

RoHS Compliant

APPROVAL SHEET

Issued No. : _____

DESCRIPTION : SMD 3225 XO CMOS
NOMINAL FREQ. : 50.000000 MHz
TAITIEN P/N : 05301-L-881-3
TAITIEN MODEL : OXETELJANF-50.000000MHz
REVISION : 1
DATE : 09/13/2016

QA	Checked	Prepared
X.H. Wang	H.G. Hu	D.R. Jiang, Z.Q. Jiang

CUSTOMER : _____

CUSTOMER P/N : _____

Customer Signature
Approved:
Date:

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■ ELECTRICAL CHARACTERISTICS

➤ FREQUENCY

	Parameter	Min.	Typ.	Max.	Units	Test Condition
1-1	Nominal Frequency	50.000000			MHz	
1-2	Frequency stability (Overall)	-30		30	ppm	Frequency stability includes frequency tolerance@25 and frequency stability vs. operating temperature range and voltage variance and first year aging.
	1-2-1 Aging	-3		+3	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	

➤ POWER SUPPLY

	Parameter	Min.	Typ.	Max.	Units	Test Condition
2-1	Supply voltage	2.97	3.3	3.63	V	
2-2	Current			15	mA	At maximum supply voltage

➤ OUTPUT

	Parameter	Min.	Typ.	Max.	Units	Test Condition
3-1	Output waveform	CMOS				
3-2	Duty Cycle	45	50	55	%	
3-3	Start Time			2	mSec	
3-4	Transition Time : Rise/Fall Time			2	nSec	
3-5	Output Level	Output High(Logic "1")	2.97		V	
3-6	Level	Output Low(Logic "0")		0.33	V	
3-7	Output Load			15pF	pF	
3-8	Tri-State	Output Active	2.31 or Floating		V	Pin 1 Tri-state
3-9		Output in High-Impedance state		0.99	V	

