

VC-TCXO 2WN2600001-Q	Product Specification	Produced date / Rev. Revised date	2020.08.31 / S1 2020.09.15 / S2
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Product Specification

VC-TCXO

Customer	
Model	2WN2600001-Q
Size	2520
Frequency	26.000000MHz
Type	VC-TCXO
Vcc	+2.4V ~ +3.3V
Vcont	+1.4 ± 1.0V
AFC Range	±9.0 ~ ±15.0ppm
Temp.	±2.0ppm max.@-30 ~ +85℃
Initial Frequency	±2.0ppm max.(After 2times reflow)

Issued Date	2020.08.31
Revised Date	2020.09.15
Prepared part	R&D
Drawn	Chen XuanRu
Checked	Jin Zhe
Approved	Xing Yue

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1. Electrical Characteristics

Parameter		Value	Conditions
Frequency		26.000000MHz	
Supply Voltage(Vcc)		+2.8V±5%	
		+3.0V±5%	
Output Load		10kohm//10pF±10%	
Auto Frequency Control(AFC)		±9.0 ~ ±14.0ppm	+1.4 ± 1.0V
Output Level		0.8Vp-p min.	Clipped sine wave(DC-coupled)
Current		1.5mA max.	10koms//10pF±10%
Duty Cycle		50±10%	
Operating Temperature Range		-30~+85℃	
Storage Temperature Range		-40~+85℃	
Initial Frequency Tolerance		±2.0ppm max.	After 2times reflow
Frequency Stability	vs. Temperature(-30 ~ +85℃)	±2.0ppm max.	Referenced to +25℃ frequency
	vs. Supply Voltage	±0.1ppm max.	Vcc±5%
	vs. Load	±0.1ppm max.	10koms//10pF±10% each
	vs. Aging	±1.0ppm max.	1 st Year
Startup Time		2ms max.	more than 90% of final amplitude
Phase Noise		-130dBc/Hz typ.	1KHz offset
ESD		HBM>2000V	JESD22-A114-B
MSL		1 级	IPC/JEDEC J-STD-033C

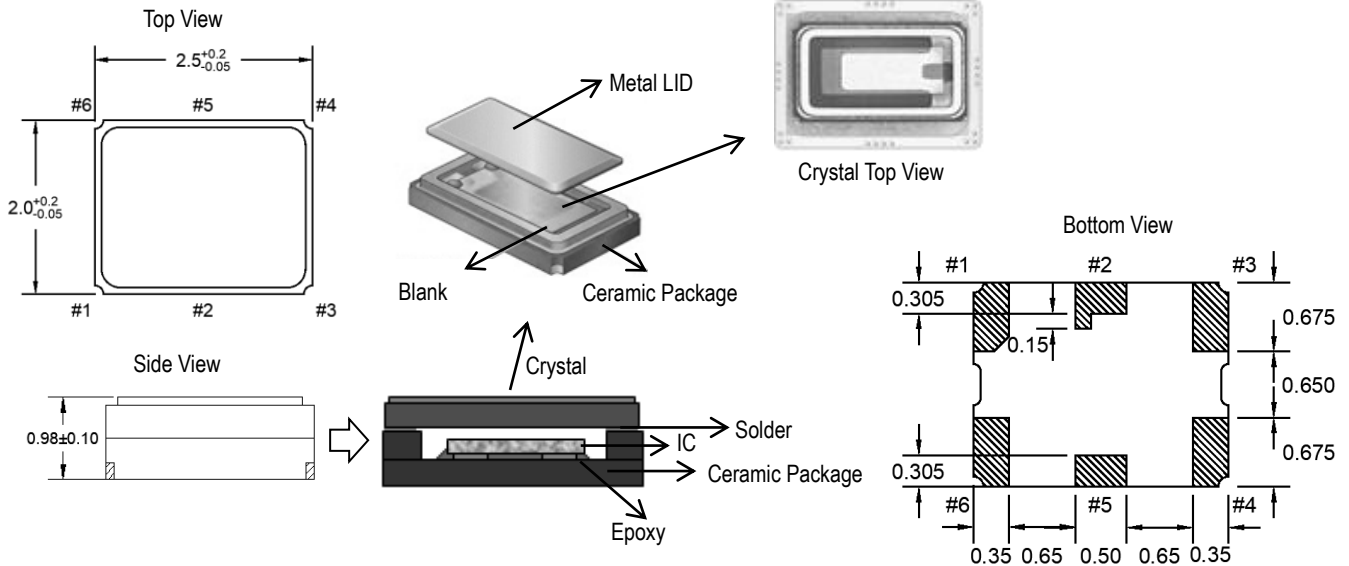
Notes:

