

RoHS Compliant

APPROVAL SHEET

Issued No. : _____

DESCRIPTION : SMD 3225 XO Multiplier LVDS
NOMINAL FREQ. : 148.500000 MHz
TAITIEN P/N : _____
TAITIEN MODEL : OAEMGLVANF-148.500000MHz
REVISION : 1
DATE : 04/18/2019

QA	Checked	Prepared

CUSTOMER : _____
CUSTOMER P/N : _____

Customer Signature
Approved:
Date:

REVISION HISTORY

Rev.	Revised Page	Revision Content	Date	Ref. No.	Reviser
01	N/A	Initial Released	04/10/2019	N/A	Dick Lin

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ELECTRICAL CHARACTERISTICS

FREQUENCY

	Parameter	Min.	Typ.	Max.	Units	Test Condition
1-1	Nominal Frequency	148.500000			MHz	
1-2	Frequency stability (Overall)	-50.0		+50.0	ppm	Frequency stability includes frequency tolerance@25°C and frequency stability vs. operating temperature range and voltage variance and first year aging.
1-3	Aging	-3		+3	ppm	Frequency drift in first year
1-4	Operating Temperature range	-40		+85	°C	The operating temperature range over which the frequency stability is measured.
1-5	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			45	mA	At maximum supply voltage
2-3	Power Supply Ramp	0.01		500	mSec	Time for V _{DD} to reach 90%V _{DD} Power ramp must be monotonic.

OUTPUT

	Parameter	Min.	Typ.	Max.	Units	Test Condition
3-1	Output waveform	LVDS				
3-2	Duty Cycle	45	50	55	%	
3-3	Start Time			10	mSec	
3-4	Transition Time : Rise/Fall Time			0.5	nSec	
3-5	Output				V	
3-6	Level				V	
3-7	Output Load	100Ω				
3-8	Tri-State	Output Active	2.31 or Floating		V	PIN 2 Tri-state Enable High
3-9		Output in High-Impedance state		0.99	V	

➤ JITTER

	Parameter	Min.	Typ.	Max.	Units	Test Condition
4-1	RMS Phase Jitter			1.5	pSec	(12KHz-20MHz)

➤ PHASE NOISE

	Parameter	Min.	Typ.	Max.	Units	Test Condition
5-1	1KHz offset		-107		dBc/Hz	
5-2	10KHz offset		-111		dBc/Hz	
5-3	100KHz offset		-114		dBc/Hz	
5-4	1MHz offset		-125		dBc/Hz	
5-5	20MHz offset		-147		dBc/Hz	

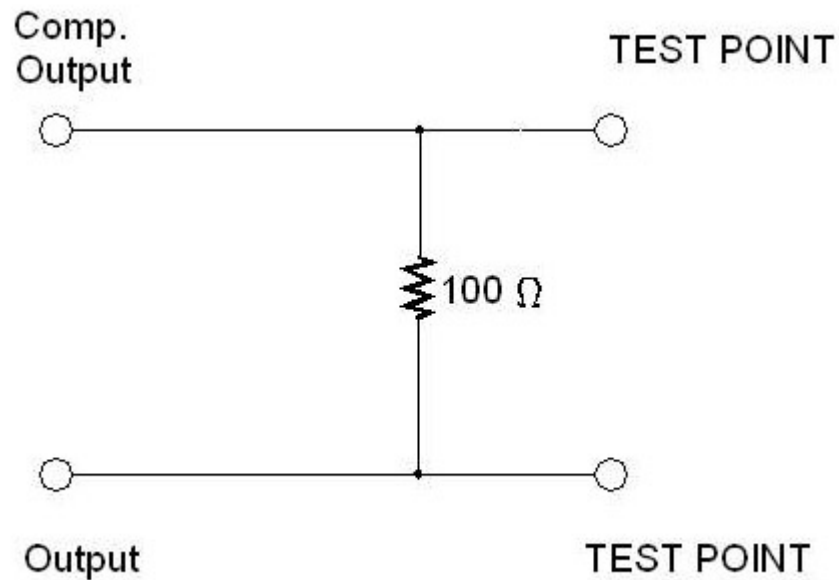
■ CUSTOMER SPECIAL REQUIREMENT

6-1	
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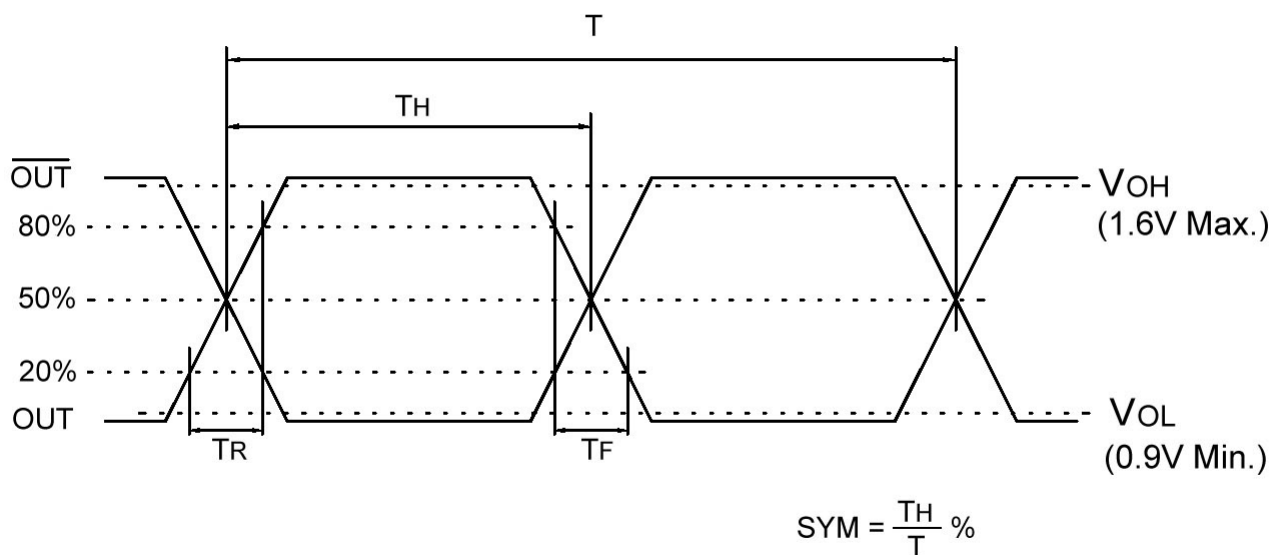
■ ENVIRONMENTAL

	Parameter	Reference Std.	Test Condition
7-1	Vibration Test	MIL-STD-883 2007 Condition A JESD22-B103 Condition 1	10~2000Hz, 1.52mm, 20g, each axis for 4 hrs
7-2	Thermal Shock	MIL-STD-883 1010 Condition B JESD22-A104 Condition B	-55°C, 125°C; soak time is 10 mins, with total 200 cycles
7-3	Mechanical Shock	MIL-STD-883 2002 Condition B JESD22-B104 Condition B	1500g, half-sine, 0.5ms, each axis for 3 times.

■ TEST CIRCUIT (LVDS LOAD)



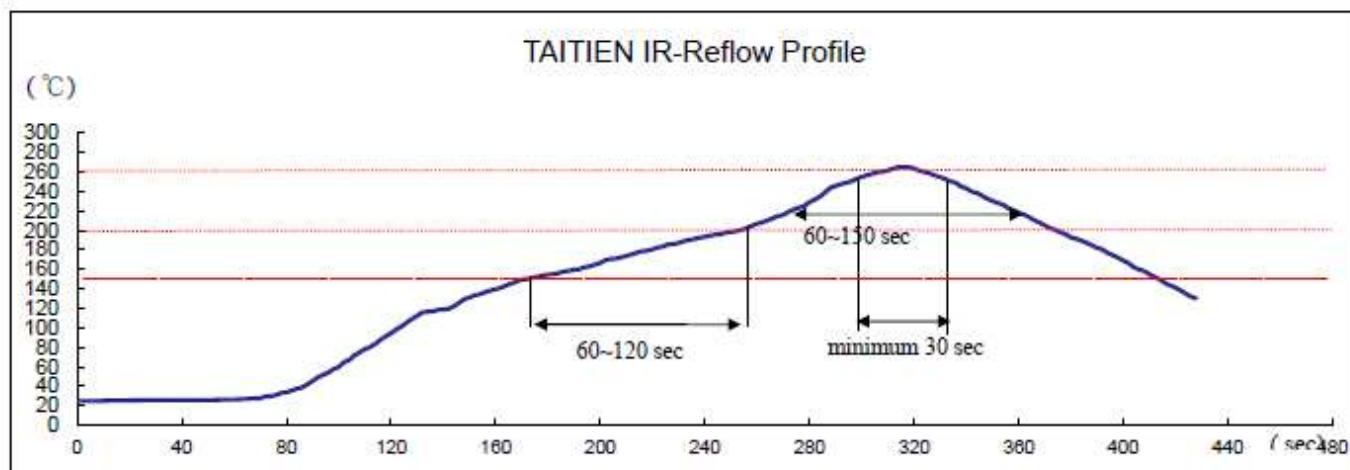
■ OUTPUT WAVEFORM (LVDS LOAD)



■ 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.

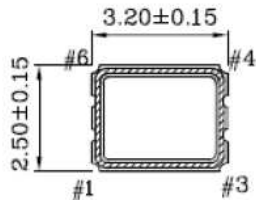
Heating : 217°C, 60~150sec.

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

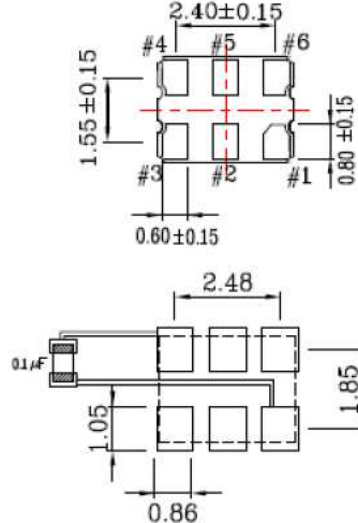
■ PRODUCT DIMENSIONS

➤ DIMENSIONS

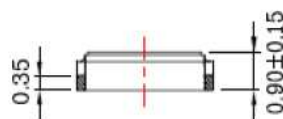
[TOP VIEW]



[BOTTOM VIEW]



[SIDE VIEW]



☆ To ensure optimal oscillator performance.
Place a by-pass capacitor of $0.1\mu F$ as
close to the part as possible between
VDD and GND pads.

➤ PIN FUNCTIONS

Pin	Function
#1	N.C.
#2	Tri-State
#3	GND.
#4	Output
#5	Comp. Output
#6	V _{DD}

■ PRODUCT IDENTIFICATION (MARKING)

➤ PROCEDURE : LASER



Frequency Code

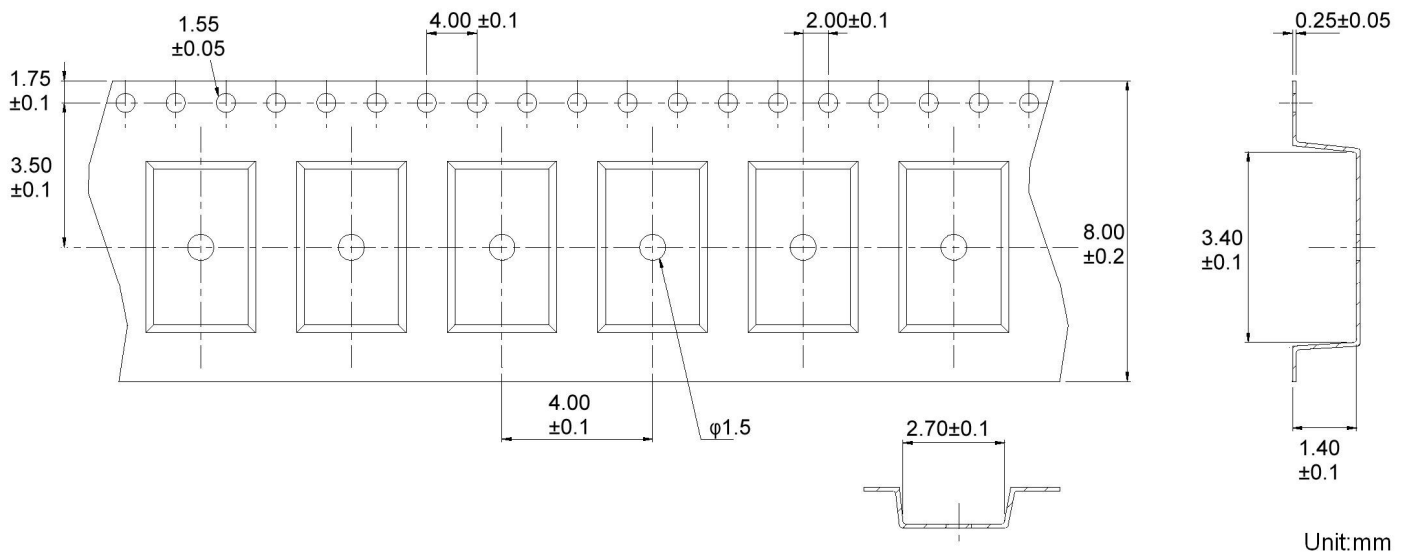
XX.XXX MHz
6 digits (Including decimal point)

Date Code

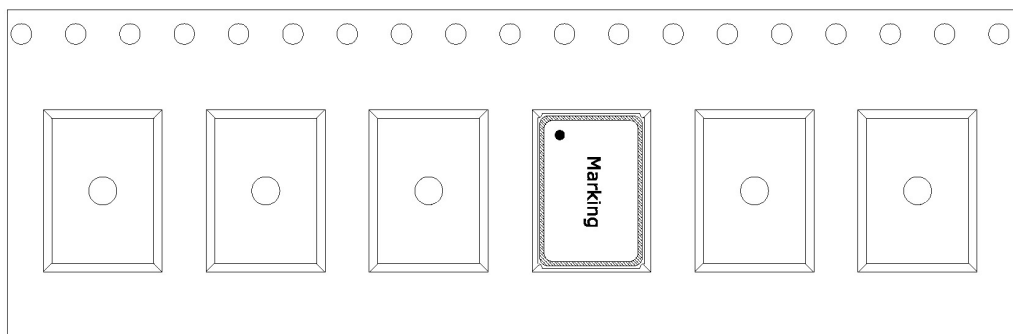
YWW
Year of Manufacture
(8=2018,9=2019)
Week No. (2 digits)

■ PACKAGE INFORMATION

➤ TAPE (CARRIER) DIMENSIONS



➤ THE DIRECTION OF PACKING



➤ REEL DIMENSIONS

