

SPECIFICATION FOR CRYSTAL UNIT

N a t i o n a l S e m i c o n d u c t o r

◎ Parts Number :

◎ Model Name : TAS-4025A

◎ Frequency : 13000.000kHz

◎ Application : B.T.

◎ Package : Tape and Reel

◎ Other : No attached test data
It is possible to endure for Lead-free
Reflow-soldering. And Lead non-use
concerned with product materials.

CUSTOMER SIGNATURE

DATE

- (1) Tokyo Denpa Co., Ltd. requires one copy returned with signature and title of authorized individual that signifies acceptance of the attached specifications.
- (2) Any orders received and accepted by Tokyo Denpa Co., Ltd. prior to return of signed copy of specification will be produced per these specifications.
- (3) Any changes to these specifications must be agreed upon in writing prior to acceptance by Tokyo Denpa Co., Ltd. for any orders.

WRITER	DESIGNER	Q. A	DATE	Jun. 03, 2004	SPECIFICATION No.	PAGE
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SPECIFICATION FOR CRYSTAL UNIT

1. General Specification

- | | | |
|------|---|-------------------------|
| 1. 1 | Holder | TAS-4025A |
| 1. 2 | Frequency | 13000.000kHz |
| 1. 3 | Mode of Oscillation | Fundamental |
| 1. 4 | Operating Temp. Range | -40°C ~ +85°C |
| 1. 5 | Storage Temp. Range | -45°C ~ +90°C |
| 1. 6 | Load Capacitance | 16.0pF |
| | (The tolerance on the load capacitance shall be within $\pm 1\%$ from the nominal value or shall not exceed $\pm 10\%$ from frequency tolerance at the reference temperature ($25 \pm 3^\circ\text{C}$), which ever value is smaller, however, in case of problem, standard test fixture shall be exchanged.) | |
| 1. 7 | Drive Level | $50 \pm 10 \mu\text{W}$ |
| 1. 8 | Outer Appearance, Dimension & Marking | As per attached. |

