

SAW TECHNO

sawtechno.ru

mail@sawtechno.ru

121351, Москва г., а/я 35

(499) 322-06-38

Общество с ограниченной ответственностью

«Научно-производственное предприятие «Техно-ПАРК»

(ООО «НПП «Техно-ПАРК»)

Юридический и фактический адрес: 121351, г. Москва,

ул. Ивана Франко, д. 48

Технические характеристики кварцевого генератора TW0457A

Производитель: TAI-SAW TECHNOLOGY CO., LTD

Поставщик: ООО «НПП «Техно-ПАРК» - авторизованный дистрибьютор компании
TAI-SAW TECHNOLOGY CO., LTD

Научно-производственное предприятие ООО «НПП «Техно-ПАРК» разрабатывает и поставляет полосно-пропускающие радиочастотные фильтры на поверхностных акустических волнах (ПАВ) и устройства на их основе. «НПП «Техно-ПАРК» имеет собственную научную и производственную базу, а также является авторизованным дистрибьютором мирового лидера по производству фильтров на ПАВ компании TAI-SAW TECHNOLOGY CO., LTD

E-mail: mail@sawtechno.ru **Web:** www.sawtechno.ru



TAI-SAW TECHNOLOGY CO., LTD.

SMD 7.0x5.0 20MHz Crystal Oscillator

MODEL NO.: TW0457A

REV. NO.: 1.0

Revise:

Rev.	Rev. Page	Rev. Account	Date	Ref. No.	Reviser
1	N/A	Initial release	12/24/13'	N/A	Ginger Huang



TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,
Taoyuan, 324, Taiwan, R.O.C.

SMD 7.0x5.0 20MHz Crystal Oscillator

MODEL NO.: TW0457A

REV. NO: 1.0

Features:

- Surface Mount Seam Weld Package
- Excellent Reliability Performance
- Good Frequency Perturbation

RoHS Compliant
Lead free
Lead-free soldering

Application:

- 3.3 V Supply Voltage Operation CMOS Output
- Option-able stand-by function for output (Tri-state output).

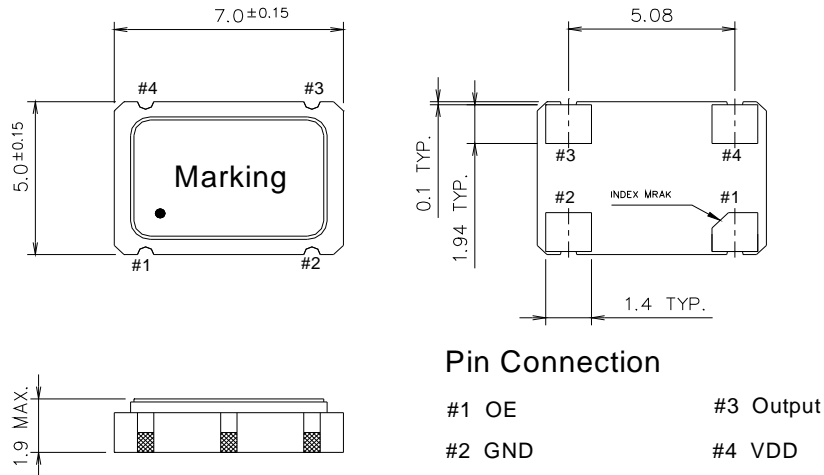
Electrical Characteristics:

TW0457A	Specifications
Nominal Frequency, Fo	20.000000 MHz
Storage Temperature Range	-55°C to +125°C
Operating Temperature Range	-40°C to +85°C
Power Supply Voltage, Vcc	3.3 V +/- 10%
Load	15pF
Output Voltage (High) Output Voltage (Low)	Vcc -0.4 V min 0.4 V max
Power Supply Current, Icc	28 mA max
Disable Current	16 mA max
Stand-by Current	50 μ A max
Frequency Accuracy ¹	+/-25 ppm max
Start-up Time	10 ms max.
Duty Cycle	40% ~ 60%
Input Voltage (High) Input Voltage (Low)	Vdd 70%Vcc min Vdd 20% Vcc max
Aging	+/- 5 ppm max / year @ 25°C
Rise Time (20% -> 80% of final RF level in Vp-p) Fall Time (80% -> 20% of final RF level in Vp-p)	3 nsec max. 3 nsec max.