- Please leave after reflow in 2h or more at room ambient

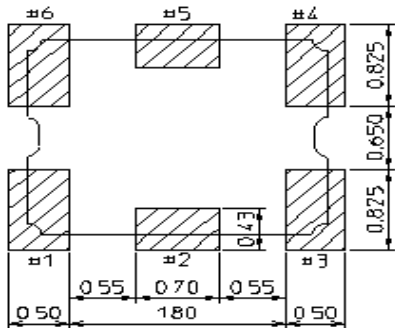
VC-TCXO 2WN2600001-Q	<h1>Product Specification</h1>	Produced date / Rev. Revised date	2020.08.31 / S1 2020.09.15 / S2
--------------------------------	--------------------------------	--------------------------------------	------------------------------------

2. Outline Specification

Unit: mm

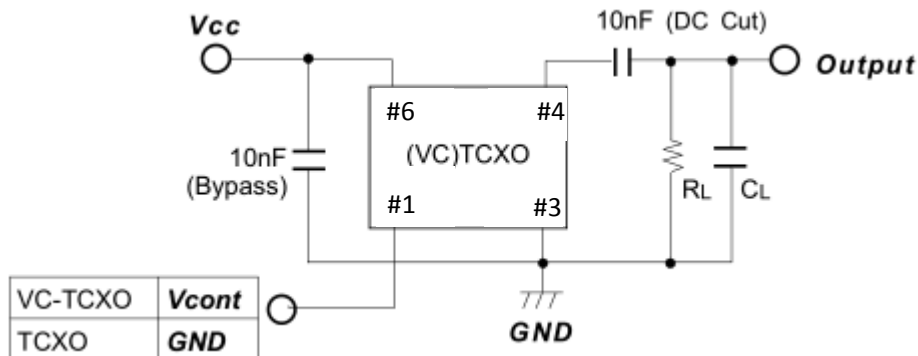


Recommended Land Pattern



Pad No.	Connection	
	TCXO	VC-TCXO
#1	GND	Vcont
#3	GND	GND
#4	Output	Output
#6	Vcc	Vcc
#2,#5	N.C.	N.C.

Measurement Circuit

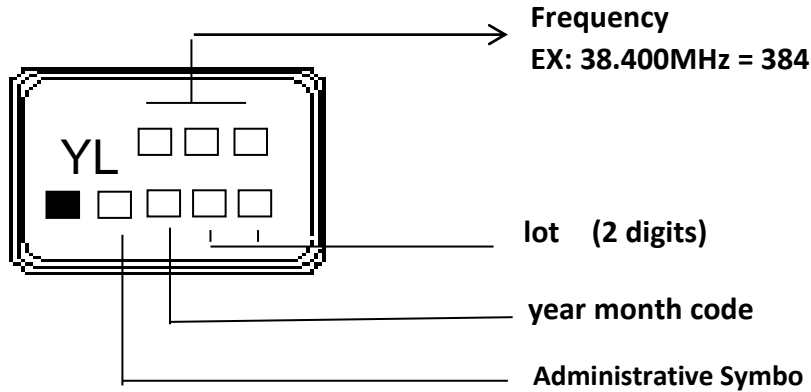


Notes:

- Please connect a bypass capacitor closely to Vcc Pad.
- Load capacitance (CL) includes probe and test board capacitance.

