



TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,
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Approval Sheet For Product Specification

Issued Date: 04/07/2006

Product Name: SMD Clock Oscillator 32.000 MHz

TST Parts No.: TW0198A

Customer Parts No.: _____

Company: _____
Division: _____
Approved by : _____
Date: _____

Checked by: _____ Robert Chang

Approval by: _____ T.F. Yang

Date: _____ 2006/04/07



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SMD Clock Oscillator 32.000MHz

MODEL NO.: TW0198A

REV. NO.: 1

A. FEATURES:

1. Ultra small package
2. Excellent for high-density packaging.

RoHS Compliant
Lead free
Lead-free soldering

B. MAXIMUM RATING:

1. Storage Temperature: -55 °C to +125 °C.
2. Operating Temperature: -40 °C to +80 °C.

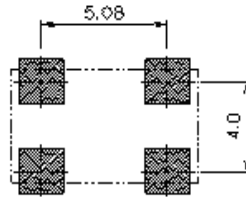
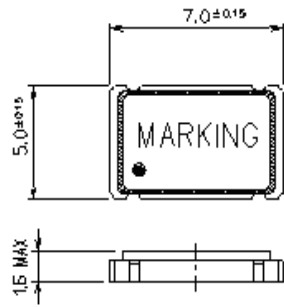
C. ELECTRICAL CHARACTERISTICS:

Characteristics	Units	Minimum	Typical	Maximum	
Center Frequency	MHz	-	32.000	-	
Overall Frequency Stability (a+b) (#note 1)	ppm	-20	-	+20	
Overall Frequency Stability (a+b+c+d+e) (#note 1)	ppm	-40	-	+40	
Input Voltage (Operating VDD)	VDC	-	3.3+/- 5%	-	
Input Current	MA	-	-	45	
Output					
Load	PF	-	15	-	
"0" Level	VDC	-	-	0.33	
"1" Level	VDC	2.97	-	-	
Symmetry (TW/T*100%) Duty Cycle	%	40%	50%	60%	
Rise Time (10%->90% VDD)	NSec	-	-	8	
Fall Time (90%->10% VDD)	NSec	-	-	8	
Phase Noise	@10Hz	dBc/Hz	-76	-79	-
	@100Hz	dBc/Hz	-102	-108	-
	@1kHz	dBc/Hz	-125	-135	-
	@10kHz	dBc/Hz	-143	-145	-
	@100kHz	dBc/Hz	-145	-148	-
Enable/Disable Function		PIN 1: High or Open, PIN 3:Enable PIN 1: Low, PIN 3:Disable			
Package size		SMD5.0X7.0X1.6mm			

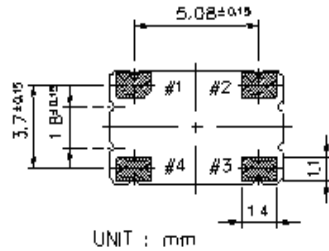
#Note 1: Frequency stability includes;

- (a) 25°C Frequency Tolerance ;
- (b) Temperature Stability
- (c) Input Voltage Stability ;
- (d) Load Stability ;
- (e) Aging