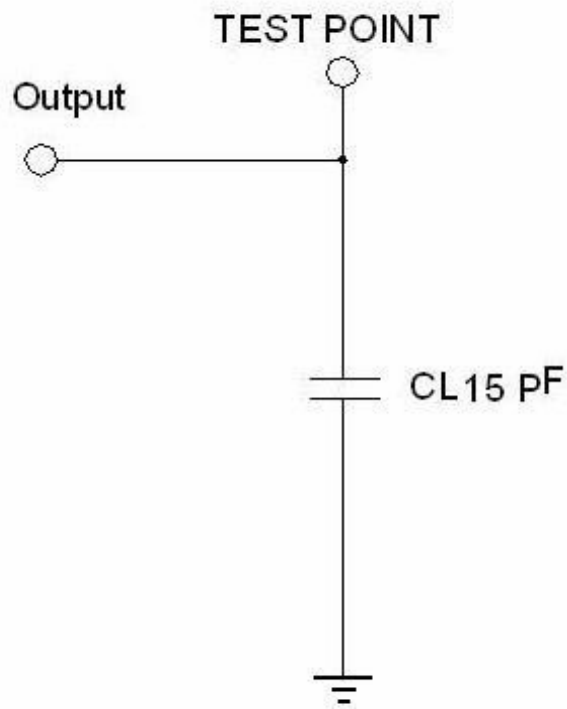
■ CUSTOMER SPECIAL REQUIREMENT

4-1 3.3V

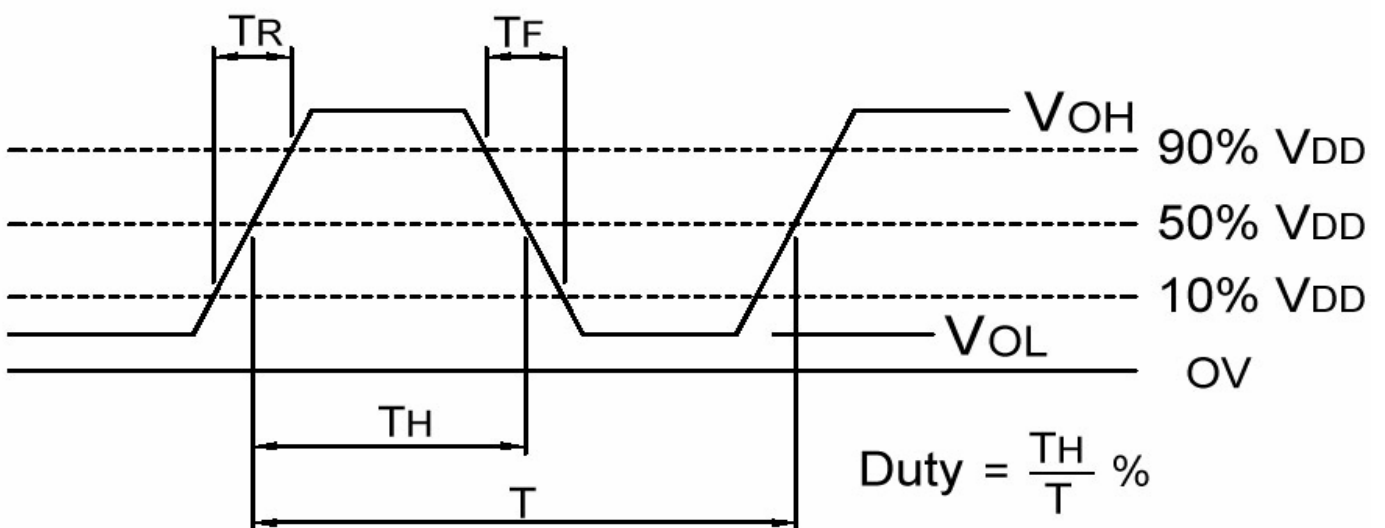
■ ENVIRONMENTAL

	Parameter	Reference Std.	Test Condition
5-1	Vibration Test	MIL-STD-883 2007 Condition A JESD22-B103 Condition 1	10~2000Hz, 1.52mm, 20g, each axis for 4 hrs
5-2	Thermal Shock	MIL-STD-883 1010 Condition B JESD22-A104 Condition B	-55 , 125 ; soak time is 10 mins, with total 200 cycles
5-3	Mechanical Shock	MIL-STD-883 2002 Condition B JESD22-B104 Condition B	1500g half-sine, 0.5ms, each axis for 3 times.

■ TEST CIRCUIT (CMOS LOAD)



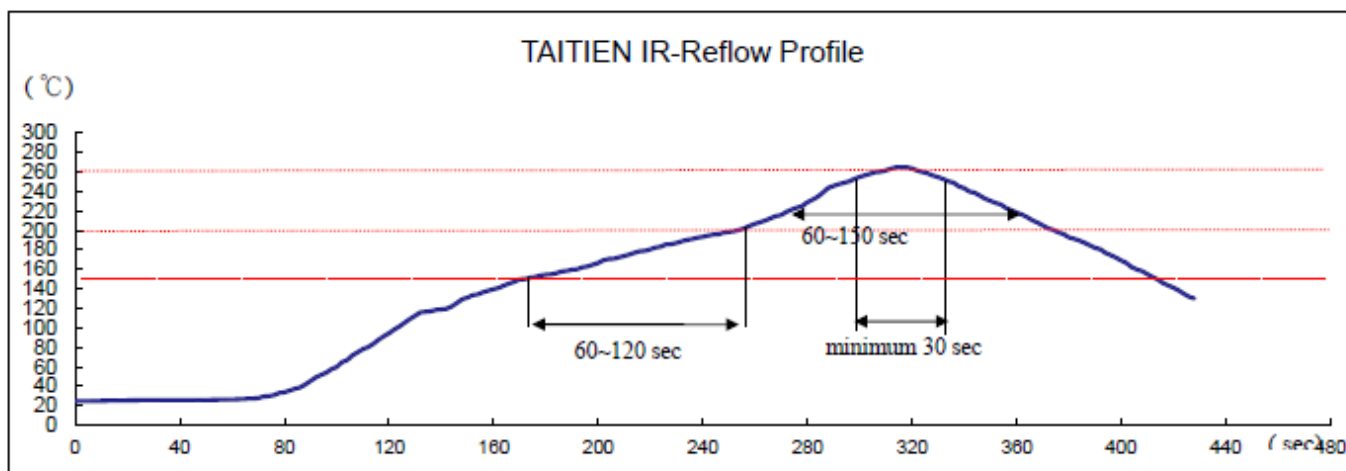
■ OUTPUT WAVEFORM (CMOS LOAD)



■ RECOMMENDED IR REFLOW PROFILE

- IR REFLOW PROFILE OF CERAMIC SMD PRODUCTS FOR Pb FREE PROCESS

TAITIEN ELECTRONICS CO., LTD.