VC-TCXO 2WN2600001-Q	<h1>Product Specification</h1>	Produced date / Rev. Revised date	2020.08.31 / S1 2020.09.15 / S2
--------------------------------	--------------------------------	--------------------------------------	------------------------------------

3. Marking Specification

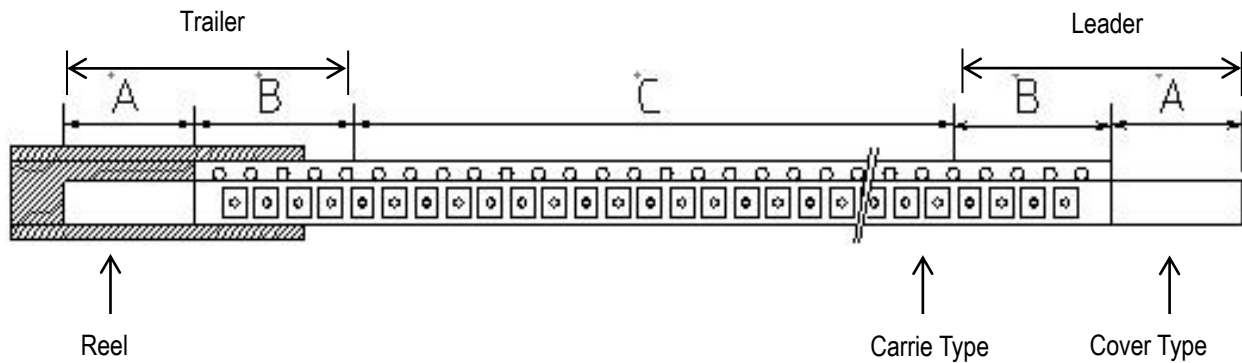


\ <table style="display: inline-table; vertical-align: middle;"> <tr> <th>month</th> <th>JAN</th> <th>FEB</th> <th>MAR</th> <th>APR</th> <th>MAY</th> <th>JUN</th> <th>JUL</th> <th>AUG</th> <th>SEP</th> <th>OCT</th> <th>NOV</th> <th>DEC</th> </tr> </table>		month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
		month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC												
year	A	B	C	D	E	F	G	H	J	K	L	M														
2021	2025	A	B	C	D	E	F	G	H	J	K	L	M													
2022	2026	N	P	Q	R	S	T	U	V	W	X	Y	Z													
2023	2027	a	b	c	d	e	f	g	h	j	k	l	m													
2024	2028	n	p	q	r	s	t	u	v	w	x	y	z													

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4. Packing Specifications

Basic Taping Specification

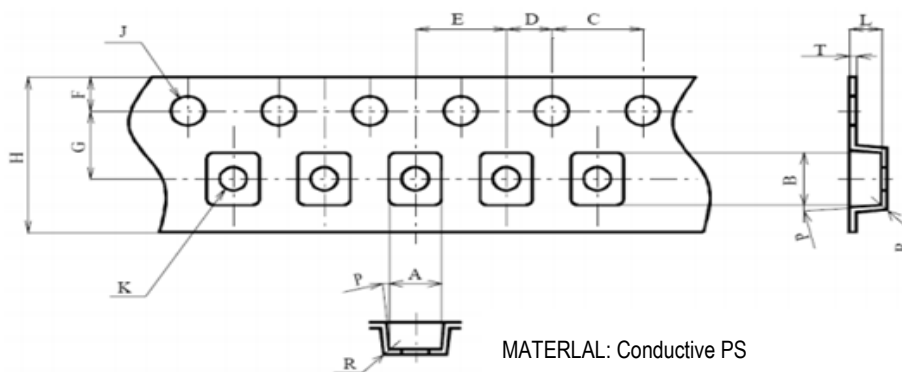


A	Cover tape only	200mm min.
B	Empty carrier tape	300mm min.
C	Component Section	

Notes:

