

深圳市维拓精电科技有限公司
WTL International Limited

APPROVAL SHEET

DESCRIPTION :	12.46 x 12.46 DIP Half Size Crystal Oscillator			
NOMINAL FREQ.:	24.0025MHz			
WTL P/N:	WTL8H51011SH			
VERSION:	1			
DATE:	2024.07.06			
Customer	Customer P/N			
Customer Signature	WTL			
	Approved by:	<i>Kavin Liu</i>		
	Checked by:	<i>Shu Ping</i>		
	Issued by:	<i>colin zhan</i>		
REVISION HISTORY				
Revised Page	Revision Content	Date	Ref. No.	Reviser

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Attachment(s):

- 1.Product Specification Sheet
- 2.Electrical Testing Report
- 3.Reliability Report
- 4.ICP Test Report

FEATURE

- Typical 12.46 x12.46x5 mm
- Tight symmetry (45 to 55%) available.
- Operation voltage:5V, 3.3V
- Tri-state enable/disable
- RoHS compliant / Pb free

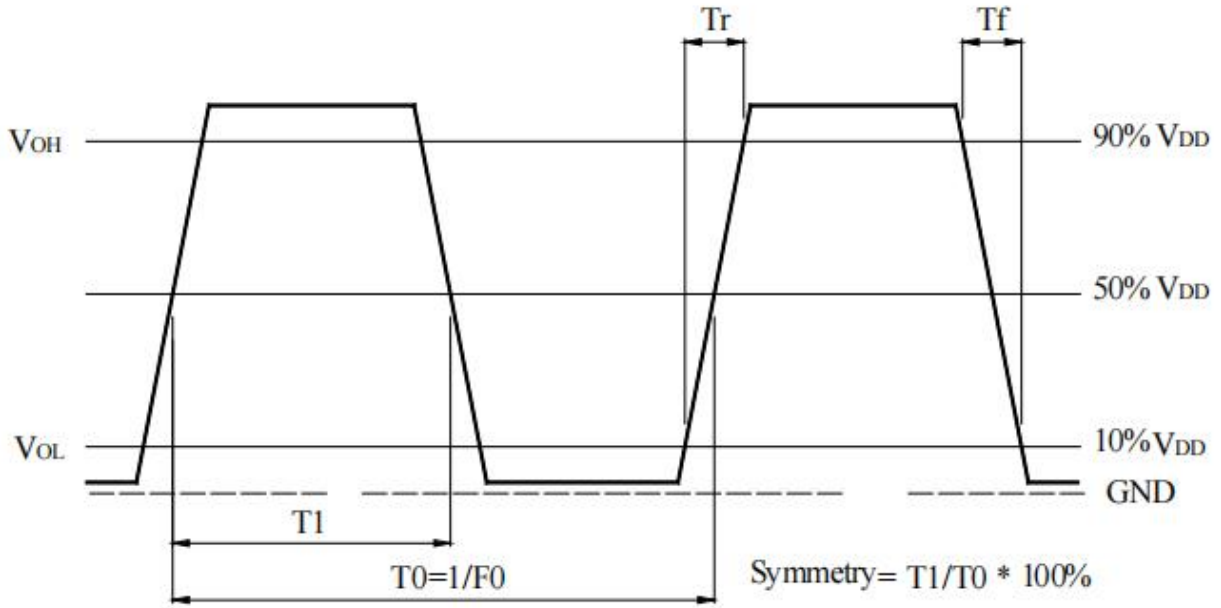


1、 ELECTRICAL SPECIFICATIONS

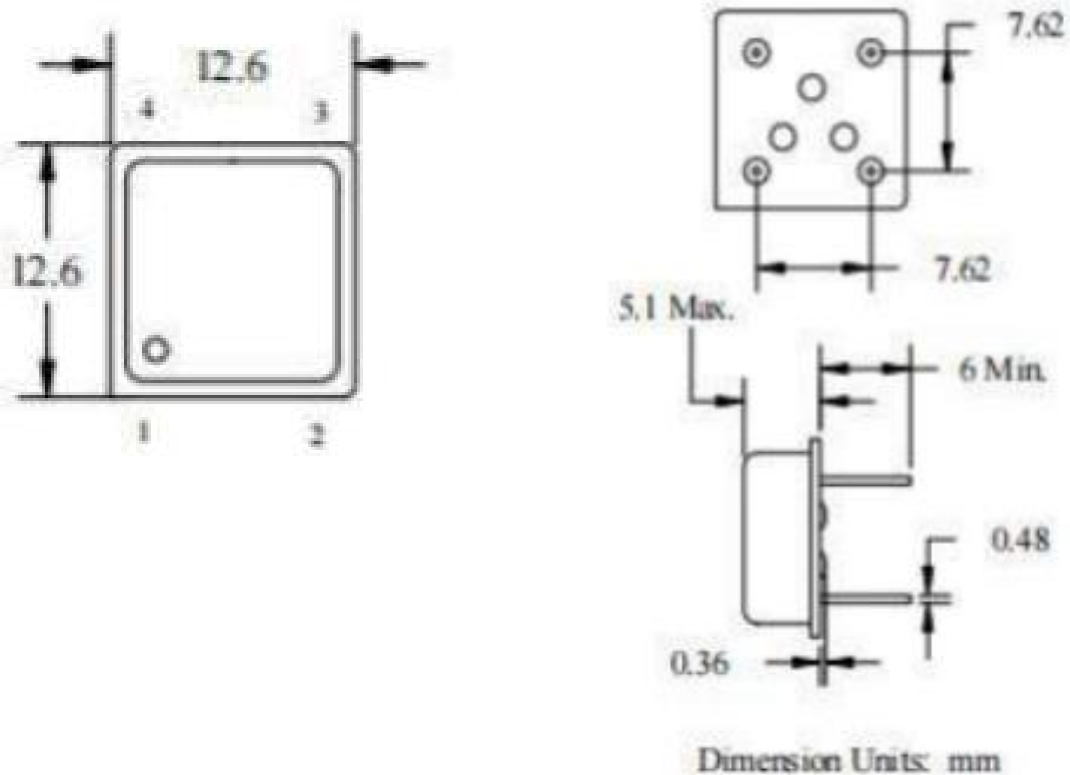
Parameter		Min.	Typ.	Max.	Units	Test Condition
1.1	Nominal Frequency	24.0025			MHz	Mode of Oscillation /AT Fundamental
