



**HOSONIC ELECTRONIC CO., LTD.**



**SMD CRYSTAL UNIT SPECIFICATIONS**

<b>Customer</b>	
<b>Customer P/N</b>	
<b>Product</b>	2520 Seam Sealing Crystal
<b>Nominal Frequency</b>	26.000000MHz
<b>HOSONIC P/N</b>	E2SB26E00000BE
<b>Version</b>	10C0
<b>Issue Date</b>	2018/5/29

<b>HOSONIC</b>		
<b>Drawn</b>	<b>Checked</b>	<b>Approved</b>
<b>LUCY</b>	<b>ZOE</b>	<b>JOHN</b>

**Approved By Customer :** \_\_\_\_\_



**HOSONIC ELECTRONIC CO., LTD.**



Revised Record

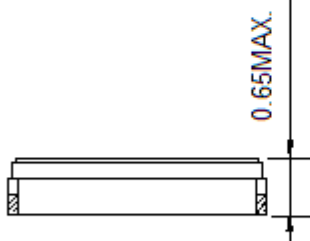
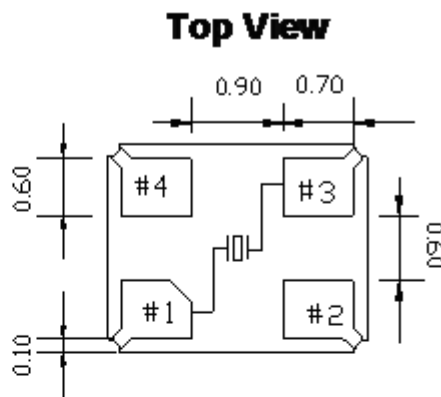
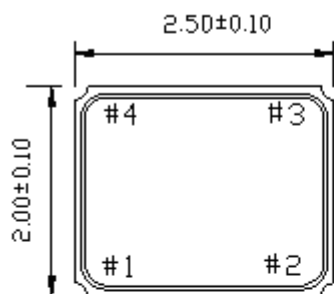
Rev.	Rev. Date	Item	Content	Remark
1.0	2018-05-29		Initial released	

**I ELECTRICAL PARAMETERS**

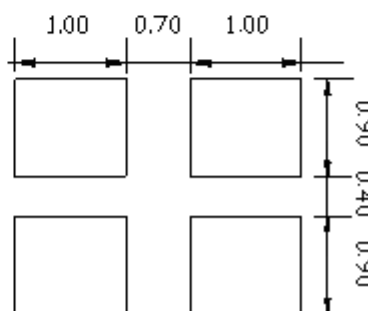
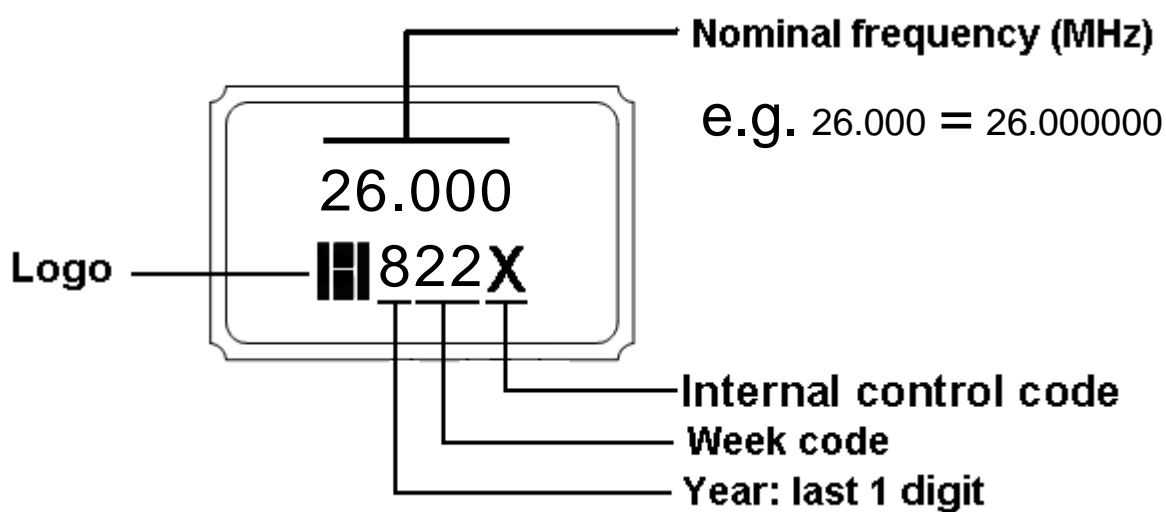
Electrical characteristics measured by S&amp;A250B or equivalent.