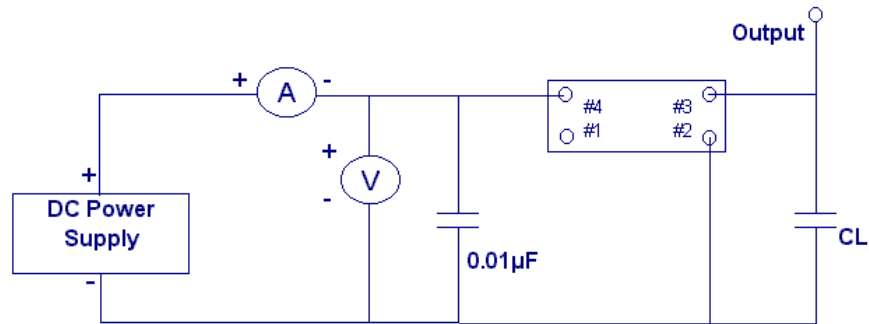
Enable/Disable Function	PIN 1: High or Open, PIN 3:Enable PIN 1: Low, PIN 3:Disable
-------------------------	--

#Note 1: Frequency accuracy includes 25C tolerance, operating temperature range -40 to 85 deg C

Mechanical Dimensions: (Unit: mm)



Test Circuit:



Marking:

Line 1 : Frequency (20.000)

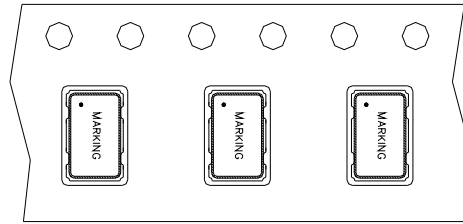
Line 2 : $\text{\textcircled{T}}$ WDXX (TST logo + Product Code + Data Code + Traceability Code)



Product Code Table

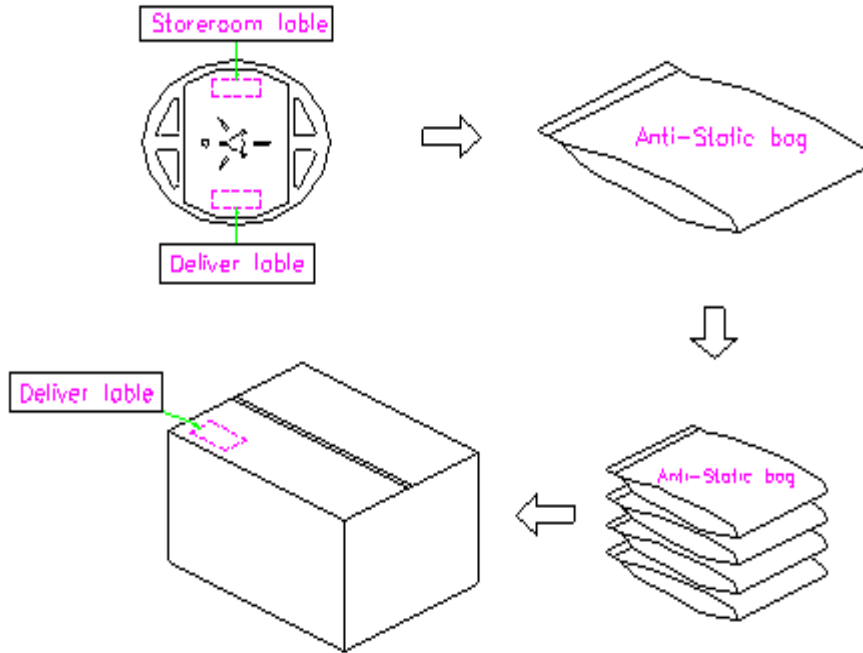
Year	2013	2014	2015	2016
	2017	2018	2019	2020
	2021	2022	2023	2024
Product code	W	w	<u>W</u>	<u>w</u>

