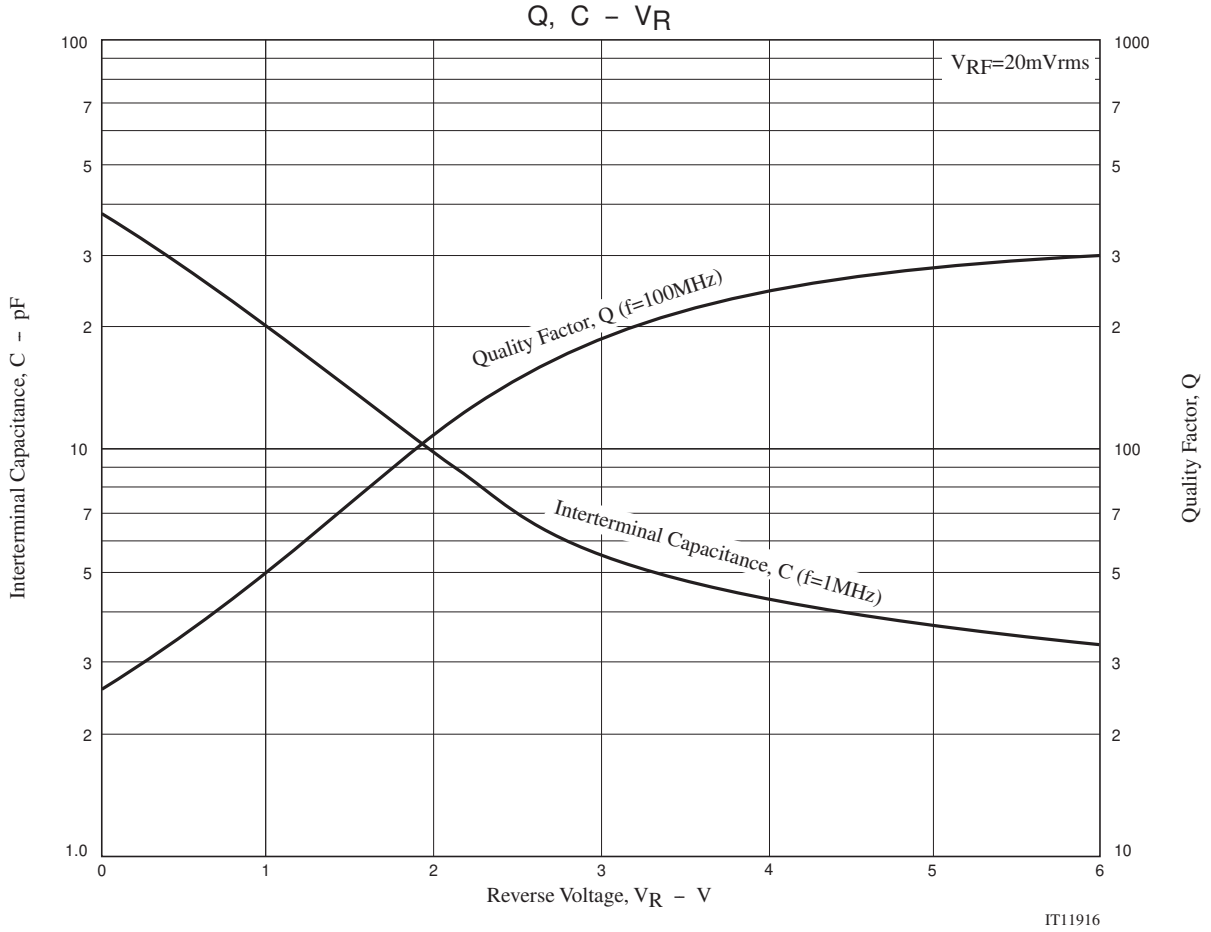


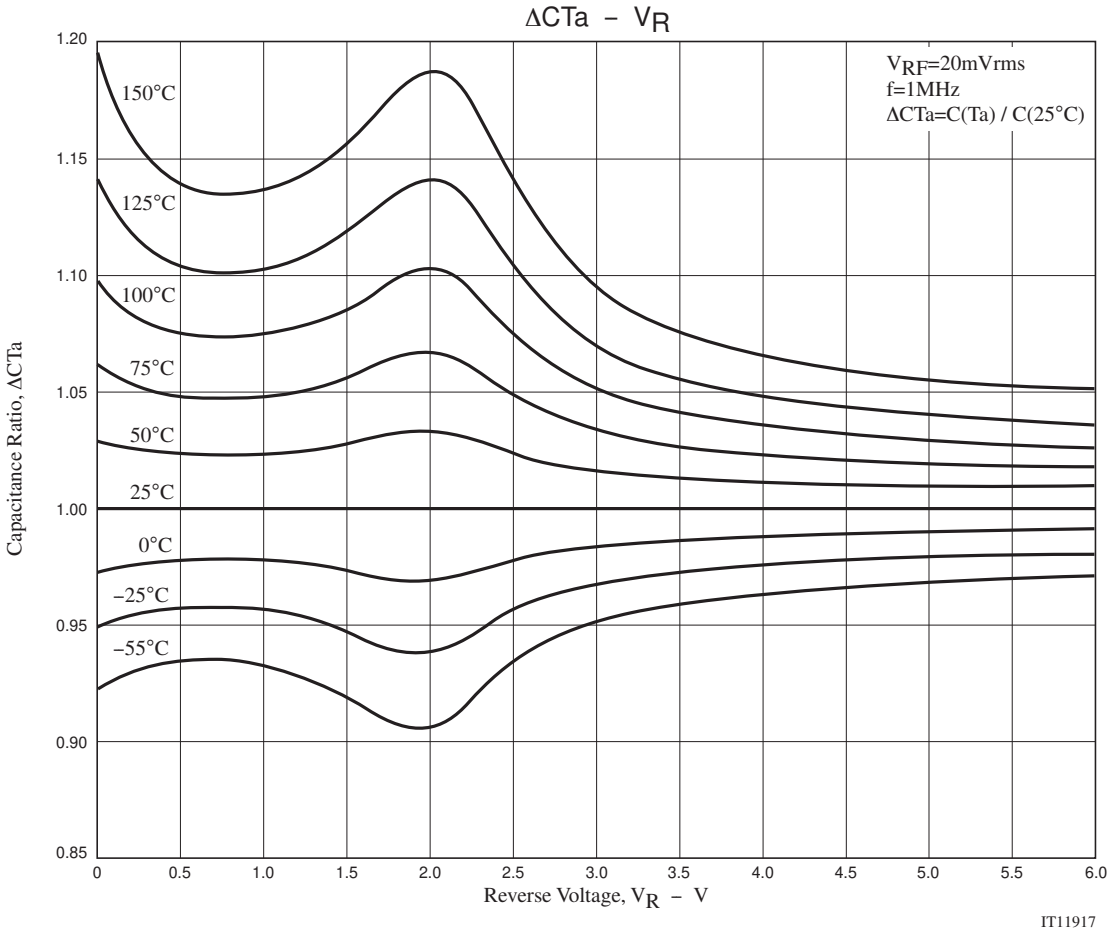
Electrical Characteristics at Ta=25°C

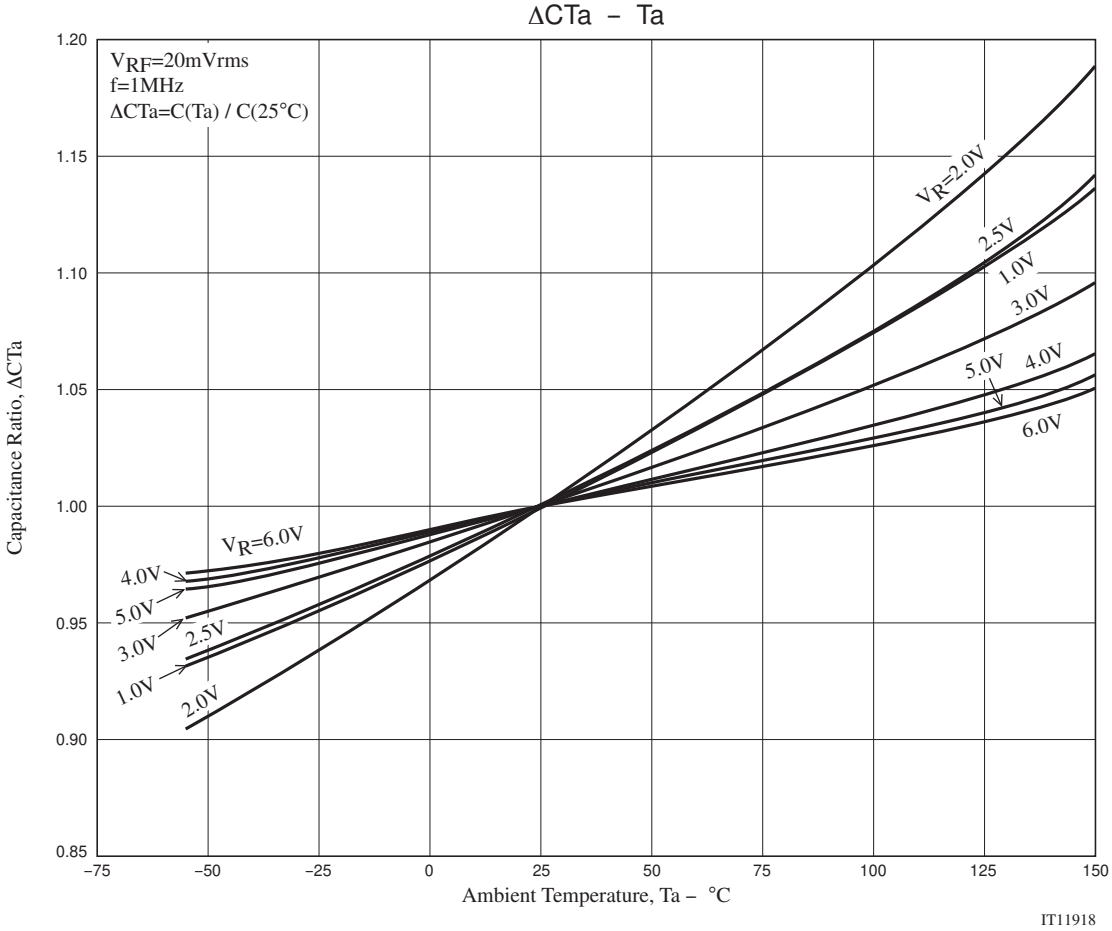
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Breakdown Voltage	$V_{(BR)R}$	I_R=10μA	15			V
Reverse Current	I_R	V_R=15V			20	nA
Interterminal Capacitance*	$C_{1.0V}$	V_R=1.0V, f=1MHz	18.5		21.5	pF
	$C_{4.0V}$	V_R=4.0V, f=1MHz	3.5		4.8	pF
Series Resistance	r_s	V_R=1.0V, f=100MHz		1.6		Ω
Capacitance Ratio	C_R	$C_{1.0V}$ / $C_{4.0V}$		4.8		