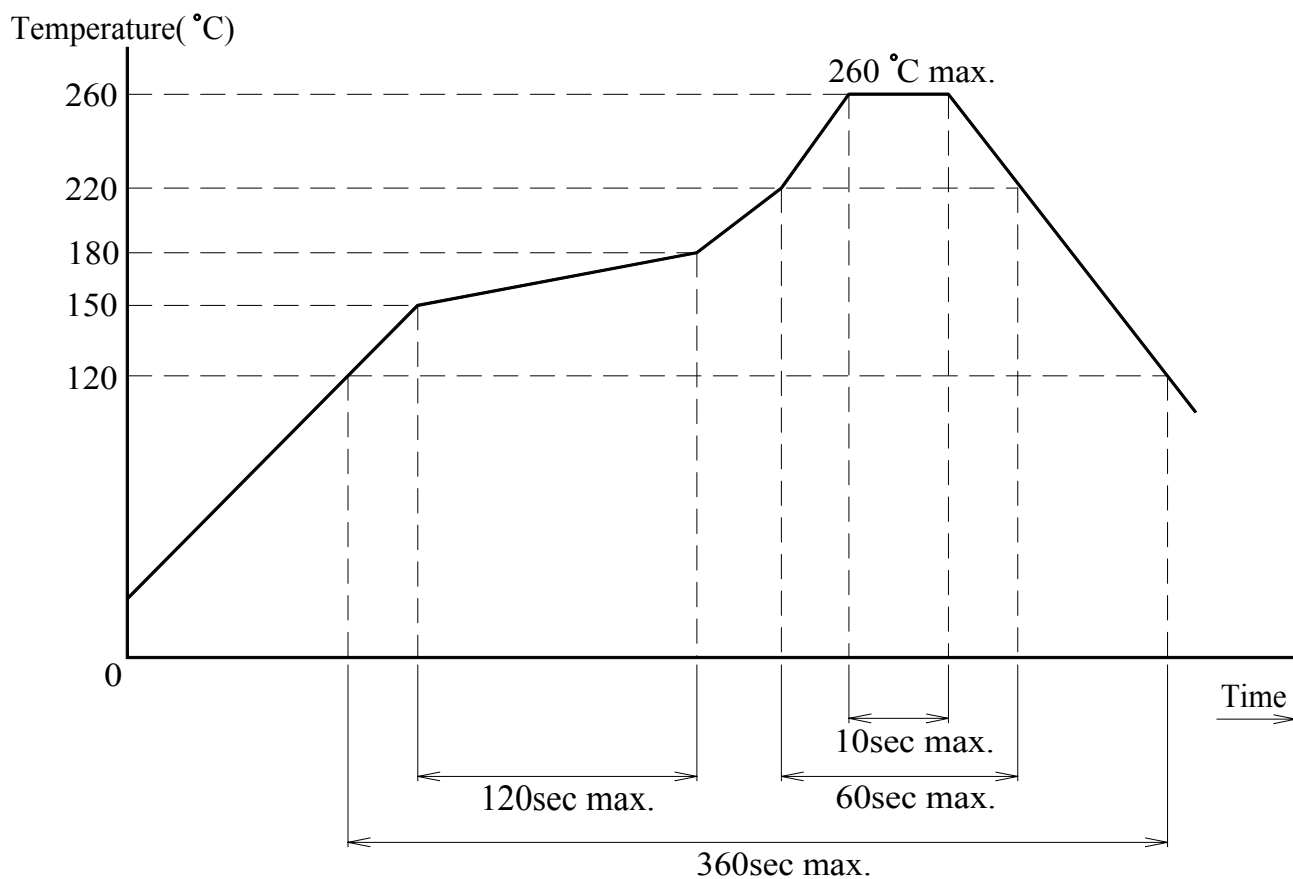
2. Electrical Specification

- | | | |
|------|-------------------------------|---|
| 2. 1 | Frequency Tolerance | $\pm 10 \times 10^{-6}$ ($25 \pm 3^\circ\text{C}$) |
| 2. 2 | Equivalent Series Resistance | 80 Ω Max. |
| 2. 3 | Temp.VS Freq. Characteristics | $\pm 15 \times 10^{-6}$
(referred to the value at 25°C) |
| 2. 4 | Shunt Capacitance (C0) | 5.0pF Max. |
| 2. 5 | Insulation Resistance | 500M Ω Min. (DC100V $\pm 15\text{V}$) |
| 2. 6 | Aging | $\pm 1.0 \times 10^{-6}$ Max. / 1 year |

【NOTE】

- ①Please keep the temperature of Reflow-soldering as specified.
(Don't add temperature of more than 260°C)
- ②Please do not repair crystals after assembled on circuit board.
- ③In case of investigation or analysis is needed, please take care
when removing the crystals from circuit board. (please do not over heat)
- ④Keep solder off from Au-Sn Alloy (Lid) portion.

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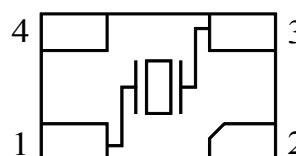
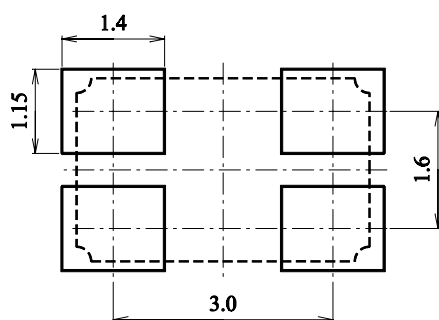
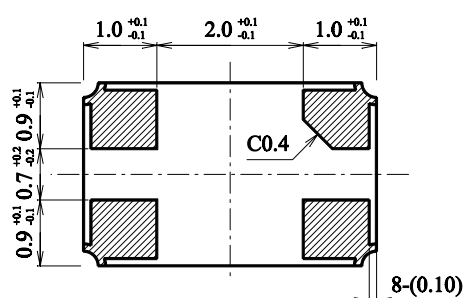
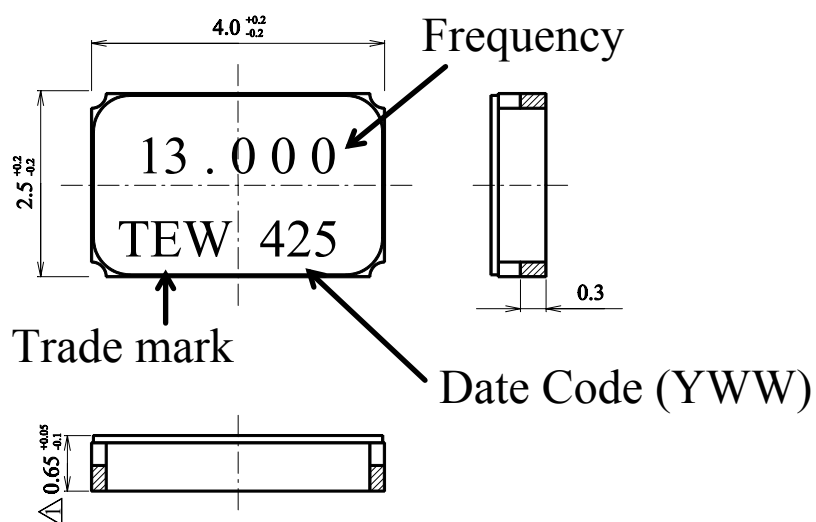