Reference Standard: JEDEC-STD 020

Test conditions: Pre-heating : 150°C to 200°C, 60~120secs.

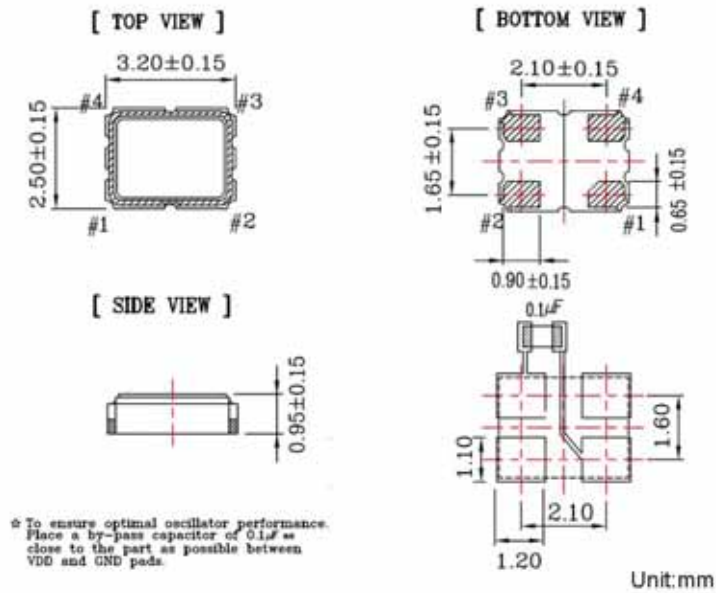
Heating : 217°C, 60~150sec.

Peak temperature at least : 260°C, The time above 255 °C : minimum 30sec.