No.	Item	Symb.	Electrical Specification				Remark	
			Min.	Typ.	Max.	Units		
1	Nominal Frequency	F0	26.000000			MHz		
2	Mode of Vibration		Fundamental					
3	Frequency Tolerance	$\Delta F/F0$	-10	-	10	ppm	At 25°C±3°C	
4	Operating Temperature Range	T <sub>OPR</sub>	-20	-	70	°C		
5	Frequency Stability (over operating temperature)	TC	-10	-	10	ppm	Ref. to 25°C	
6	Storage Temperature	T <sub>STG</sub>	-55	-	125	°C		
7	Load capacitance	CL	-	10	-	pF		
8	Equivalent Series Resistance	ESR	-	-	50	Ω		
9	Drive Level	DL	-	50	100	μW		
10	Insulation Resistance	IR	500	-	-	MΩ	At 100V <sub>DC</sub>	
11	Shunt Capacitance	C0	-	-	3	pF		
12	Aging Per Year	Fa	-2	-	2	ppm	First Year	
13	Package type	E2SB						

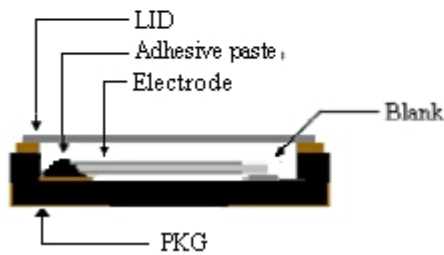
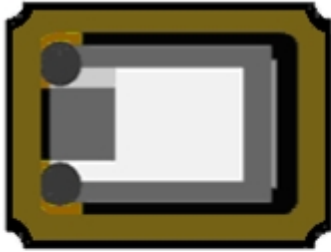
**NOTE: Storage Temperature is only for the product itself, the temperature for the packing material is -4~40°C.**

**I OUTLINE DIMENSIONS (UNIT: mm)**

**Recommended Solder Pattern**

Pin	Connection
#1,#3	X'tal
#2,#4	GND


**I MARKING:**


**NOTE:** The internal control code maybe blank.

**I PRODUCT LAYOUT**


NO.	PART	MATERIAL	REMARK
1	LID	KOVAR(Fe+Co+Ni alloy)	
2	PKG	Al <sub>2</sub> O <sub>3</sub>	Base
3	Blank	SiO <sub>2</sub>	Quartz
4	Adhesive paste	Ag/Silicon	Support
5	Electrode	Noble metal	

**I REFLOW PROFILES**

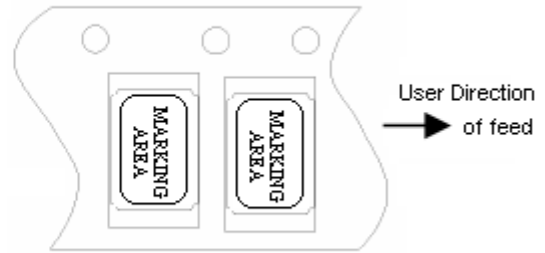
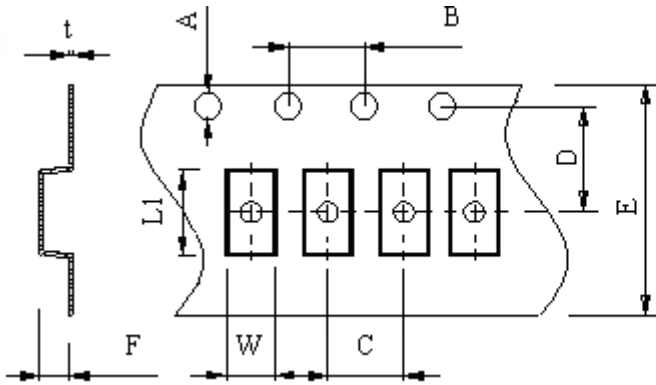
Profiles Feature	Pb-Free Assembly
Average Ramp-up Rate (Ts max to Tp)	3°C/second max.
Preheat	
■ Temperature Min (Ts min)	125°C
■ Temperature Max (Ts max)	200°C
■ Time (ts min to ts max)	60~180 seconds
Time maintained above	
■ Temperature (TL)	217°C
■ Time (tL)	60~150 seconds
Peak/Classification Temperature (Tp)	260°C
Time within 5°C of actual Peak Temperature (tp)	20~40 seconds
Ramp-down rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.
<b>Suggest reflow times</b>	<b>3 Times max</b>