- Insert TCXO product in carrier tape
- Attach cover tape using heat pressing method

Carrier Tape (8mm)



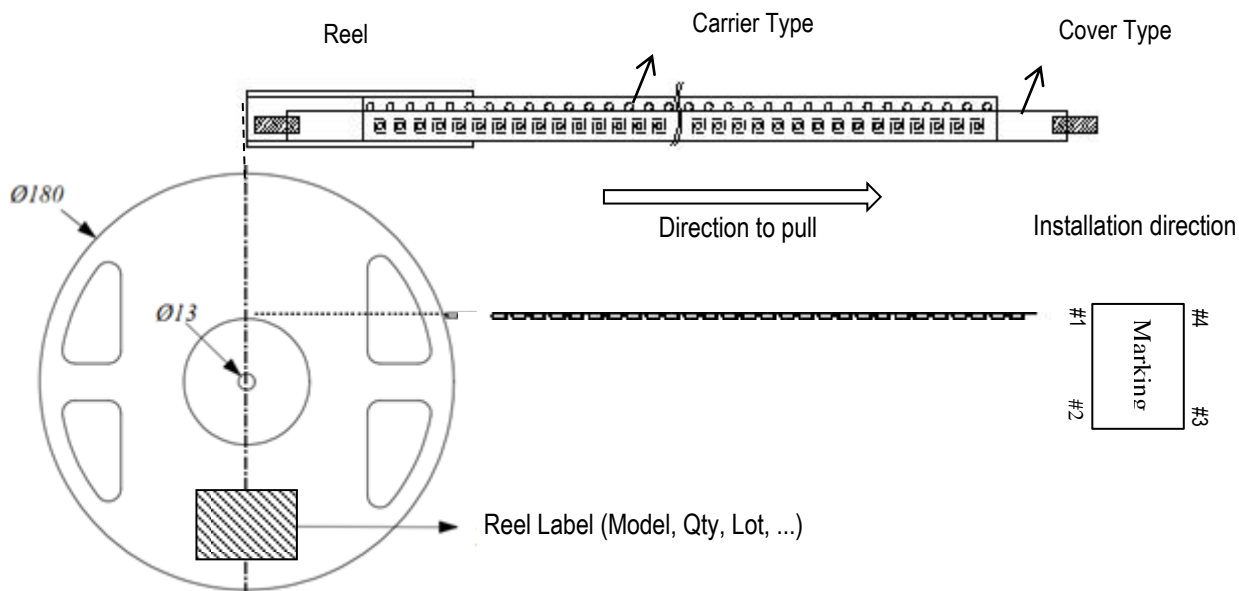
MATERIAL: Conductive PS

Unit: mm

Symbol	A	B	C	D	E	F	G
Dimension	2.3±0.1	2.7±0.1	4.0±0.1	2.0±0.05	4.0±0.1	1.75±0.1	3.5±0.05
Symbol	H	J	K	L	P	T	R
Dimension	8.0±0.2	Φ 1.5+0.1/-0	Φ 1.2±0.1	1.4±0.1	5° max.	0.3±0.05	R0.3 max.

VC-TCXO 2WN2600001-Q	<h1>Product Specification</h1>	Produced date / Rev. Revised date	2020.08.31 / S1 2020.09.15 / S2
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Reel Taping



Inner Bag / Inner Box / Outer Box



Inner Bag(1Reel)



HDPE(15 reels enter)



Outer Box(60Reel max.)

pocketful	Outer Box
45Kpcs	180Kpcs



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--------------------------------	--------------------------------	--------------------------------------	------------------------------------

