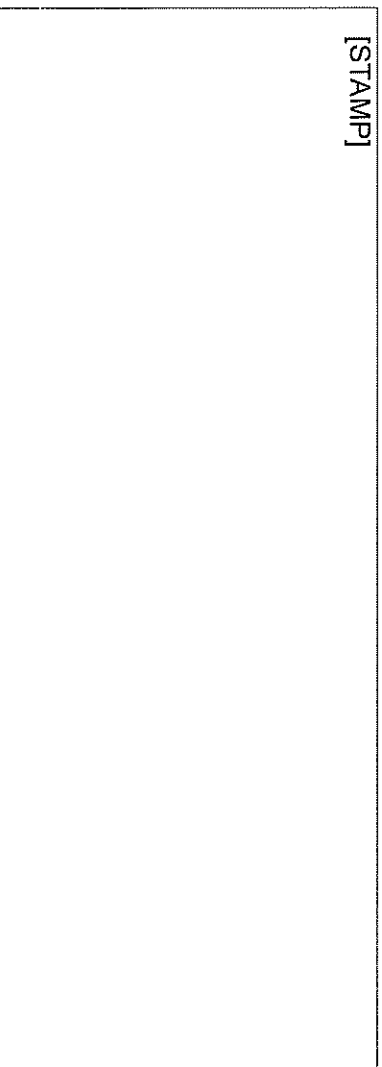


Customer specification Number	-
Product	Quartz Crystal
Model	CX49GFNB
Frequency	per KB101-09511-211 3/8
KKC Part Number	per KB101-09511-211 3/8

【Pb-Free, RoHS compliant】

【MSL 1】

[STAMP]



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 FAX 075-604-3501

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Design KYOCERA KINSEKI Yamagata Co. Crystal Product Division Development Design Section	Issued by M.Adachi <i>M. Adachi</i>	Approved by T.Ueta <i>T. Ueta</i>
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Recycled paper is being used for the conservation of nature.

3	4.194304	CX49GFNB04194H0PESZZ	120	0.0048~0.5	4.1AKSS
4	4.332	CX49GFNB04332H0PESZZ	120	0.0048~0.5	4.3CKSS
5	4.433619	CX49GFNB04433H0PESZZ	120	0.0048~0.5	4.4BKSS
6	4.9152	CX49GFNB04915H0PESZZ	100	0.004~0.5	4.9BKSS
7	6	CX49GFNB06000H0PESZZ	90	0.0036~0.5	6.0AKSS
8	7.2	CX49GFNB07200H0PESZZ	90	0.0036~0.5	7.2AKSS
9	8	CX49GFNB08000H0PESZZ	90	0.0036~0.5	8.0AKSS
10	10	CX49GFNB10000H0PESZZ	90	0.0036~0.5	10AKSS
11	12	CX49GFNB12000H0PESZZ	70	0.0028~0.5	12AKSS
12	14.31818	CX49GFNB14318H0PESZZ	50	0.002~0.5	14AKSS
13	16	CX49GFNB16000H0PESZZ	50	0.002~0.3	16ZKSS
14	16.9344	CX49GFNB16934H0PESZZ	50	0.002~0.3	16M ◻
15	18.432	CX49GFNB18432H0PESZZ	50	0.002~0.3	18WKSS
16	20	CX49GFNB20000H0PESZZ	50	0.002~0.3	KSS20L
17	24	CX49GFNB24000H0PESZZ	50	0.002~0.3	24XKSS
18	24.576	CX49GFNB24576H0PESZZ	50	0.002~0.3	KSS24G
19	27	CX49GFNB27000H0PESZZ	50	0.002~0.3	27UKSS

Date: 2009/08/12

1. APPLICATION

This specification sheet is applied to quartz crystal "CX49GFNB".