D. OUTLINE DRAWING: (Unit: mm)

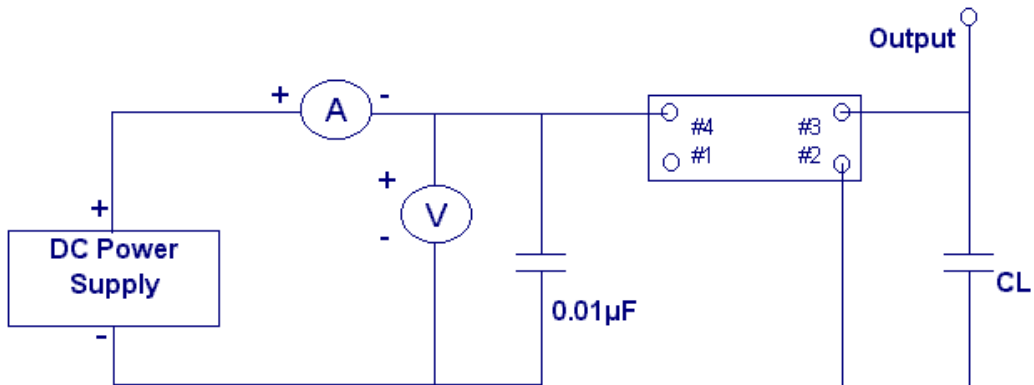


Recommended Soldering Pattern

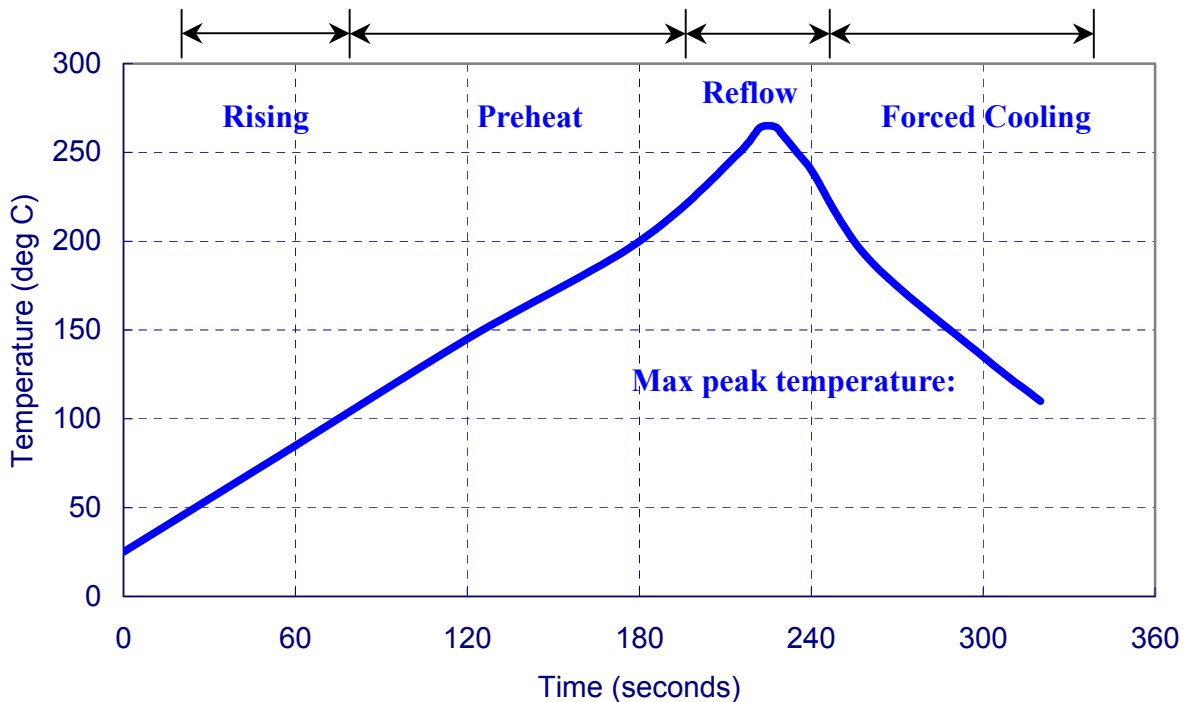


PIN#	FUNCTION
1	NO CONNECT / 3-STATE
2	CIRCUIT AND COVER GROUND
3	OUTPUT
4	VDD

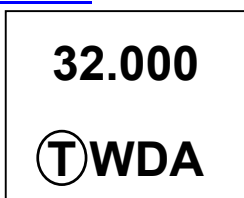
E. TEST CIRCUIT:



F. SOLDERING REFLOW PROFILE:



G. MARKING:



Where W stand for product code and D for date code

1. Product Code Table:

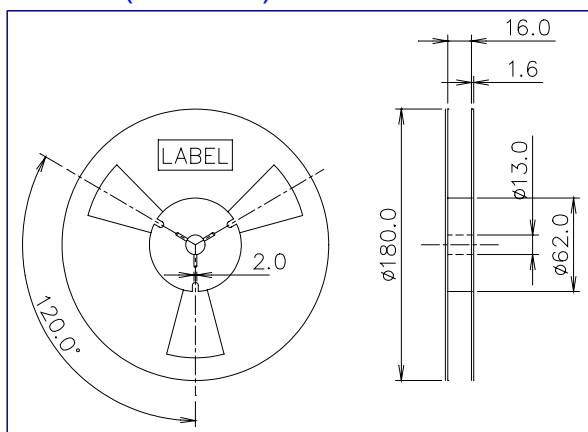
Year	2001	2002	2003	2004
	2005	2006	2007	2008
Product Code	W	w	W	w

2. Date Code Table:

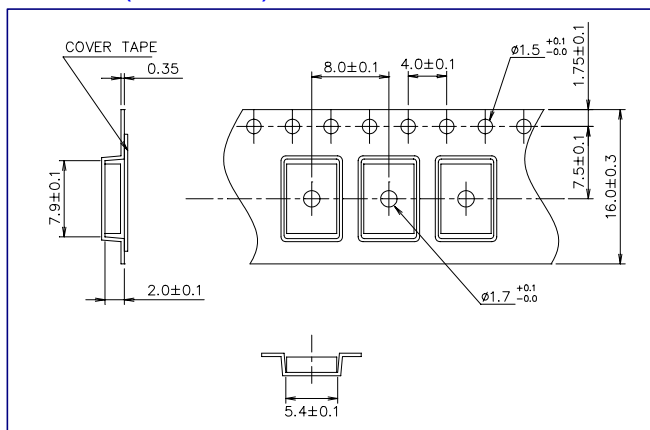
WK01	WK02	WK03	WK04	WK05	WK06	WK07	WK08	WK09	WK10	WK11	WK12	WK13
A	B	C	D	E	F	G	H	I	J	K	L	M
WK14	WK15	WK16	WK17	WK18	WK19	WK20	WK21	WK22	WK23	WK24	WK25	WK26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
WK27	WK28	WK29	WK30	WK31	WK32	WK33	WK34	WK35	WK36	WK37	WK38	WK39
a	b	c	d	e	f	g	h	i	j	k	l	m
WK40	WK41	WK42	WK43	WK44	WK45	WK46	WK47	WK48	WK49	WK50	WK51	WK52
n	o	p	q	r	s	t	u	v	w	x	y	z

H. PACKING: (1k/Reel)

1. REEL DIMENSION (Unit: mm)



2. TAPE DIMENSION (Unit: mm)



3. PACKING DIRECTION

The dot or the logo of marking should be close to the hole of tape.