1) Reflow soldering : three times max.

DATE	Mar.14.2001		

NAME OF UNIT			TITLE		
			Reflow Temperature Profile (12-F0260)		
NOTE		UNIT	PROJECTION	SCALE	D.W.G. NO.
Lead free solder					
APPROVE	DESIGN	DRAWING	TOKYO DENPA CO.,LTD.		120-12671 4/8

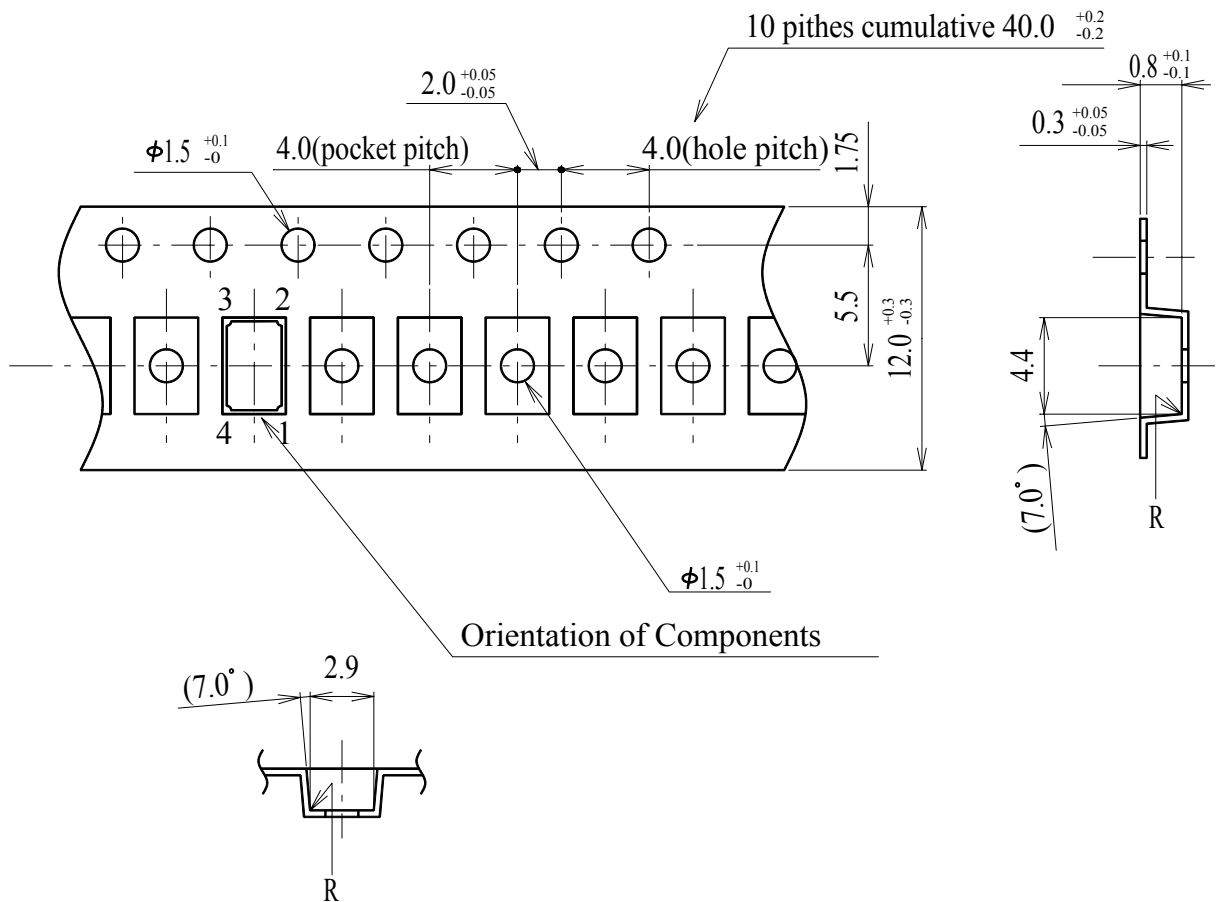
Marking on the can is prepared with rubber stamp or marked with laser etching.