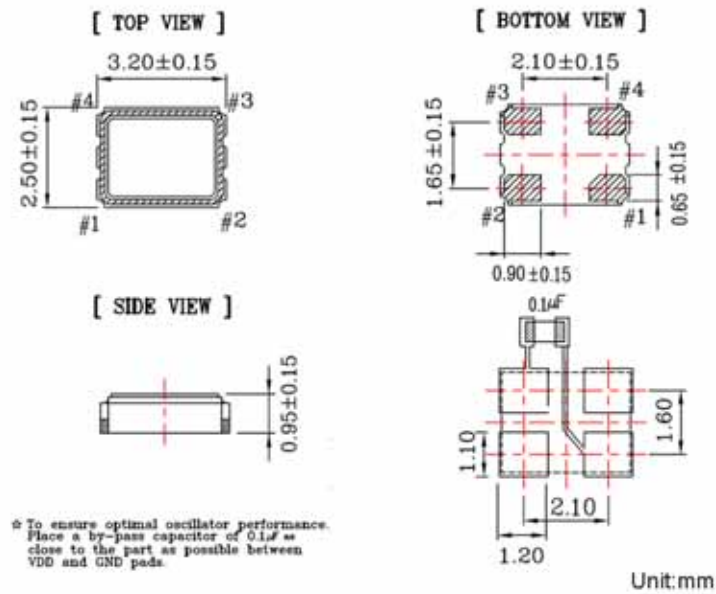
■ PRODUCT DIMENSIONS

➤ DIMENSIONS

A



B



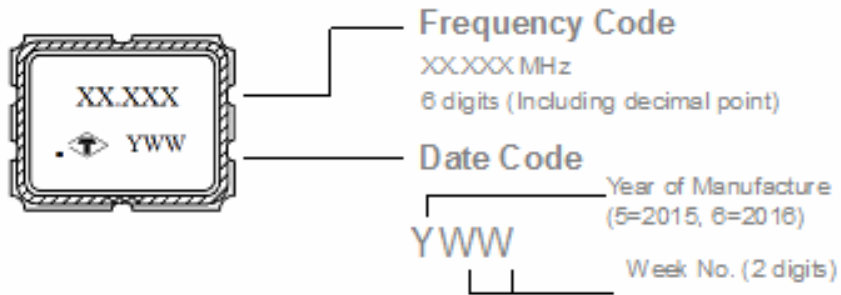
➤ PIN FUNCTIONS

Pin	Function
#1	Tri-State
#2	GND
#3	Output
#4	V _{DD}

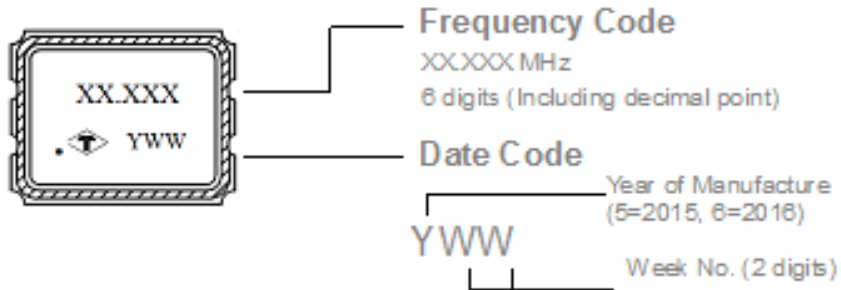
■ **PRODUCT IDENTIFICATION (MARKING)**

➤ **PROCEDURE : LASER**

A.

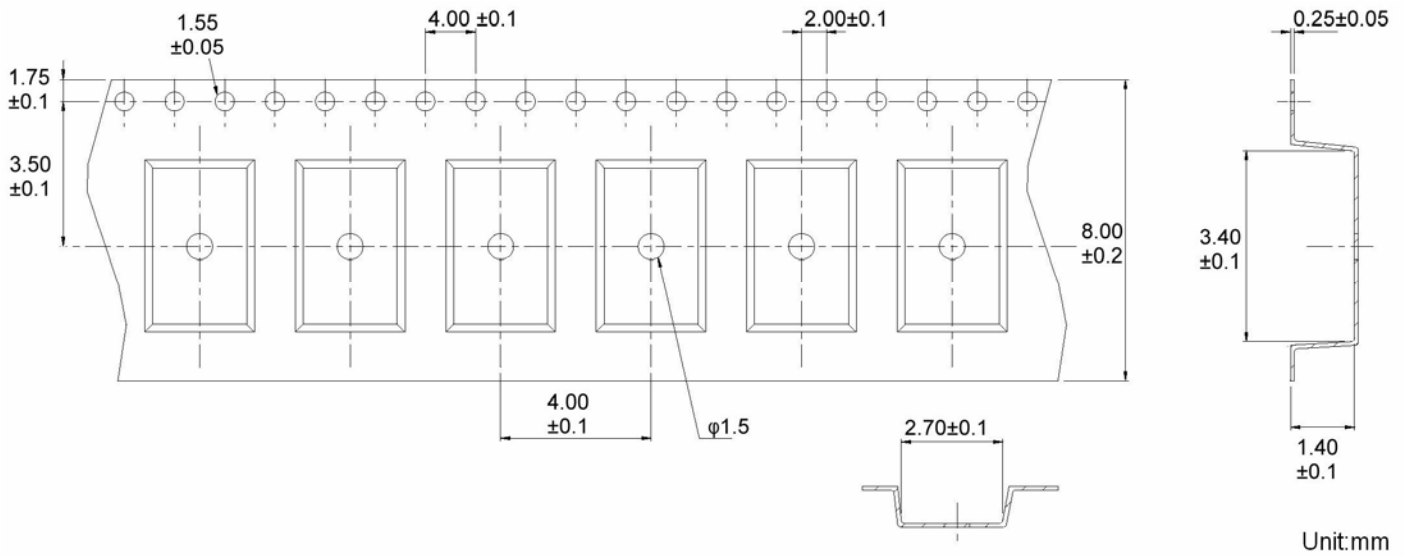


B.