	Frequency stability	-50		+50	ppm	Inclusive of operating temperature range supply voltage and load
	Aging	-5		+5	ppm	Frequency drift in first year
1.3	Operating Temperature Range	-40		+85	°C	The operating temperature range over which the frequency stability is measured
1.4	Storage Temperature Range	-55		+125	°C	
1.5	Supply voltage	4.5	5.0	5.5	V	
1.6	Current			16	mA	
1.7	Output waveform	CMOS				
1.8	Duty Cycle	40	50	60	%	
1.9	Start Time			5	nSec	
1.10	Transition Time :Rise/Fall Time			5	nSec	
1.11	Output Level CMOS	Out High(Logic"1")	4.5		V	
		Out Low(Logic"0")		0.5	V	
1.12	Output Load			50	pF	
1.13	Tri-State	Output Active	4.5		V	Pin 1 Tri-state
		Output in High-Impedance state			0.5	v

REMARK: SPECIFICATIONS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE. PLEASE CONFIRM WITH OUR SALES ENGINEER.

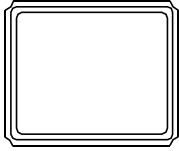
2、 OUTPUT WAVEFORM



3. DIMENSIONS(Unit: mm)



4. MARKING



Marking Instruction:

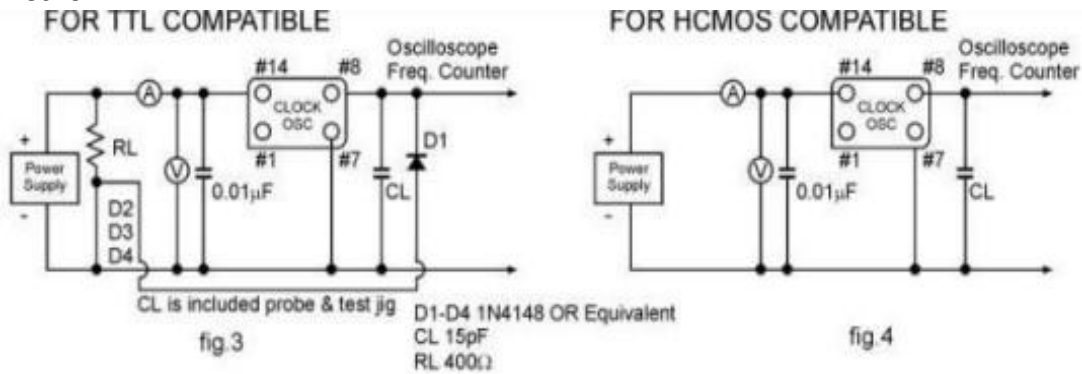
The date code was marked on the crystal body, which will be easily traced back in case of quality issue.

