HOSONIC ELECTRONIC CO., LTD.

CRYSTAL UNIT SPECIFICATIONS

Customer	ADS
Customer P/N	
Product	49SA CRYSTAL
Nominal Frequency	7.372800MHz
HOSONIC P/N	E49A7E00X0016E
Version	10C0
Issue Date	2017/2/23

HOSONIC		
Drawn	**Checked**	**Approved**
LUCY	**ZOE**	**JOHN**

Approved By Customer : _____

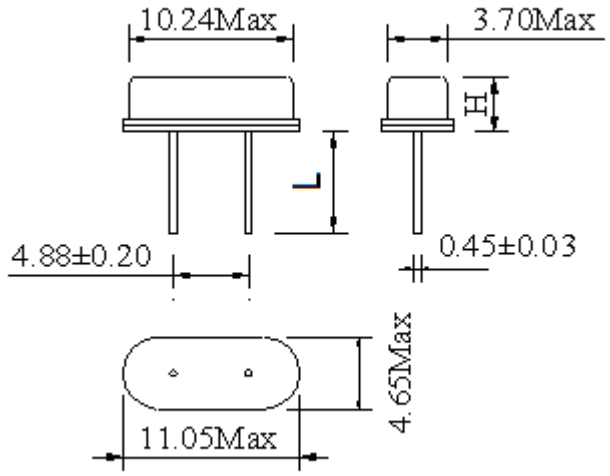
Revised Record				
Rev.	Rev. Date	Item	Content	Remark
1.0	2017-02-23		Initial released	

I ELECTRICAL PARAMETERS

No.	Item	Symb.	Electrical Specification				Remark
			Min.	Typ.	Max.	Units	
1	Nominal Frequency	F0		7.372800		MHz	
2	Mode of Vibration			Fundamental			
3	Frequency Tolerance	△F/F0	-30	-	30	ppm	at 25℃±3℃
4	Operating Temperature Range	TOPR	-20	-	70	℃	
5	Frequency Stability (over operating temperature)	TC	-30	-	30	ppm	Ref. to 25℃
6	Storage Temperature	TSTG	-55	-	125	℃	
7	Load capacitance	CL	-	16	-	pF	
8	Equivalent Series Resistance	ESR	-	-	90	Ω	
9	Drive Level	DL	-	100	500	μW	
10	Insulation Resistance	IR	500	-	-	MΩ	At 100V_{DC}
11	Shunt Capacitance	C0	-	-	7	pF	
12	Aging Per Year	Fa	-5	-	5	ppm	First Year
13	Package type	HC-49SA					

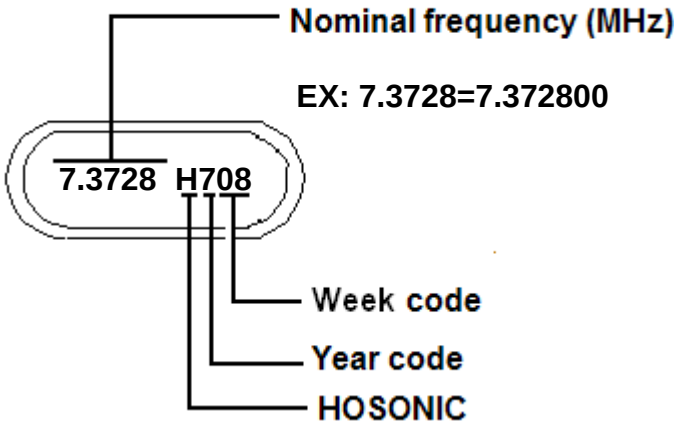
NOTE：Storage Temperature is only for the product itself,the temperature for the packing material is -4~40℃.

Outline Dimensions (unit: mm)

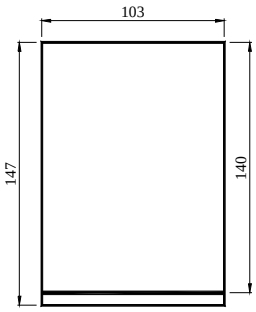


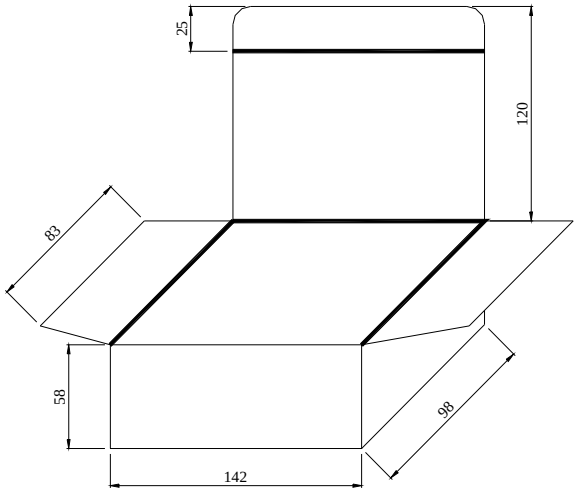
L= 6.0±0.5 H = 3.5MAX

MARKING



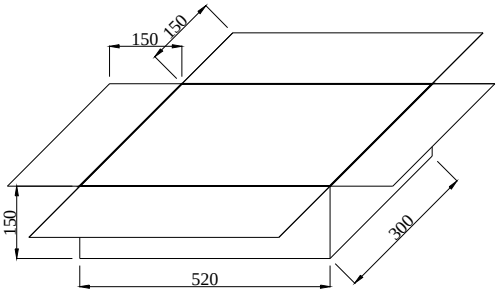
I PACKAGE (units : mm)

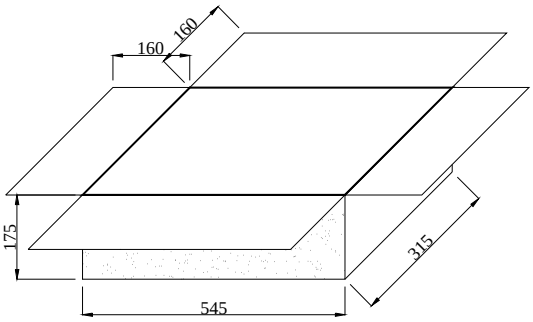




200 PCS = 1 BAG

5 BAGS = 1 INNER BOX





20 INNER BOX = 1 BOX

1 BOX = 1 OUTER BOX

* 20 K PCS = 1 OUTER BOX

I RELIABILITY SPECIFICATIONS

No.	Test Item	Test Conditions	Reference
1	High Temperature Storage	Temperature: 125℃±5℃ Time: 1000±12 Hours	MIL-STD-883E-1016
2	Temperature Cycle	Temperature 1: -55℃±5℃ Temperature 2: 125℃±5℃ 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℃ 60~120 Seconds Solder Temperature: 260℃±5℃ 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℃±5℃ Relative Humidity: 80%--85% Time: 250Hours±24 Hours	MIL-STD-202F-103B
6	Steam Aging	Temperature: 97℃±5℃ Time: 24 Hours 260℃ solder pot to check solderability	MIL-STD-883 C-1008.2B
7	Solderability	Dip in flux 5~10 seconds Temperature: 245℃±5℃ Time: 10 Seconds	MIL-STD-202F-208H
8	Aging	Temperature: 85℃±5℃ Time: 250±12Hours	MIL-STD-202 F-108A
9	Thermal Shock	Temperature 1: -55℃±5℃ Temperature 2: 125℃±5℃ 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