深圳市晶科鑫实业有限公司

样品承认书

客户代码：			
物料名称：	温度补偿晶体振荡器TCXO		
规格型号：	SMD2016 4pin 52.000MHz 3.3V ±0.5PPM -40~85℃		
P N/ SJK：	7X52000J33XCY		
环保属性：	■RoHS ■REACH ■HF □PAHS □其它		
版 次：	A1 2026-8-2 9 初版	最小包装： 3000pcs/real	
湿敏等级：	一级		

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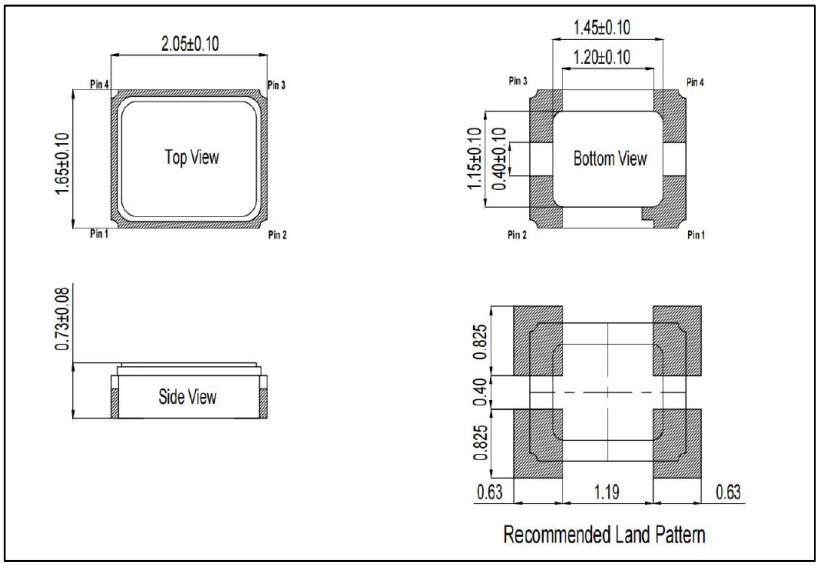
Add: 12F, Bldg. 3C, TianAn Cloud Park Phase 1, Bantian, Longgang, Shenzhen, China
Tel: (86) 755 82507042 Fax: (86) 755 88353718 Http://www.q-crystal.com.cn

ELECTRICAL SPECIFICATIONS

Parmeters		Condition	Electrical Specifications			
			MIN	TYP	MAX	UNITS
Nominal Frequency			52.000000			MHZ
Operating Temperature Rangequency			-40		85	℃
Supply Voltage			3.14	3.3	3.47	V
Current Drain					2.0	MA
Output Level			0.8			Vp-p
Output Type			Clipped sine wave			
Output Load		Resistance		10		kΩ
		Capacitance		10		Pf
Frequency Tolerance		After 2times reflow			±2.0	ppm
Frequency Stability	vs:Temperature				±0.5	ppm
	vs:Load	10kΩ/10pF ±10%			±0.2	ppm
	vs:Supply Voltage	Vcc±0.1V			±0.2	ppm
Storage Temperature			-40		85	℃
Start-upTime		To 90% of Vp-p			2.0	ms
Duty Cycle			40	50	60	%
Aging					±1.0	ppm/year

