



ITTI Company Limited

26/F., Levertech Centre, 69-71 King Yip Street, Kwun Tong, Kowloon, Hong Kong

Tel: (852) 2723-0628 Fax: (852) 2739-0018

APPROVAL SHEET

DATE: Dec 11, 2008

CUSTOMER : VIA Technologies, Inc.

PRODUCT NAME : Surface Mount Tuning Fork

SPECIFICATION VERSION : 0

ITTI PART NO.

CUSTOMER PART NO.

1. 1300072-32.768KHz

99G08-03204S

32.768KHz, 7.9 x 3.7 x 2.4mm, SMD

20 / -40°C to +85°C

RoHS Compliant
Directive 2002/95/EC



PREPARED BY : _____

CONFIRMED BY : _____

CUSTOMER APPROVAL :

CHECKED BY : _____

APPROVED BY : _____





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SPECIFICATION

CUSTOMER : VIA Technologies, Inc.

PACKAGE : CS2 (7.9 x 3.7 x 2.4) mm

ITTI PART NO. : 1300072-32.768KHz

CUSTOMER PART NO. : 99G08-03204S

ELECTRICAL CHARACTERISTICS :

Parameter	Symbol	Condition	Specification	Unit
1. Nominal Frequency	Fo	At 25°C	32.768	KHz
2. Frequency Tolerance	$\Delta F/Fo$	At 25°C	± 20	ppm
3. Tolerance Stability Over Temp. Range	Tc		$(-3.5 \pm 0.8) \times 10^{-8}$	ppm/°C ²
4. Operating Temp. Range	Topr		-40 to +85	°C
5. Storage Temp. Range	Tstg		-55 to +125	°C
6. Load Capacitance	CL		12.5	ρF
7. Equivalent Series Resistance	R1		50 max.	kΩ
8. Drive Level	DL		1.0 max.	μW
9. Aging	Fa	At 25°C, Per Year	± 5.0 max.	ppm

Date of specification : Aug 8, 2008

VIA Technologies, Inc.



Web : www.itti-co.com

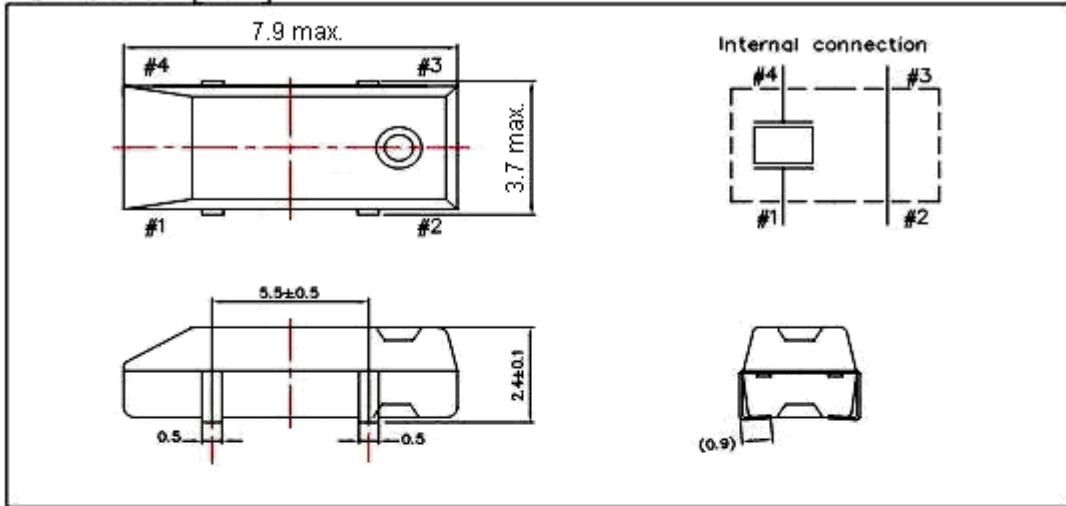


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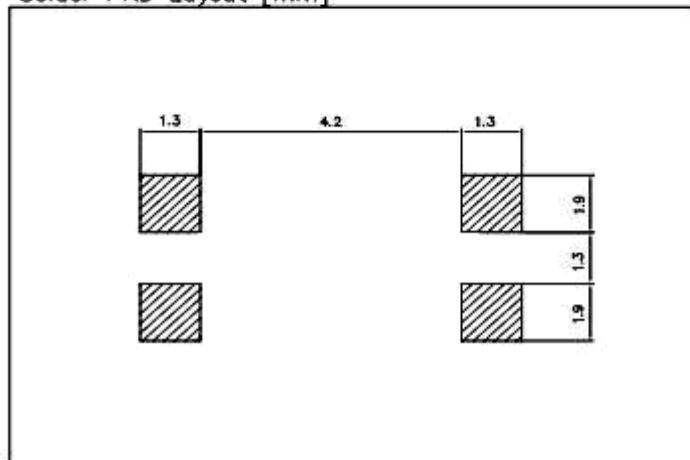
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IT-CS2-006 Dimension