5. Reliability Specifications

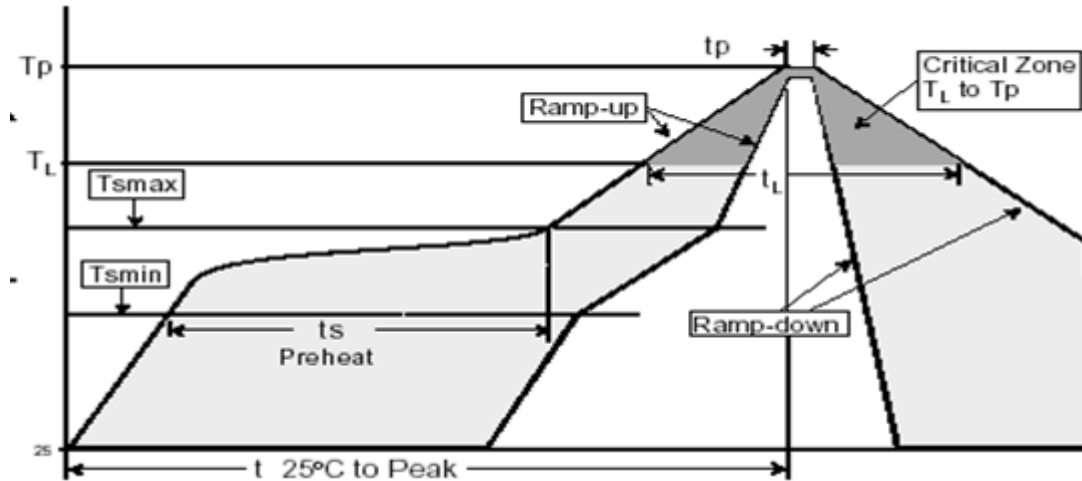
	Test Item	Test Condition	Criteria
1	Preconditioning	125°C 24Hr → 85°C,85%RH 168Hr → 3times reflow It shall be measured after 4Hr to 12Hr at room temperature & humidity	±1.0ppm
2	Drop	Preparation: Test pieces should be fixed on the dummy load with 120~150g weights Condition: Height 150cm onto Iron-plate Drop times: 3 times in 6 mutually perpendicular axes, 1 time random drop total 19 times Condition: Height 120cm onto Iron-plate Drop times: 2 times in 6 mutually perpendicular axes Total drop times: 31 times	±1.0ppm
3	High Temp. & Humidity Storage	85°C,85%RH 240Hr It shall be measured after 4Hr to 12Hr at room temperature & humidity	±1.0ppm
4	Thermal shock	-40°C/30min ↔ 85°C/30min, 100cycles It shall be measured after 4Hr to 12Hr at room temperature & humidity	±1.0ppm
5	Vibration	20~2000Hz, PSD 0.053g ² /Hz, X.Y.Z direction, 15min/direction	±1.0ppm
6	High Temp. Storage	125°C, 240Hr	±1.0ppm
7	Low Temp. Storage	-55°C, 240Hr	±1.0ppm
8	Solderability	Precondition: 105°C, 100%RH, 4Hr Condition: 235±5°C for 3±0.5sec, Solder Pot	90%
9	Solder Heat Resistance	260±5°C, 10±1sec, Solder Pot It shall be measured after 2Hr to 4Hr at room temperature & humidity	±1.0ppm
10	ESD(Electrostatic Discharge) Human Body Model	C = 100pF, V = ±1KV, R = 1.5kohm, 3times	±1.0ppm

*Storage conditions : 18 months

*Constant humidity : 40~70%

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--------------------------------	--------------------------------	--------------------------------------	------------------------------------

6. Recommended Reflow Profile



1	Preheat -Temp. Min (T _{min}) -Temp. Max (T _{max}) -Time (t _s)	150°C 200°C 60~180sec
2	Primary Heat -Temp. (T _L) -Time (t _L)	220°C 60~150sec
3	Peak -Temp. (T _p) -Time (t _p)	260°C 10sec max.