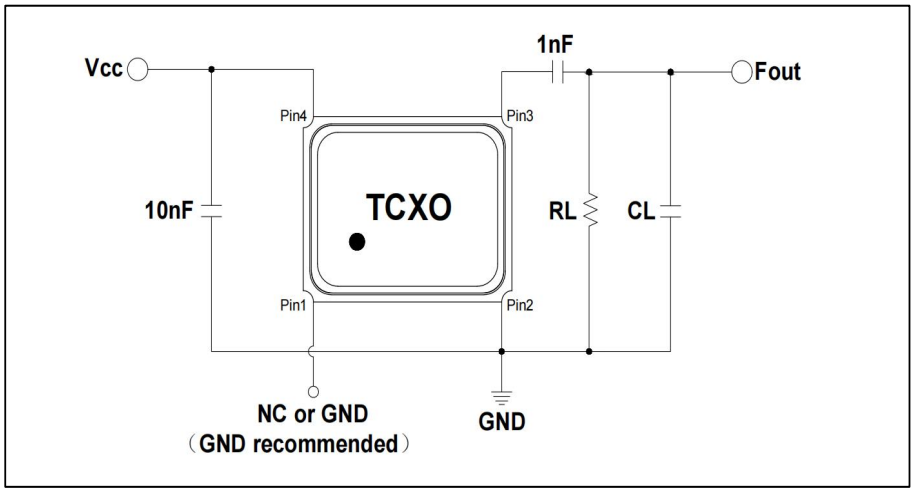
DIMENSION（Unit：mm）



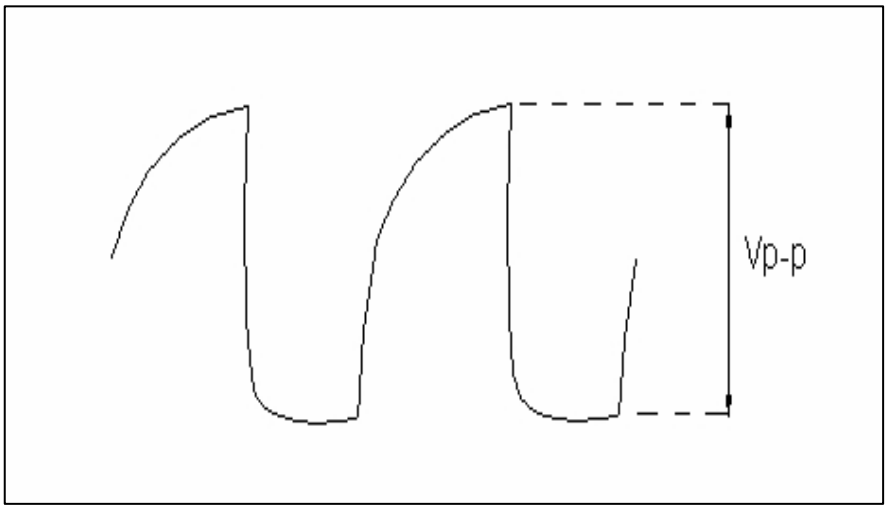
Pin Connection

Name	Connection
Pin 1	GND Or NC （GND recommended）
Pin 2	GND
Pin 3	Fout
Pin 4	Vcc

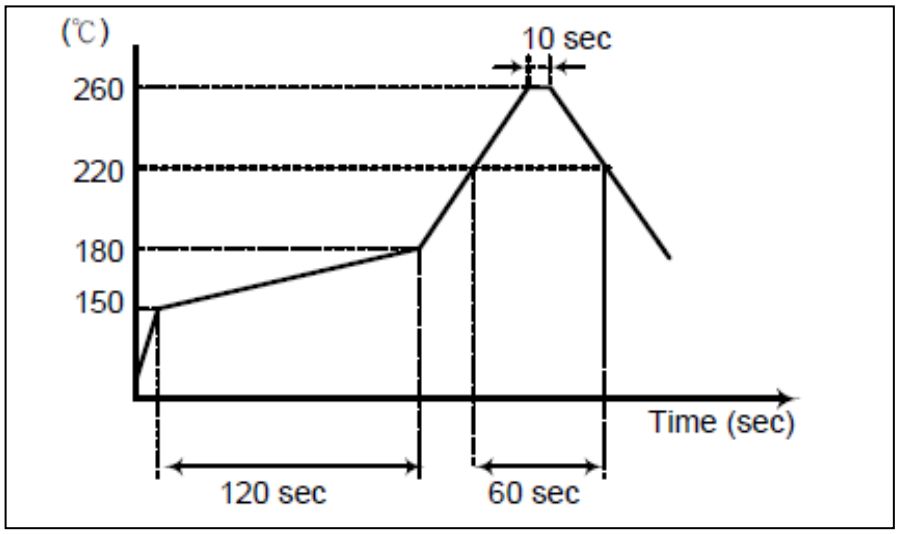
MEASUREMENT CIRCUIT



WAVEFORM CONDITIONS

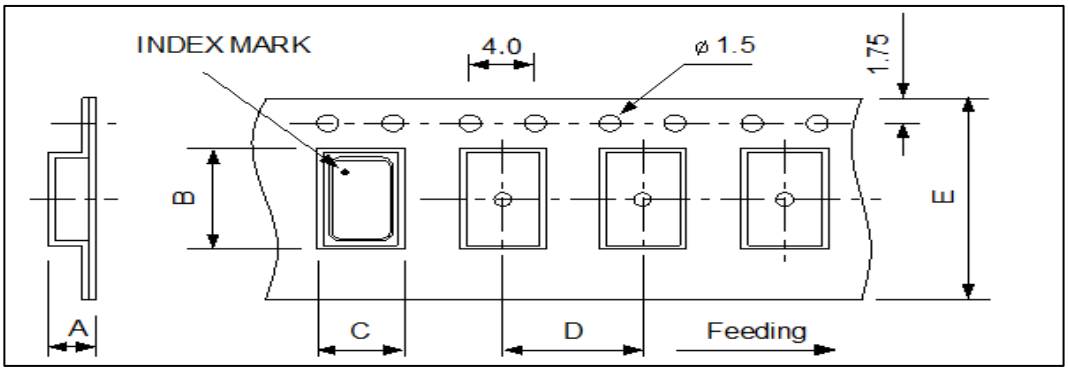


REFLOW CONDITION

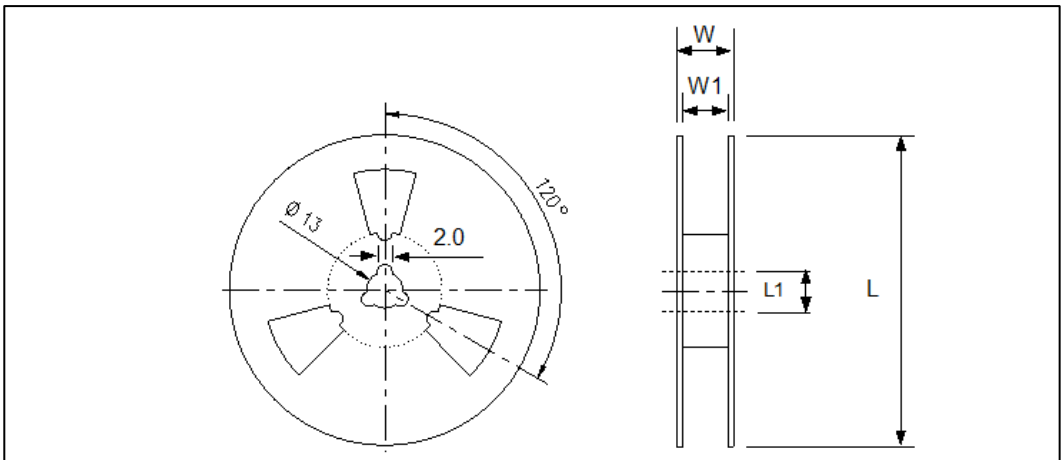


The reflow temperature profile may vary depending on the product model, specifications and frequency range.Refer to the individual product specifications for details

CARRIER TYPE

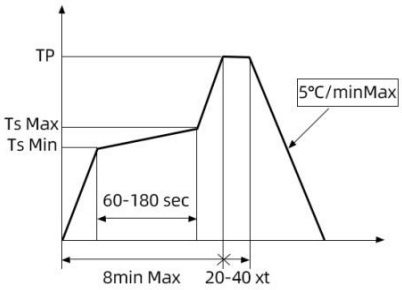


REEL



		A	B	C	D	E	L	L1	W	W1	pcs / Reel
DIMENSIONS	7050	2.15	7.9	5.4	8	16	180	13	21.5	17.5	1K
	6035	1.4	6.4	3.9	8	12	180	13	15.4	13	1K
	5032	1.46	5.5	3.6	8	12	180	13	15.4	13	1K
	3225	1.4	3.4	2.7	4	8	180	13	11.5	8	3K
	2520	1.15	2.8	2.25	4	8	180	13	10.5	8	3K
	2016	0.95	2.25	2.25	4	8	180	13	10.5	9	3K
	1612	0.8	2.0	1.85	4	8	180	13	10.5	9	3K

RELIABILITY TEST SPECIFICA TIONS

Test item	Equipment	Condition	Specification