Ordering Information

Device	Package	Shipping	memo
SVC710-TL-E	MCPH3	3,000pcs./reel	Pb Free




ΔCTa – VR
VRF=20mVrms
f=1MHz
ΔCTa=C(Ta) / C(25°C)
150°C
125°C
100°C
75°C
50°C
25°C
0°C
–25°C
–55°C
Capacitance Ratio, ΔCTa
Reverse Voltage, VR – V
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
IT11917


ΔCTa – Ta
VRF=20mVrms
f=1MHz
ΔCTa=C(Ta) / C(25°C)
VR=2.0V
2.5V
1.0V
3.0V
5.0V
4.0V
6.0V
VR=6.0V
4.0V
5.0V
3.0V
2.5V
1.0V
2.0V
Capacitance Ratio, ΔCTa
Ambient Temperature, Ta – °C
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
–75
–50
–25
0
25
50
75
100
125
150
IT11918

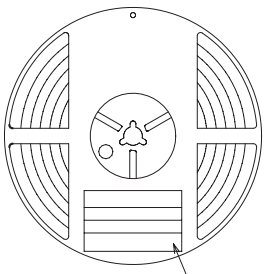
Taping Specification

SVC710-TL-E

1. Packing Format

Package Name	Carrier Tape Type	Maximun 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

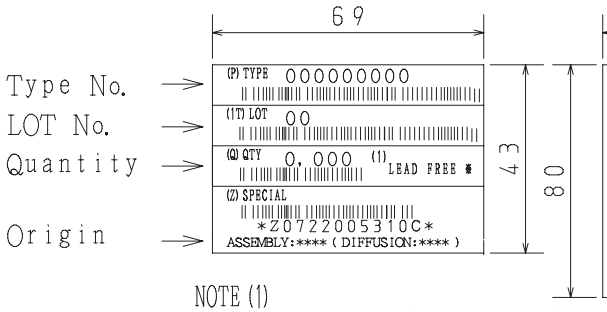
Packing method



Reel label

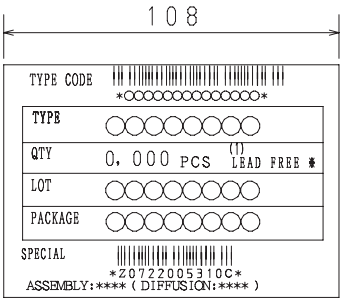
Reel label, Inner box label

(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.