**Remark: To reference JEDEC J-STD-020C**

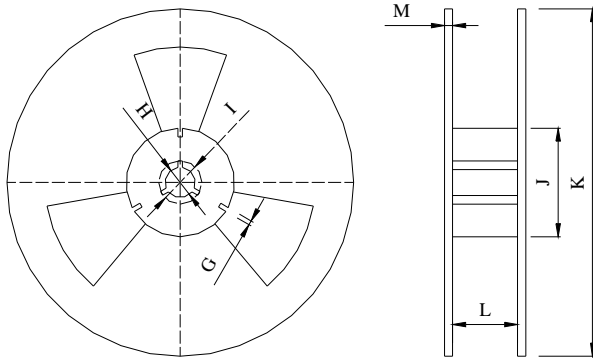
**I PACKAGE(reference to EIA-481)**

*Tape Dimensions(unit : mm)*



A	B	C	D	E	F	L1	W	t
1.50	4.0	4.0	3.5	8.0	1.0	2.75	2.25	0.2

*Reel Dimensions(unit: mm)*



G	H	I	J	K	L	M
2.5	13.5	21.6	60.0	178	9.5	1.6

\*3000pcs/Reel

Carton Dimension (unit : mm)



1 reel = 1 Inner box



20 Inner boxes = 1 Carton

60kpcs = 1 Carton



**I RELIABILITY SPECIFICATIONS**

No.	Test Item	Test Conditions	Reference
1	High Temperature Storage	Temperature: 125°C ± 5°C Time: 1000 ± 12 Hours	MIL-STD-883E-1016
2	Temperature Cycle	Temperature 1: -55°C ± 5°C Temperature 2: 125°C ± 5°C Temperature change between T1 and T2 at soonest Run 1000 cycles, maintain T1 and T2 5minutes each in one cycle	JESD22 Method JA-104
3	Solder Heat Resistance	Pre-heat: 125°C 60~120 Seconds Solder Temperature: 260°C ± 5°C Time: 30 Seconds	MIL-STD-202F 210 E
4	Drop Test	3 Times Free Fall from 75cm height table to 3cm thickness hard wood board	MIL-STD-202F-203B
5	High Temperature, High Humidity Storage	Temperature: 85°C ± 5°C Relative Humidity: 80%~85% Time: 250Hours ± 24 Hours	MIL-STD-202F-103B
6	Steam Aging	Temperature: 97°C ± 5°C Time: 24 Hours 260°C solder pot to check solderability	MIL-STD-883 C-1008.2B
7	Solderability	Dip in flux 5~10 seconds Temperature: 245°C ± 5°C Time: 10 Seconds	MIL-STD-202F-208H
8	Aging	Temperature: 85°C ± 5°C Time: 250 ± 12Hours	MIL-STD-202 F-108A
9	Thermal Shock	Temperature 1: -55°C ± 5°C Temperature 2: 125°C ± 5°C Temperature change between T1 and T2: 5 seconds 100 cycles, maintain T1 and T2 for 30 minutes each in one cycle	MIL-STD-883E-1011.9B
10	Vibration	Frequency Range: 10Hz~2000Hz Amplitude: 1.5mm or 20G 4Hours in each direction, total 12Hours	MIL-STD-202F-204D

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Crystals](#) category:*

*Click to view products by [Hosonic](#) manufacturer:*

Other Similar products are found below :

[CX3225GB25000M0PPSZ1](#) [718-13.2-1](#) [MC405 32.0000K-R3:PURE SN](#) [7A-40.000MAAE-T](#) [FL2000085](#) [99-BU](#) [9B-15.360MBBK-B](#) [9C-7.680MBBK-T](#) [H10S-12.000-18-EXT-TR](#) [ABC2-6.000MHZ-D4Z-T](#) [ABLS-20.000MHZ-D2-T](#) [ABS071-32.768KHZ-6-T](#) [R38-32.768-12.5-5PPM-NPB](#) [BTD1062E05A-513](#) [21U15A-21.4MHZ](#) [RTX-781DF1-S-20.950](#) [LFXTAL066198Cutt](#) [9C-14.31818MBBK-T](#) [A-11.000MHZ-27](#) [ABL-27.000MHZ-B4Y-T](#) [ABM11-132-24.000MHZ-T3](#) [ABM3B1-25.000MHZ-D2Y-T](#) [SPT2A-.032768B](#) [SPT2A.032768G](#) [SSPT7F-9PF20-R](#) [LFXTAL065253Cutt](#) [LFXTAL066431Cutt](#) [XT9S20ANA14M7456](#) [XT9SNLANA16M](#) [7A-24.576MBBK-T](#) [7B-30.000MBBK-T](#) [MMCC2R32.7680KHZ](#) [7A-14.31818MBBK-T](#) [6504-202-1501](#) [6526-202-1501](#) [ABLS-12.000MHZ-B2Y-T](#) [7A-10.000MBBK-T](#) [SG636PCE-20.000MC](#) [3404](#) [E1SAA18-25.000M TR](#) [CM315D32768EZFT](#) [C1E-24.000-7-2020-R](#) [C1E-19.200-12-1530-X-R](#) [C1E-16.000-12-1530-X-R](#) [ABM11-16.000MHZ-9-B1U-T](#) [FL5000014](#) [EUCA18-3.1872M](#) [FX0800015](#) [425F35E027M0000](#) [FP0800018](#)