1.SOLDERABILITY TEST	SJK-REL001、RC-328A	TP:260℃ TsMax：200℃ TsMin：150℃ 2 time 	MIL-STD-883E Method 2003.7
2. HERMETICITY TEST	HELIOT-306S	Pressurized 0.4~0.5Mpa ethanol sealed tank for 10 minutes	MIL-STD-883E Method 1014.10
3. VIBRATION TEST	HG-V4、S&A 250B	Enable Crystal(10g) from 10-55-10Hz,X、Y、Z horizontal,1 Minute vibration/time, 1time/ 2 hours.	MIL-STD-883E Method 2007.3
4. MECHANICAL SHOCK	HPC-200、S&A 250B	Enable Crystal 50G(490m/s2) time=11 ms speed=3.4 m/s half sine wave oscillation	JIS C6701
5. DROP TEST	HARD BOARD.S&A250B	75cm High,3 times on hard board	MIL-STD-202F Method 213B
6. HIGH&LOW TEMP STORAGE TEST(Static test)	H-PTH-80CK & HM101-3ABN，S&A 350B/250B	High temperature: 125℃±2℃,1000hr；Low temperature:-40℃±3℃,1000hrs	MIL-STD883C, METHOD 1011.8
7. TEMP &HUM CYCLING TEST	H-PTH-80CK CHAMBE，S&A 350B/250B	Temperature:-10℃±2℃～65℃±2℃,Humidity:93±3%,1 cycle need 24 hrs. 5cycles.	MIL-STD-883E Method 1005.8
8. HIGH TEM. & HUM.STORAGE TEST	H-PTH-80CK CHAMBE，S&A350B/250B	Temperature:85℃±2，Humidity:85+3,-2%,Store 96 hrs	JIS C6701
9. AGING TEST	H-PTH-80CK CHAMBE，S&A350B/250	Temperature:85℃±2，Store 1000 hrs	JIS C5023