5. RELIABILITY SPECIFICATIONS

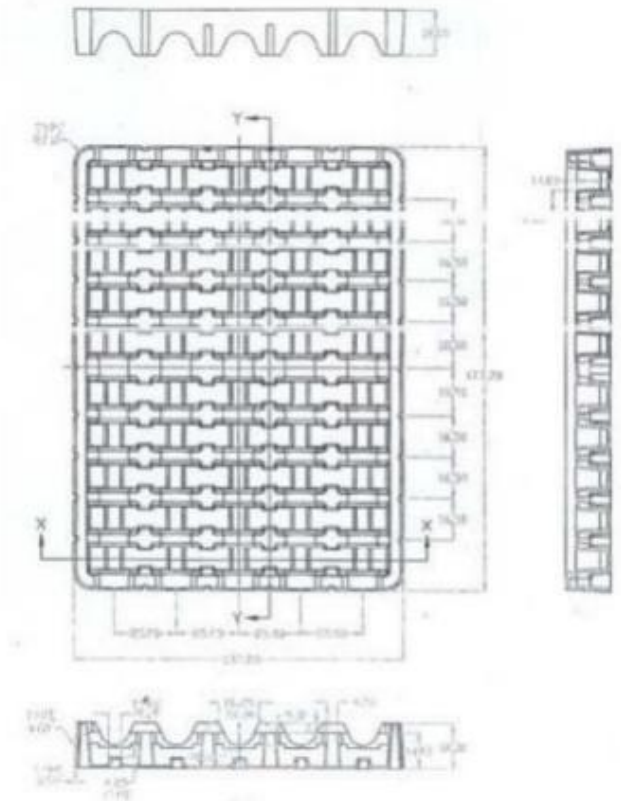
No.	Test Item	Test Conditions	Reference
1	High Temperature Storage	Temperature: 125°C ± 10°C Time: 1000 ± 24 Hours	MIL-STD-883E
2	Temperature Cycle	Temperature 1: -55°C ± 10°C Temperature 2: 125°C ± 10°C Temperature change between T1 and T2 at soonest Run 10 cycles, maintain T1 and T2 30minutes each in one cycle	MIL-STD-883E
3	Solder Heat Resistance	Pre-heat: 125°C 60~ 120 Seconds Solder Temperature: 260°C ± 10°C Time: 5 Seconds	MIL-STD-202F
4	Drop Test	3 Times Free Fall from 75cm height table to 3cm thickness hard wood board	MIL-STD-202F
5	High Temperature, High Humidity Storage	Temperature: 85°C Relative Humidity: 85% Time: 500 Hours	MIL-STD-883E
6	Steam Aging	Temperature: 97°C Time: 8 Hours 230°C solder pot to check solder ability	MIL-STD-883E
7	Solder ability	Dip in flux 5~ 10 seconds Temperature: 230°C ± 10°C Time: 5 Seconds	MIL-STD-883E
8	Aging	Temperature: 85°C Time: 500 Hours	MIL-STD-883E

9	Thermal Shock	Temperature 1: $-55^{\circ}\text{C} \pm 10^{\circ}\text{C}$ Temperature 2: $125^{\circ}\text{C} \pm 10^{\circ}\text{C}$ Temperature change between T1 and T2: 5 seconds 10 cycles, maintain T1 and T2 for 30 minutes each in one cycle	MIL-STD-202F
10	Vibration	Frequency Range: 10Hz~ 1000Hz Amplitude: 1.5mm 40mins in each direction, total 120mins	MIL-STD-883E

6. Test Circuit

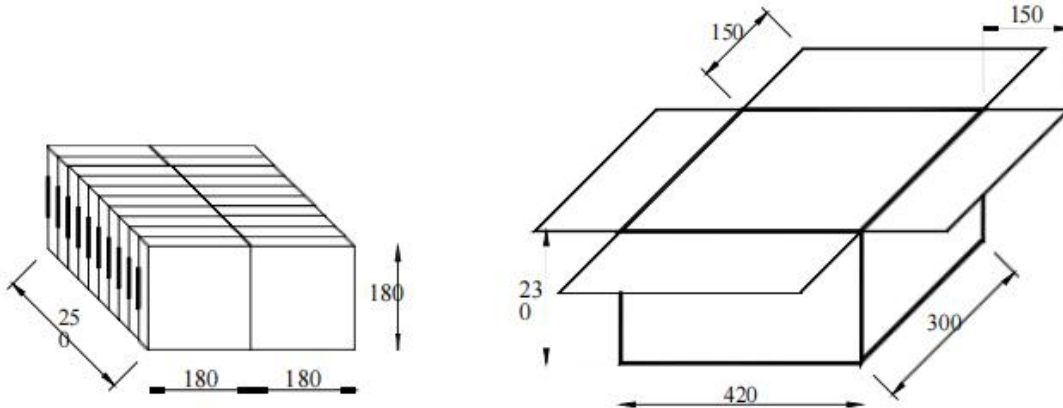


7. PACKING SPECIFICATIONS



Q'ty:500pcs/Reel

Carton Dimension (unit : mm)



1 reel = 1 Inner box
20 Inner boxes = 1 Carton
20kpcs = 1 Carton

8. WTL PART NUMBER SYSTEM :

For example: WTL8M26106MW

[Instructions: for project management, WTL will trace back the part number to developer wherever it goes]

WTL - 8M - 26106 - MW

WTL: Brand

8M : Package Code

26106: Serial number , flow code , without any rules

MW: WTL Developer Code, for example: VH,CH,PZ,RZ