DATE	Dec.20.2000		
△	Mar.12.2001		
△	Oct.29.2001		

NAME OF UNIT △TAS-4025A (TAS-7)				TITLE Outline Drawing (12-F0246B)		
NOTE			UNIT	PROJECTION	SCALE	D.W.G.NO.
			mm	3rd angle	10/1	
APPROVE	DESIGN	DRAWING	TOKYO DENPA CO.,LTD.			120-12671 5/8

DRAWING OUT DIRECTION →



- 1) Corner of "R" not mentioned is 0.3max.
- 2) The tolerance not mentioned is +/-0.1.

△ MATERIAL : PS

NAME OF UNIT

TAPE

DATE	Jan.22.2001		
△	Oct.03.2001		
△	Jan.08.2002		

TITLE

(12-F0248C)

NOTE

△ TAS-4025A (TAS-7) 12mm (Standard)

UNIT

mm

PROJECTION

3rd angle

SCALE

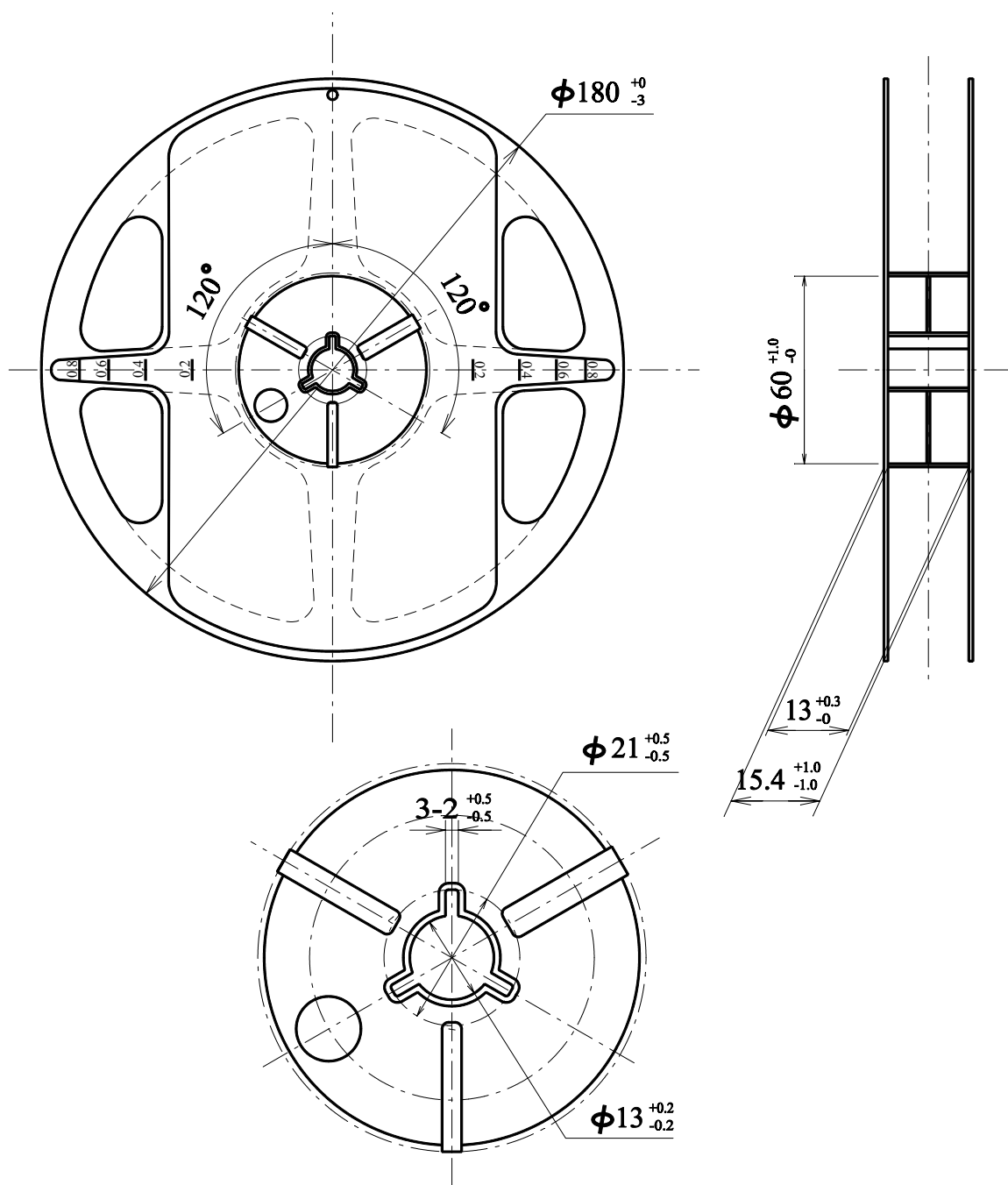
3/1

D.W.G. NO.

APPROVE	DESIGN	DRAWING