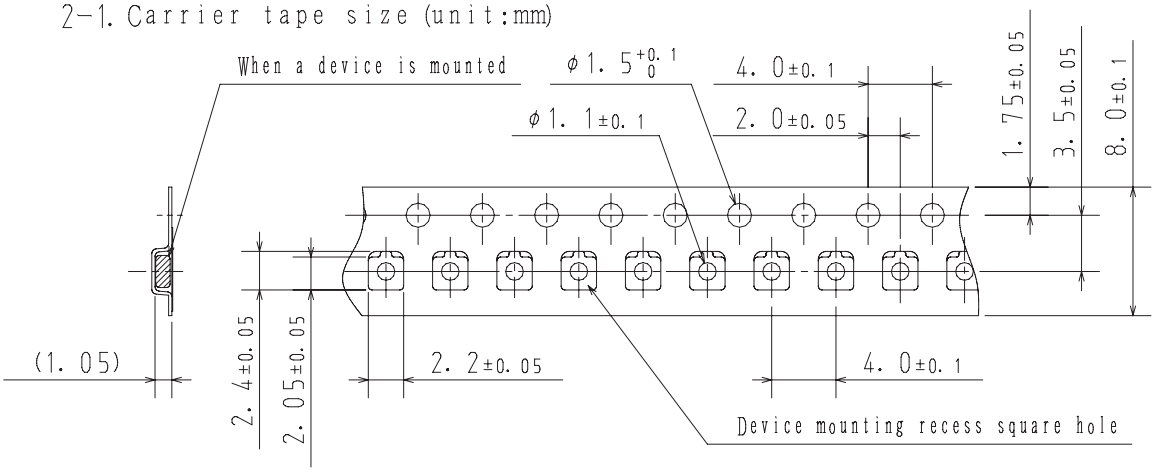


NOTE (1)
The LEAD FREE ※ description shows that the surface treatment of the terminal is lead free.

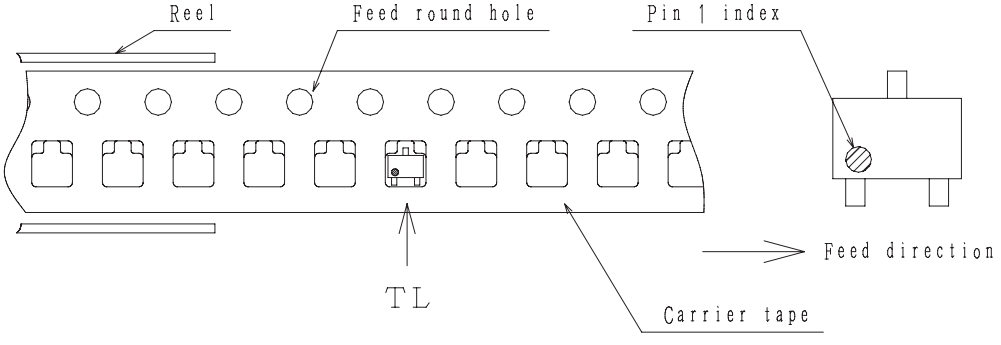
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



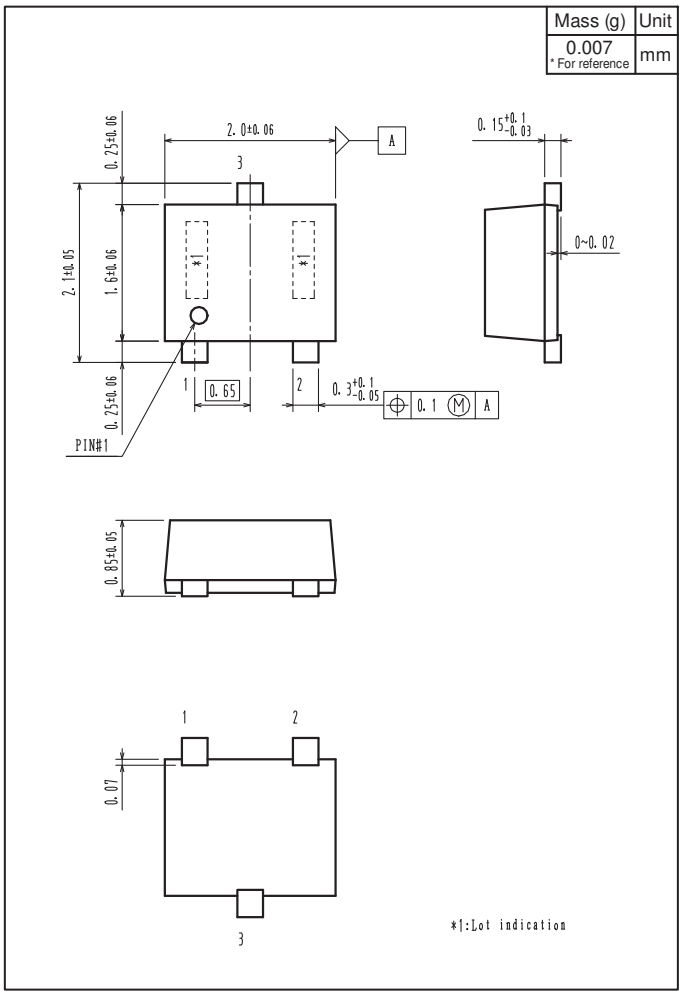
2-2. Device placement direction



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

Outline Drawing

SVC710-TL-E



Land Pattern Example