2. KKC PART NUMBER

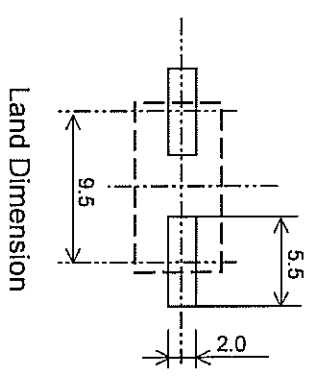
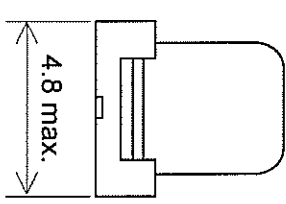
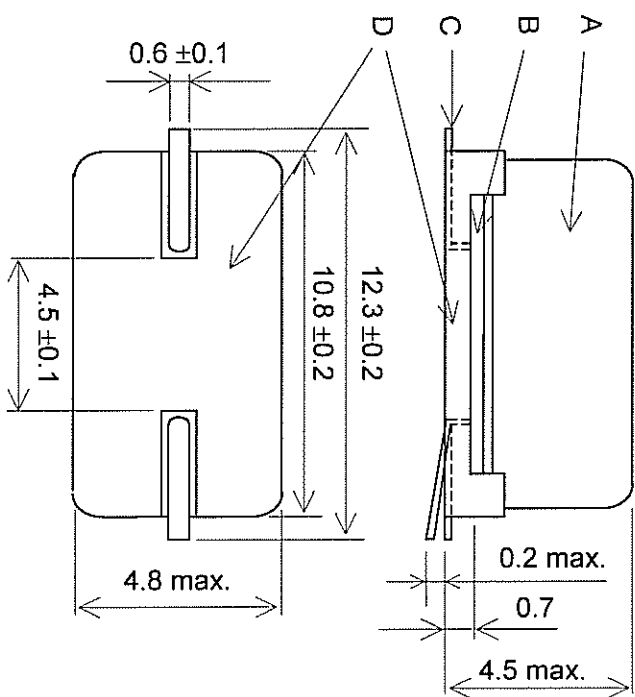
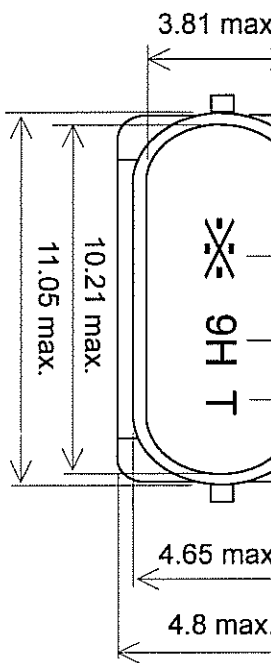
per KB101-09511-211 3/8

3. RATINGS

Items	SYMB.	Rating	Unit	Remarks
Operating Temperature	Topr	-10~+70	°C	
Storage Temperature Range	Tstg	-40~+85	°C	

4. ELECTRICAL CHARACTERISTICS

Items	Electrical Specification			Test Condition	Remarks
	SYMB.	Min.	Typ.		
Mode of Vibration			Fundamental		
Nominal Frequency	F0		※		MHz
Nominal Temperature Load	T _{NOM}		25		°C
Capacitance	CL		12.0		pF
Frequency Tolerance	df/F	-50.0		+50.0	PPM
Frequency Temperature Characteristics	df/F	-50.0		+50.0	
Frequency Ageing Rate		-5.0		+5.0	
				+25 ±5°C Network Analyzer E5100A 200 μA	
				-10~+70°C	
				1 year	+25 ±5°C



MARKING

(1) Nominal Frequency Code + Identification
(per KB101-09511-211 3/8)

(2) Lot number
Year: Last 1 digit
Month: Refer to the following table

Month	1	2	3	4	5	6	7	8	9	10	11	12
Mark	A	B	C	D	E	F	G	H	J	K	L	M

Example) Aug. 2009 : 9H

(3) Manufacturing Location

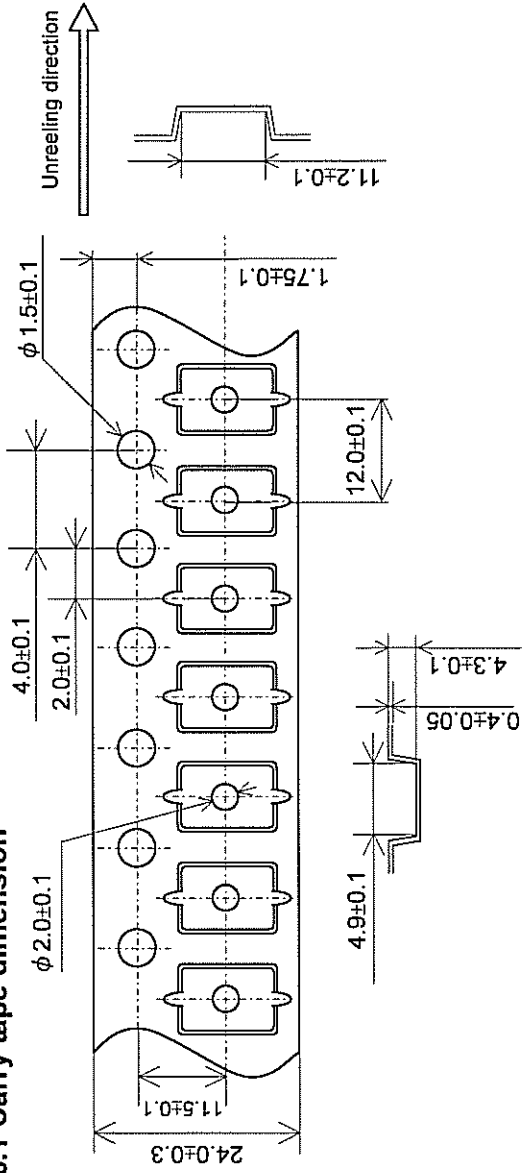
T: KYOCERA KINSEKI (Thailand) Co., Ltd.