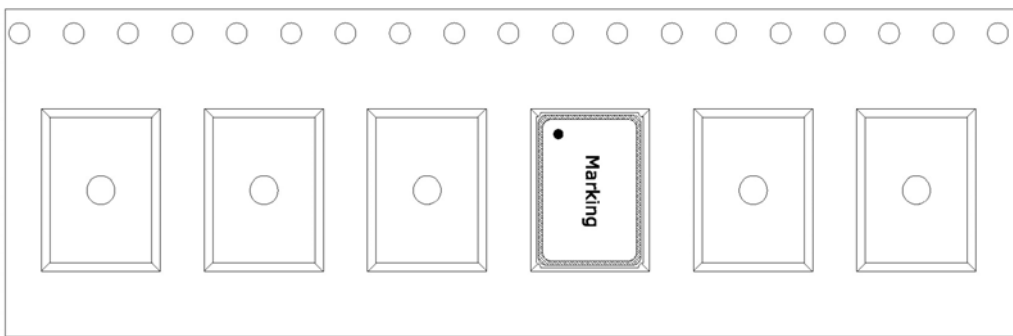


■ PACKAGE INFORMATION

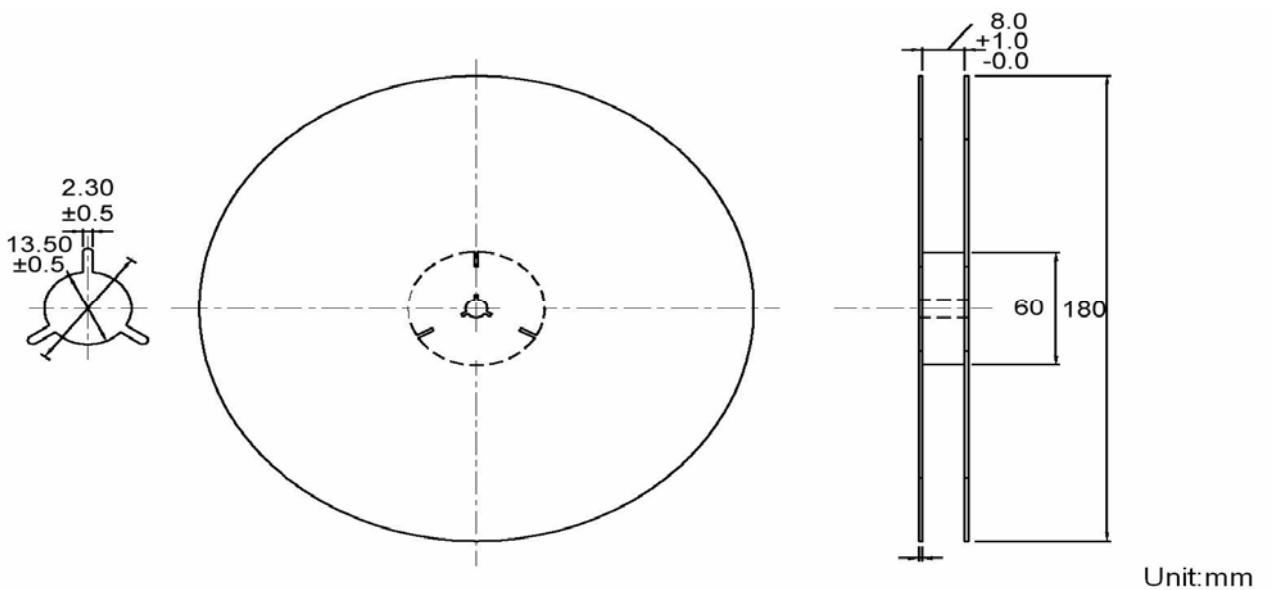
➤ TAPE (CARRIER) DIMENSIONS



➤ THE DIRECTION OF PACKING



➤ REEL DIMENSIONS



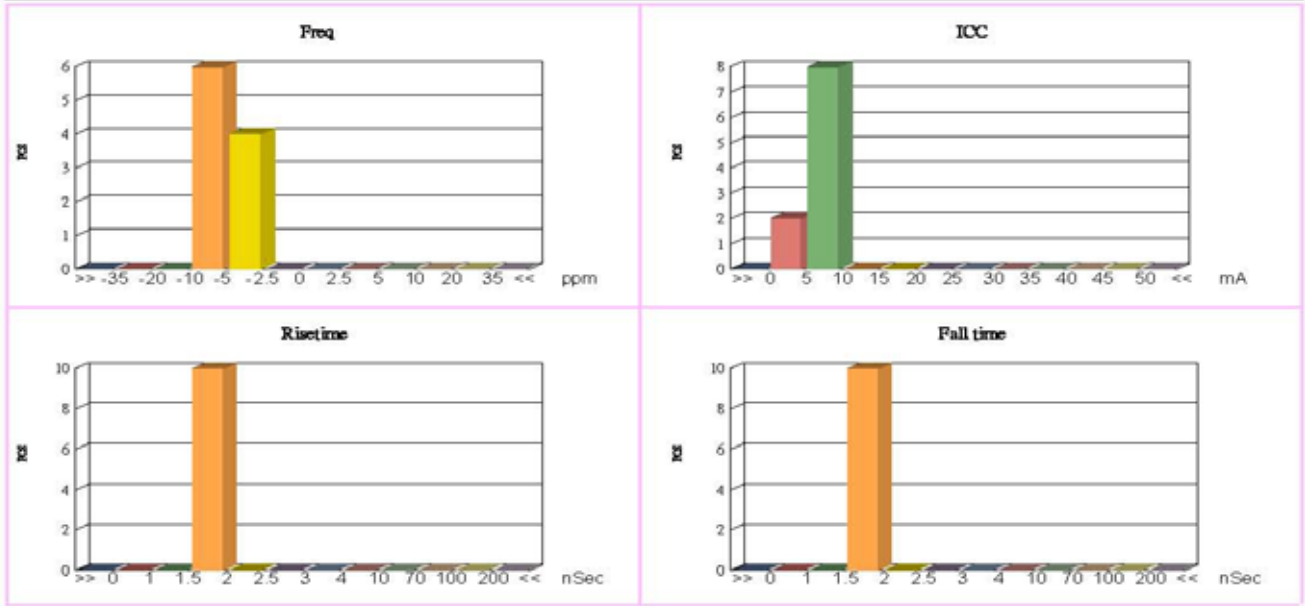
■ ATTACHMENT

➤ ELECTRICAL CHARACTERISTICS TEST

TAITIEN ELECTRONICS(SHENZHEN) CO., LTD

OSC-TYPE OQC REPORT

LotNo	SA1-160801569	Customer		Custpa						
OrderNo	PS-201608-292	Noc	OX00500000005301881	Model	OXETELJANF	OrderQty	1000	(pcs)		
SZ No	SW1-160800794-001	Freq	50.000000 (MHz)	D/C	638	TestQty	10	(pcs)		
Level	普單普通	Vdd	3.3 (V)	Temp	25±2°C	Date	2016-9-13	Tester	0404226	
[105B SAMPLING]						NG QTY	SAMPSIZE	Ac	Re	Result
ELECTRICAL						0	10	0	1	OK
VISUAL(MECHANICAL)						0	10	0	1	OK
FINE&GROSS LEAK						0	10	0	1	OK
MARKING						0	10	0	1	OK
	Freq VDD(1-10%)	Freq VDD	Freq VDD(1+10%)	ICC	RiseTime	Fall Time	Start Time	Duty	Tri	
Unit	PPM	PPM	PPM	mA	nSEC	nSEC	mSEC	%		
Cus.spec	0/0	30/-30	0/0	15	2.0/0.0	2.0/0.0	2	55.0/45.0		
UCL	0	12	0	15	2.0	2.0	2.0	55.0	T	
LCL	0	-12	0	0	0.0	0.0	0.0	45.0		
Average	--	-5.83	--	5.02	1.80	1.84	0.07	49.79	T	
STD	--	1.50	--	0.01	0.07	0.04	0.01	0.09		
MAX	--	-3.67	--	5.03	1.93	1.91	0.08	49.89		
MIN	--	-7.72	--	5.00	1.67	1.78	0.06	49.64		
CA	--	-48.58	--	--	--	--	--	--		
CP	--	2.67	--	--	--	--	--	--		