■ **PACKING DIRECTION:**

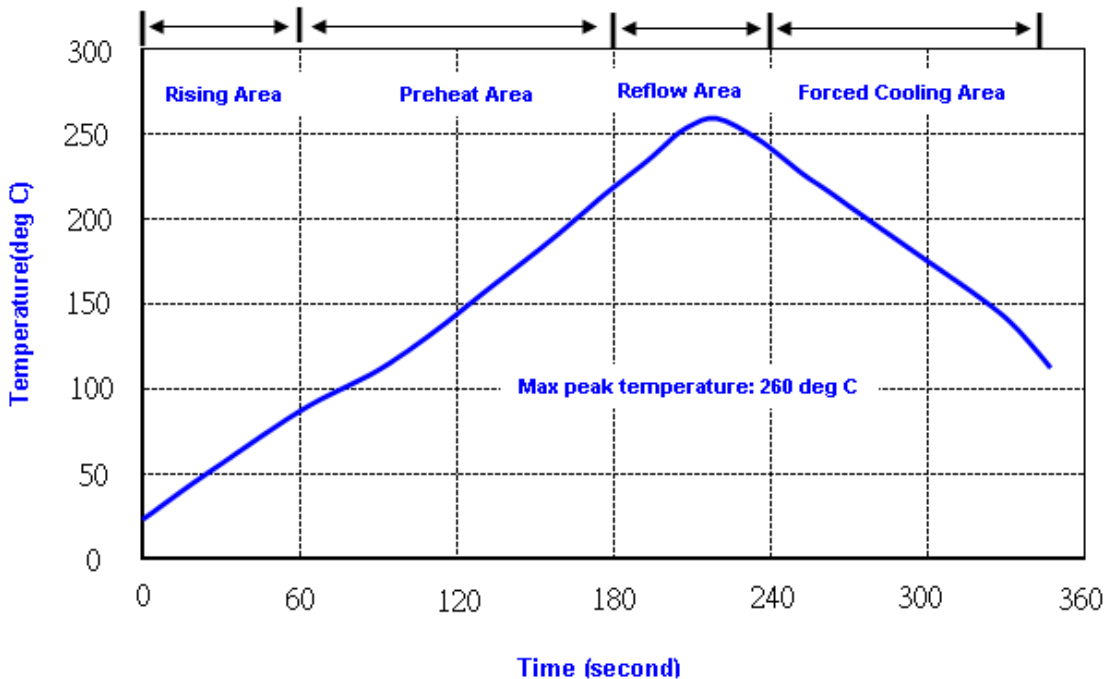


Packing Quantity/Packing:

1K pcs maximum per reel



Reflow Profile:



Note: 1. Max peak temperature: 260+/-5 deg C; Time: 10+/-2 sec
 2. Temperature: 217+/-5 deg C; Time: 90~100 sec

Reliability Specifications

Test name	Test process / method	Reference standard
Mechanical characteristics		
resistance to Soldering heat (IR reflow)	Temp./ Duration : 260°C /10sec x2 times Total time : 4min.(IR-reflow)	EIAJED-4701 -300(301)M(II)
Vibration	Total peak amplitude : 1.5mm Vibration frequency : 10 to 55 Hz Sweep period : 1.0 minute Vibration directions : 3 mutually perpendicular Duration : 2 hr / direc.	MIL-STD 202F method 201A
Mechanical Shock	directions : 3 impacts per axis Acceleration : 3000g's, +20/-0 % Duration : 0.3 ms (total 18 shocks) Waveform : Half-sine	MIL-STD 202F method 213C
Solderability	Solder Temperature:265±5°C Duration time: 5±0.5 seconds.	MIL-STD 883G method 2003
Environmental characteristics		
Thermal Shock	Heat cycle conditions -55 °C (30min) ↔ 125 °C (30min) * cycle time : 10 times	MIL-STD 883G method 1010.7
Humidity test	Temperature : 70 ± 2 °C Relative humidity : 90~95% Duration : 96 hours	MIL-STD 202F method 103B
Dry heat (Aging test)	Temperature : 125 ± 2 °C Duration : 168 hours	MIL-STD 883G method 1008.2 condition C
PCT test	Pressure: 2.06kg/cm ² (2.03*10 ⁵ pa) Temperature : 121 ± 2 °C Relative humidity : 100% Duration : 24 hours	EIAJED-4701-3 B-123A