TOKYO DENPA CO.,LTD.

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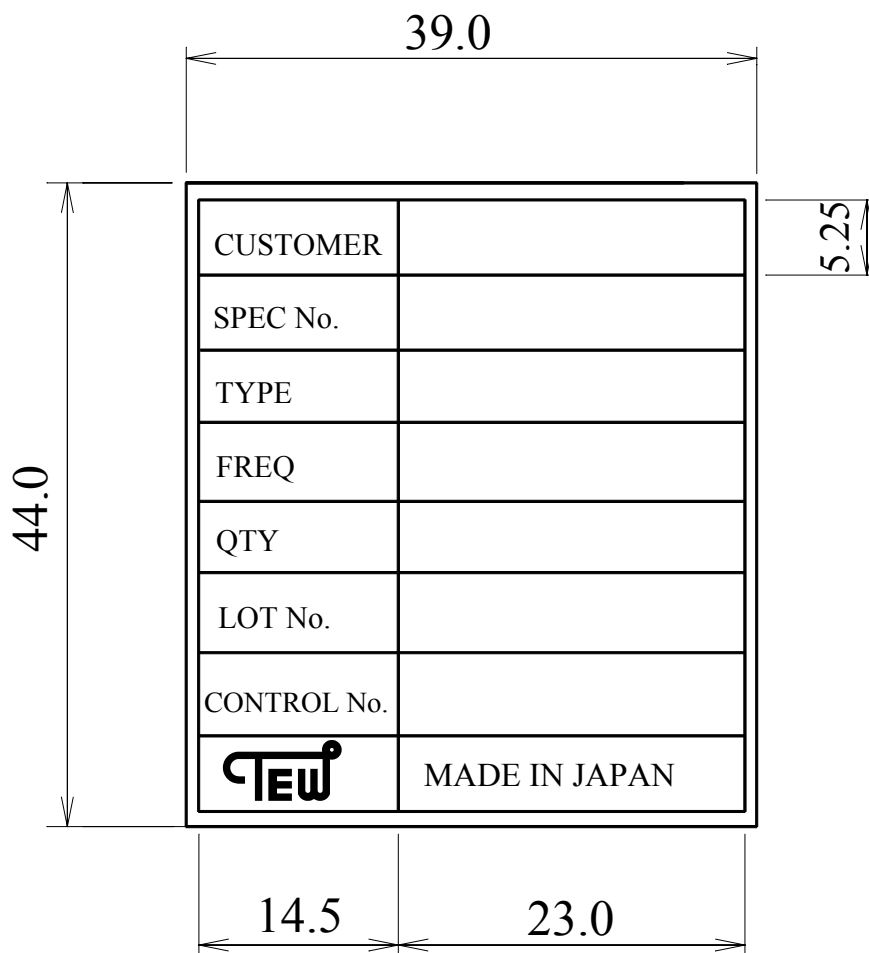


Width drawing of Hab(1/1)

MARK	DATE		
	Mar.13.2001		

NAME OF UNIT	REEL	TITLE	OUTLINE DRAWING (12-F0257)
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NOTE	$\phi 180$ 12mm PS	UNIT	PROJECTION	SCALE	D.W.G. NO.
		mm	3rd Angle	1/2	
APPROVE	DESIGN	DRAWING			120-12671 7/8



				DATE	2002.12.10		
NAME OF UNIT				TITLE			
φ180 REEL MARKING				MARKING LABEL AND DIMENSION (12-F0397)			
NOTE			UNIT	PROJECTION	SCALE	D.W.G. NO.	
			mm	3rd angle	1/2		
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