CPK	--	1.37	--	--	--	--	--	--		
Remark										



SUPERVISOR:



INSPECTOR:



TAITIEN ELECTRONICS(SHENZHEN) CO., LTD

OSC-TYPE OQC REPORT

SZ NO	SW1-160800794-001	SPEC NO	05301L8813	MODEL	OXETELJANF	TestDate	2016-9-13	Temp	25±2°C	
CUSTPN		Frequency	50.000000 (Mhz)	VDD	3.3 (V)	WaveForm	CMOS	CL	15 pf	
Test Circuit	<p>CMOS TEST CIRCUIT</p>				WaveForm	<p>ITL CMOS 2.4V(90%VDD) 1.4V(50%VDD) 0.4V(10%VDD) 0V SYM = TH%</p>				
	Freq VDD(1-10%)	Freq VDD	Freq VDD(1+10%)	ICC		Rise Time	Fall Time	Start Time	Duty	Tri
Unit	PPM	PPM	PPM	mA	nSEC	nSEC	mSEC	%		
Max	0	12	0	15	2	2	2	55		
Min	0	-12	0	0	0	0	0	45		
1		-7.72		5.01	1.77	1.83	0.08	49.66	T	OK
2		-6.71		5.00	1.67	1.84	0.08	49.89	T	OK
3		-7.61		5.01	1.71	1.85	0.07	49.74	T	OK
4		-4.37		5.01	1.93	1.83	0.07	49.87	T	OK
5		-4.31		5.03	1.84	1.84	0.06	49.77	T	OK
6		-6.36		5.03	1.85	1.78	0.08	49.85	T	OK
7		-6.44		5.01	1.83	1.81	0.07	49.64	T	OK
8		-3.67		5.03	1.80	1.88	0.08	49.89	T	OK
9		-4.35		5.00	1.81	1.80	0.07	49.72	T	OK
10		-6.71		5.03	1.83	1.91	0.07	49.82	T	OK
Average	—	-5.83	—	5.02	1.80	1.84	0.07	49.79		
STD	—	1.50	—	0.01	0.07	0.04	0.01	0.09		
MAX	—	-3.67	—	5.03	1.93	1.91	0.08	49.89		
MIN	—	-7.72	—	5.00	1.67	1.78	0.06	49.64		
CA	—	-48.58	—	—	—	—	—	—		
CP	—	2.67	—	—	—	—	—	—		
CPK	—	1.37	—	—	—	—	—	—		