** The font of marking is reference. **

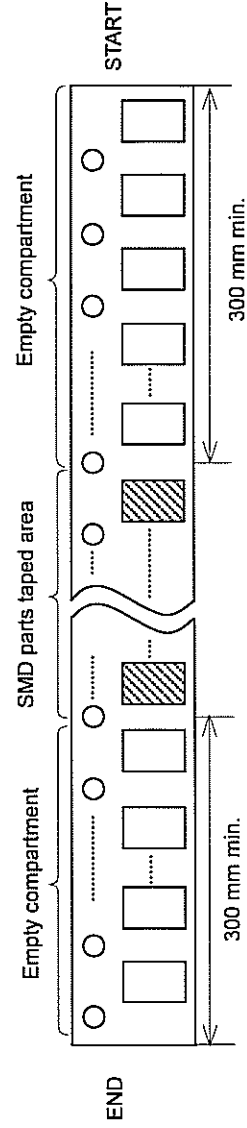
(Unit:mm)

6. TAPING & REEL

6.1 Carry tape dimension

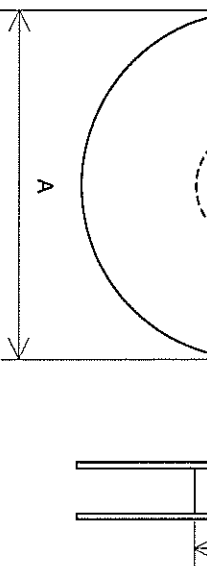


6.2 Leader and trailer tape



6.3 Taping specification

1. The seal tape shall not cover the sprocket holes. And not protrude from the carrier tape.
2. Tensile strength of the tape : $10N\{1.02kgf\}$ or more.
3. The R of the corner without designation is 0.2RMAX.
4. Disalignment between centers of the cavity and sprocket hole shall be 0.05mm or less.
5. Peeling force of the seal tape (Peeling speed 300mm/min.): 20 to 70 gf.



In the case of ϕ 330 Reel (1,000 pcs. Max.)

Symbol	A	B	C	D
Dimension	ϕ 330	ϕ 80	ϕ 13	ϕ 21
Symbol	E	W		
Dimension	2	25.5		

(Unit : mm)

7. Environmental requirements

7.1 Leakage

Test condition

No bubbles shall appear when units are placed in hot water (70-75 °C) having depth of 100-150 mm for 5 minutes.

7.2 Shock

Test condition

After following test, frequency shall not change more than ± 5 PPM. Randomly dropped from height of 20cm onto hardwood surface in 3 times.

7.3 Vibration

Test condition

After following test, frequency shall not change more than ± 5 PPM.

Frequency : 10-55 Hz

Amplitude : 0.7-0.9 mm

Cycle time : 1-2 min (10-55-10 Hz)

Duration: 3 mutually perpendicular planes in each 30 min.

7.4 Resistance to Soldering

Test condition

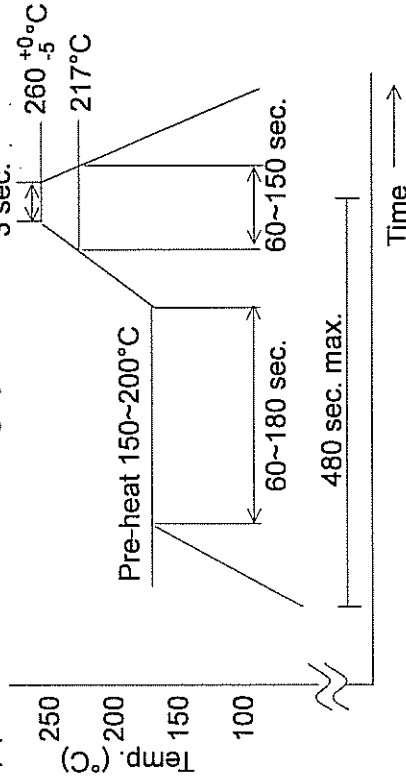
After following test, frequency shall not change more than ± 10 PPM. Solder by the reflow profile condition on the next page.

8. Soldering conditions

1) Material of solder

Kind: lead free solder past: (Melting point: $220 \pm 5^\circ\text{C}$)

2) Temp. profile of reflow soldering system



9. Quality Assurance

Location

Kyocera Kinseki (Thailand) Co., Ltd.: Kyocera Kinseki (Thailand) Co., Ltd.

Quality Assurance Division

Quality guarantee

When the failure by the responsibility of our company occurs clearly after delivery within 1 year, a substitute article etc. is appropriated gratuitously and this is guaranteed. However, when passing 1 year after delivery, there is a case where I am allowed to consider as onerous repair after both consultation.

10. Cautions for use

(1) Automatic mounting machine use

Please use after affirmation that select the mounting machine model with a shock small if possible in the case of use of an automatic mounting machine, and it does not have breakage. There is a risk of a quartz crystal unit's breakage occurring and not functioning normally by too much shock etc.

(2) Conformity of a circuit

In case of use of an oscillation circuit, please insert in a quartz crystal unit in series resistance 5 times as many as the standard value of equivalent in-series resistance, and confirm oscillating. Please remove resistance which inserted after the notes above-mentioned examination in the quartz crystal unit in series, and use it.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- ⊖ [View CX49GFNB20000H0PESZZ on WIN SOURCE](#)
- ⊖ [AVX Corp/Kyocera Corp Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
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- ✓ Excess Inventory Management