Dimension [mm]



Solder PAD Layout [mm]



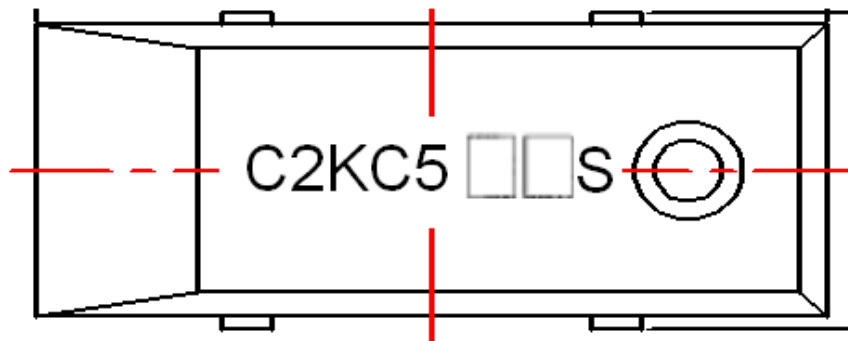


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IT-CS2-007

Marking



Example for the marking

Marking: C2KC5□□S (8 Digits)

<u>C2K</u>	<u>C5</u>	<u>□</u>	<u>□</u>	S
*1	*2	*3	*4	

*1 Frequency

*2 Specification

*3 Mfg. Year

Last digit of year

*4 Mfg. Month

Jan. ~Dec. : A~M
(excluding I)





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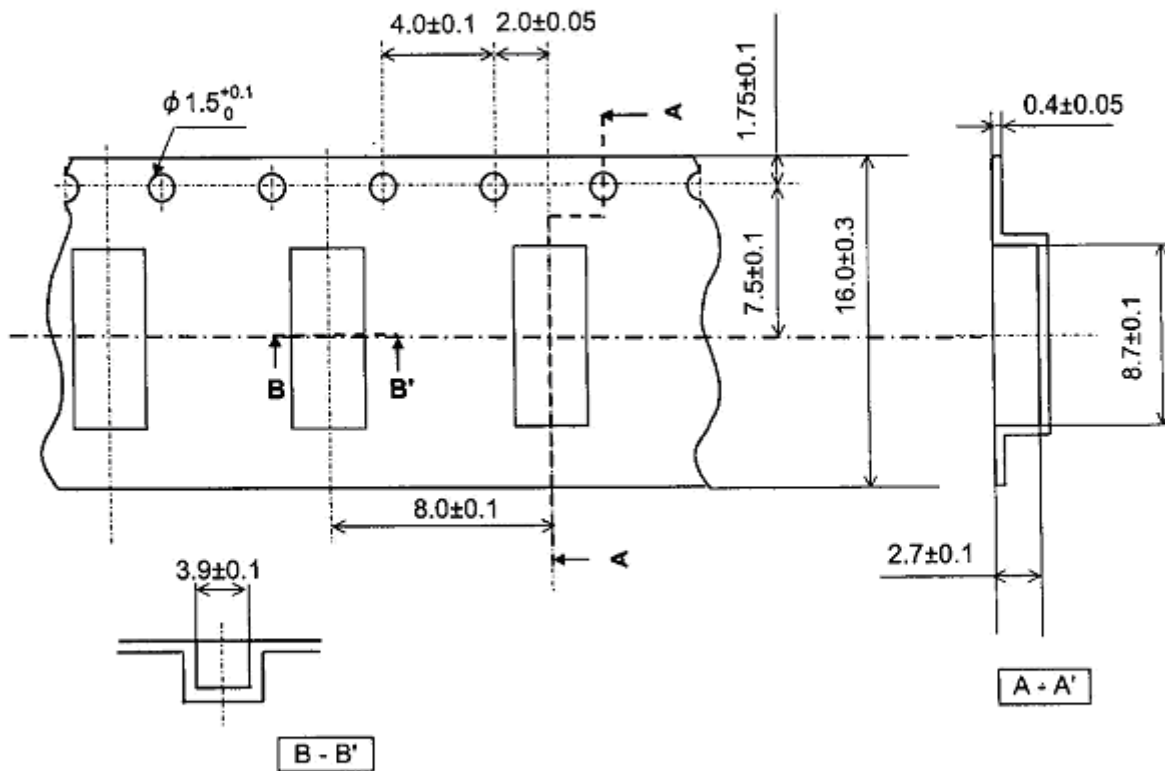
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IT-CS2-006 Packaging

Carrier tape

Tolerance ± 0.2



Unit=mm



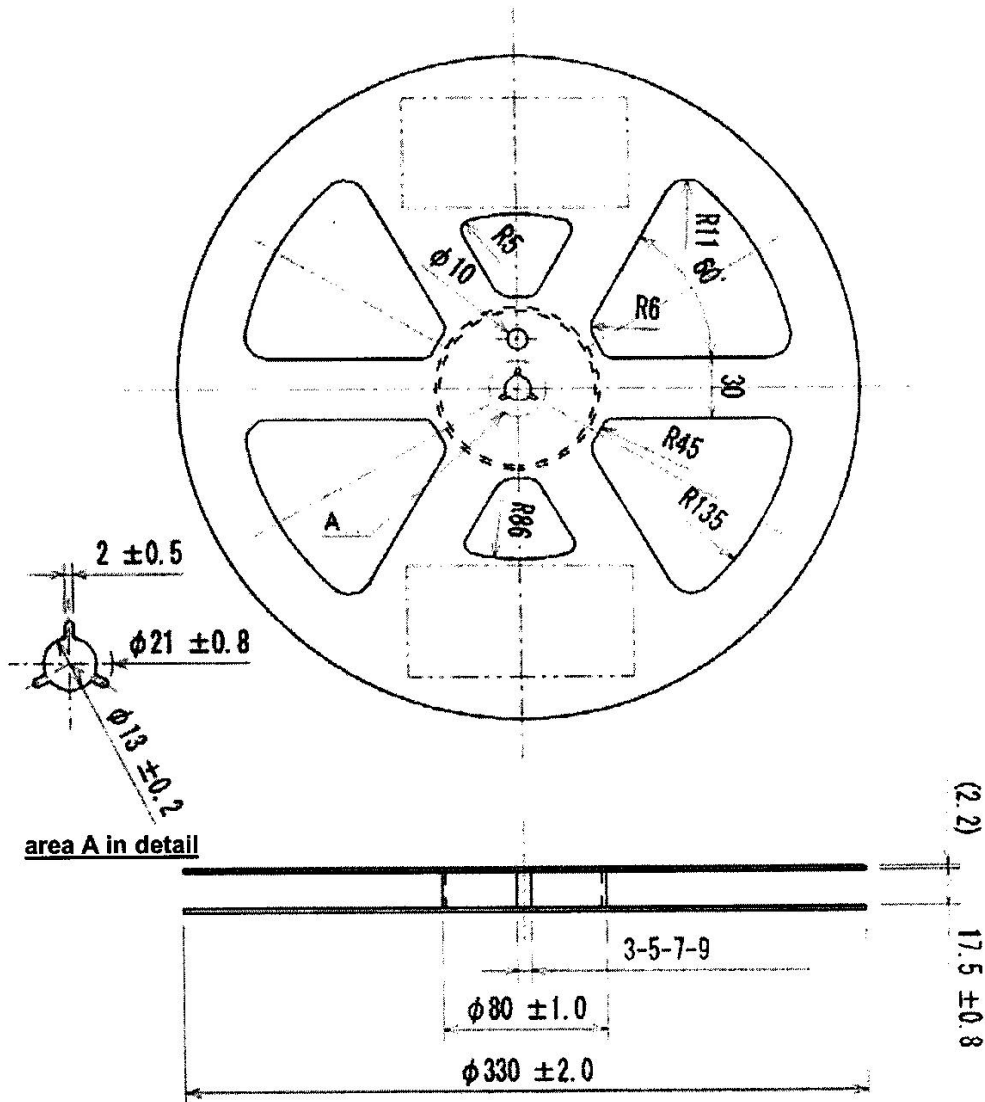


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Taping reel

Quantity per reel : 3,000pcs./ for a reel



: Labeling area

Unit : mm





IT-CS2-005

Guarantee Reliability Conditions

No.	Item	Specification	Condition
1	High temperature storage	$\Delta f/f = \pm 10 \times 10^{-6}$	After storage under 85°C for 500 hrs, measure at room temperature. *1
2	Low temperature storage	$\Delta f/f = \pm 10 \times 10^{-6}$	After storage under -40°C for 500 hrs, measure at room temperature. *1
3	High temperature and high humidity storage	$\Delta f/f = \pm 10 \times 10^{-6}$	After storage under 60 ± 2°C, 90 to 95% RH for 500 hrs, measure at room temperature. *1
4	Thermal shock resistance	$\Delta f/f = \pm 10 \times 10^{-6}$	Measured at room temperature after 20 cycles. -25°C ⇔ +80°C for 30 minutes. *1
5	Mechanical shock resistance	$\Delta f/f = \pm 5 \times 10^{-6}$	Measure after free drop of the crystal unit three times from the height of 75cm onto a wooden board *2
6	Vibration resistance	$\Delta f/f = \pm 5 \times 10^{-6}$	Amplitude 1.5mm and 10 ~ 60Hz with cycle time 2 ~ 3 minutes in 3 directions (X,Y, and Z axis)each for 2 hrs. *2
7	IR Reflow	$\Delta f/f = \pm 5 \times 10^{-6}$	Measure after 1 time reflow under reflow profile *1

Note:

1. The above tests no.1 to 7 must be conducted in dependently (not sense tests)
2. *1:Measure after 24 hours soak at room temperature
3. *2:Measure after 2 hours soak at room temperature





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Reflow Condition