SUPERVISOR:

INSPECTOR:

■ ATTACHMENT

➤ SUBSTANCE ANALYSIS LIST OF RAW MATERIAL

TAITIEN ELECTRONICS CO.,LTD.

原材料有害物質成分分解表(Hazardous Substance Analysis List of Raw Material)

型號(Model):OX type

零件重量: weight:26.9716 ± 20% mg

零件名稱 Part Name	數量 Qty	材質材料 Material	成分:元素 (Component / Chemical element)	物質材料重量 Material Weight (mg)	物質百分比 Substance Percentage (%)	CAS No.	物質材料名稱 Material Name	檢測種類 Test Method	測試報告編號 Test report No.	送檢日期 Test date	有害物質成分重量 (ppm) Hazardous substance content										其他有害物質 Other hazardous substances		
											Pb	Cr	Hg	Cd	PCB	POPs	Cl-	B-	PFOS	PFOA			
BASE	100	Metalizing	Ag	14.743533	85.28	1344-26-7	K110C26A	S99	E-45C180802716	2011/02/16	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
			ZnO	2.118000	0.43	1313-75-8																	
			ZnO	2.118000	0.43	1313-75-8																	
			MgO	2.118000	0.44	1327-43-4																	
			Fe	2.118000	0.68	7429-98-7																	
			SiO2	2.720000	2.78	7631-86-8																	
			Sn	2.880000	0.40	7482-85-7																	
			Al	2.880000	13.78	7440-20-4																	
			Plate-Au	Au	2.180000	0.88																	7440-67-8
			Seal Ring	Co	2.880000	1.88																	7440-48-4
	Fe	2.880000	8.28	7429-98-7																			
	Ni	2.880000	2.88	7440-40-0																			
	Al	2.880000	2.78	7440-20-4																			
	Cu	2.180000	0.48	7440-65-8																			
LID	-	LID	Cl	2.481300	14.82	7440-48-4	W41076C	POVY	E-1021440520714	2007/02/16	NO	NO	NO	NO	NA	NA	NO	NO	NO	NO	NO	NO	NO
			Fe	1.484300	48.47	7429-98-7																	
			Sn	2.918000	0.40	7482-85-7																	
	Ni	1.218000	88.83	7440-40-0																			
Blank	100	Quartz	SiO2	2.480000	100.00	14828-83-5	TACB1	S99	E-1021440520714	2010/02/16	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
IC	100	SiC	Si	2.270000	100.00	7440-21-4	18C	S99	E-1021440520714	2010/02/16	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
ADHESIVE	+	S99-F	Ag	2.820000	83.00	7440-20-4	FREE BOND	S99	E-45C181810640	2010/02/16	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
			polymer	2.880000	23.00																		
	Ag	2.280000	0.74	7440-20-4																			
	SiO2	2.940000	5.15	10828-83-5																			
			CH2OH	2.024300	4.1	66-17-8																	
			polymer	2.880000	13.20																		
Electrode	+	Metal-Ag	Ag	2.182000	100.00	7440-20-4	錫膏包埋	S99	E-45C181810640	2011/02/16	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Electrode	+	Metal-Ni	Ni	2.000400	100.00	7440-20-0	錫膏包埋	ETC	E-1021440520714	2011/02/16	NO	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bond Wire	-	S99	Au	2.180000	100.00	7440-67-8	TAS-4A	S99	E-45C181810640	2011/02/16	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO