

VC-TXO SPECIFICATION TOH1300DPM4DKA Preliminary 1/5

1. Construction Of Part No.

example **TO H XXXX D P H 4 K R A**
 a b c d e f g h

No	Meaning	No.of Digits	Example
a	Name Of Product	2	TO : Temperature Compensated Crystal Oscillator
b	Size Of Product	1	B : 5.0x3.2x1.5 mm F : 4.0x2.5x1.2 mm H : 3.2x2.5x1.2 mm C : User Spec
c	Nominal Frequency	4	XXXX : XX.XX0000 MHz
d	Additional Function	1	N: No Additional Function D: Digital Temperature Compensation M: Multi-Output Function
e	Operating Voltage	1	A: 3.0V D: 5.0V G:2.4V P: User Spec
f	Operating Temperature	1	H : -30°C ~ 80°C I : -30°C ~ 75°C J : -30°C ~ 70°C K : -30°C ~ 70°C L : 0°C ~ 50°C M : User Spec
g	Pin Number	1	4 : 4 pin
h	User Serial Number	3	

2. Electrical Characteristics

Parameter	Value	Condition
Output Frequency	13.000000MHz	
Supply Voltage	DC 2.7V \pm 0.1V	
Output Level	0.8 Vp-p Min (Clipped Sine Wave)	10kohm/10pF \pm -10% each
Current Drain	1.5 mA Max	10kohm/10pF \pm -10% each
Operating Temperature Range	-20°C to +75°C	
Storage Temperature Range	-40°C to +85°C	
Frequency Stability		
vs. Temperature	\pm -2.5ppm Max	Referenced to 25°C
vs. Supply Voltage	\pm -0.3ppm Max	DC 2.7V \pm -0.1V
vs. Load	\pm -0.2ppm Max	10kohm/10pF \pm -10% Each
vs. Aging	\pm -1.0ppm Max	1 Year
Frequency Tolerance		
Initial	\pm -2.0ppm Max	T=25°C \pm -2°C
After Reflow	\pm -3.0ppm Max.	T=25°C \pm -2°C.(After 8hours)
AFC-Characteristic		
Vcont=2.5V	+9.0 to +18.0ppm	Referenced to Vcont=1.5V
Vcont=0.5V	-18.0 to -9.0ppm	
Phase Noise	-110 dBc/Hz Max	100Hz offset
Harmonics	-5dBc Max	

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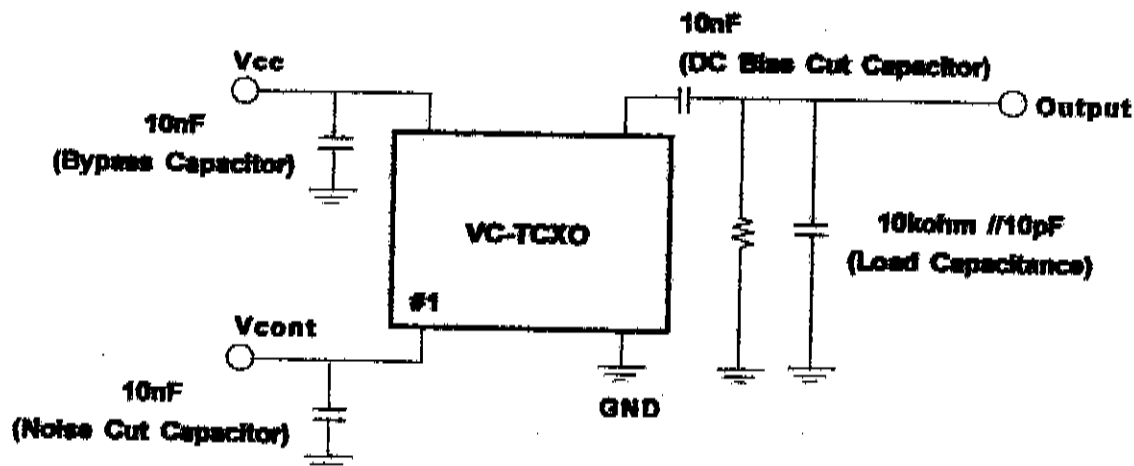
3. Environmental Characteristics

No	Test Item	Test Condition
1	High Temp. Storage	85 \pm 2 $^{\circ}$ C, 96 \pm 2Hr
2	Low Temp. Storage	-40 \pm 2 $^{\circ}$ C, 96 \pm 2Hr
3	High Temp. & High Humidity Storage	40 $^{\circ}$ C, 90-95%RH, 96 \pm 2Hr
4	Thermal shock	-40 $^{\circ}$ C/30min ~ 85 $^{\circ}$ C/30min, 15cycles
5	Vibration	Frequency : 20-2000Hz Acceleration : 5G XYZ each direction \times 30min
6	Drop	150cm, 120g Jig, onto concrete, each side(6), corner(1), total 76times
7	Solderability	230 $^{\circ}$ C \pm 5 $^{\circ}$ C for 10sec, more than 90% must be covered
8	Solder heat resistance	280 \pm 5 $^{\circ}$ C for 10sec

Note

1. Must be measured after 4-12hours at room temperature, humidity.
2. Frequency must be within initial value \pm 2ppm.

4. Measurement Circuit (VC-TCXO)



* Note

1. Be cautious of VC-TCXO pin connection.
2. Load Capacitance includes probe and test JIG capacitance.

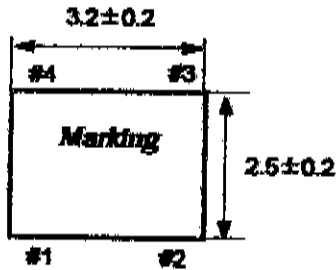
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5. Outline (3225 VC-TCXO)

Top View

unit : mm

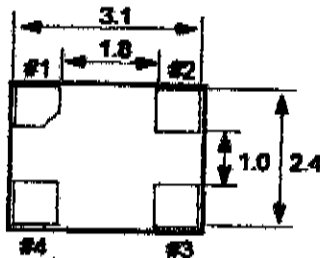


Lead No.	Connection
#1	Vcont
#2	GND
#3	Output
#4	Vcc

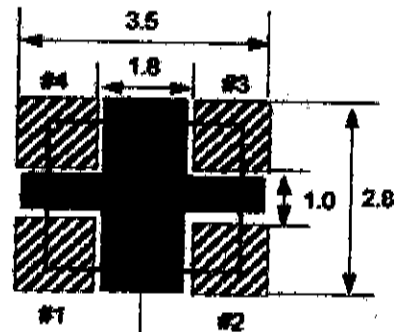
Side View



Bottom View



※ Recommended Land Pattern (3225 Type)



Do not design any patterns except GND in this area

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