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：	贴片钟振
规格型号：	**7050 OSC 22.1184MHZ 1.8~3.3V ±30PPM CMOS**
P N/ SJK：	**6N22118G33YC**

承　　认　　签　　章					
供　应　商　承　认			（　　）公 司 承 认		
制定	审 核	核 准	工 程 师	审 核	批 准
林雁	杨霞	黄灏东			
盖章签署			盖章签署		
日　　期			日　　期		
批示：　☐接受　　☐有条件接受					
备注：					

公司地址: 深圳市龙岗区天安云谷产业园一期 3 栋 C 座 12 楼 1204～1206 室
电　　话：0755-88352810-837　　传　　真：0755-88353718

Approved by: 黄灏东
Checked by: 杨霞
Issued by: 玉静霞

产品规格书

SPECIFICATION

PN / SJK: **6N22118G33YC**

深圳市晶科鑫实业有限公司
SHENZHEN CRYSTAL TECHNOLOGY INDUSTRIAL CO., LTD.

公司地址: 深圳市龙岗区天安云谷产业园一期 3 栋 C 座 12 楼 1204～1206 室
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http://www.q-crystal.com Email：sjk-fae@q-caystal.com Mobile：18682088994 (Mr.huang)

修 改 记 录					
版次	修改日	项目	改定内容	改定者	确认者
A1	2015-6-5		初版	林雁	杨霞

1. ELECTRICAL SPECIFICATIONS

Standard atmospheric conditions

Unless otherwise specified, the standard range of atmospheric conditions for making measurement and tests are as follow:
Ambient temperature : 25±5℃
Relative humidity : 40%~70%
If there is any doubt about the results, measurement shall be made within the following limits:
Ambient temperature : 25±3℃
Relative humidity : 40%~70%

Measure equipment

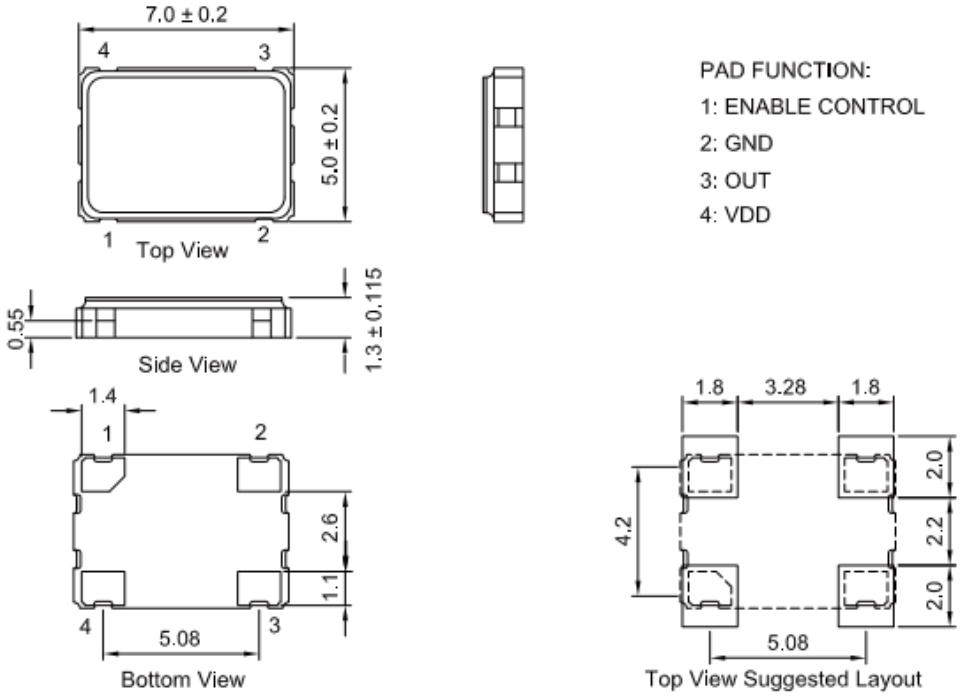
Electrical characteristics measured by MD 37WX-05M or equivalent.

Crystal cutting type

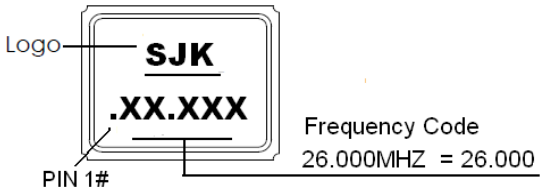
The crystal is using AT CUT (thickness shear mode).

	Parameters		SYM	Electrical Spec.				Notes
				MIN	TYPE	MAX	UNITS	
1	Nominal Frequency			22.118400			MHZ	
2	Frequency Stability	AT 25℃		±10			PPM	
		Over Operating Temperature range		±20			PPM	
3	Operating Temperature		Topr	-40	25	85	℃	
4	Storage Temperature		Tstg	-55	~	125	℃	
5	Supply Voltage		VDD	1.8~3.3 ±10%			V	
6	Input Current		Icc			10	mA	
7	Enable Control			Yes				Pad1
8	Output Load : CMOS		CL	15			pF	
9	Output Voltage High		VoH	90% Vdd			V	
10	Output Voltage Low		VoL			10% Vdd	V	
11	Rise Time		Tr			5	ns	10%→90%VDD Level
12	Fall Time		Tf			5	ns	90%→10%VDD Level
13	Symmetry (Duty ratio)		TH/T	45	~	55	%	
14	Start-up Time		Tosc			10	ms	
15	Enable Voltage High		Vhi	70% Vdd			V	
16	Disable Voltage Low		Vlo			30% Vdd	V	
17	Aging			±3			ppm/yr.	1st. Year at 25℃
18	Output Disable Delay Time		T off			150	us	
19	Output Enable Delay Time		T on			150	us	
20	Phase Jitter （12KHZ~20MHZ）				0.5	1.0	ps	

2. DIMENSIONS (Units :mm)

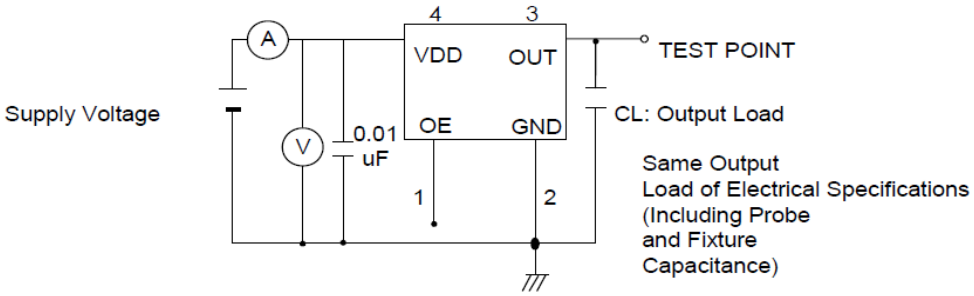


MARKING



3. TEST CIRCUIT

Control input (output enable/disable)
Logic 1 or open on pad 1: Oscillator output
Logic 0 on pad 1 : Disable output to high impedance

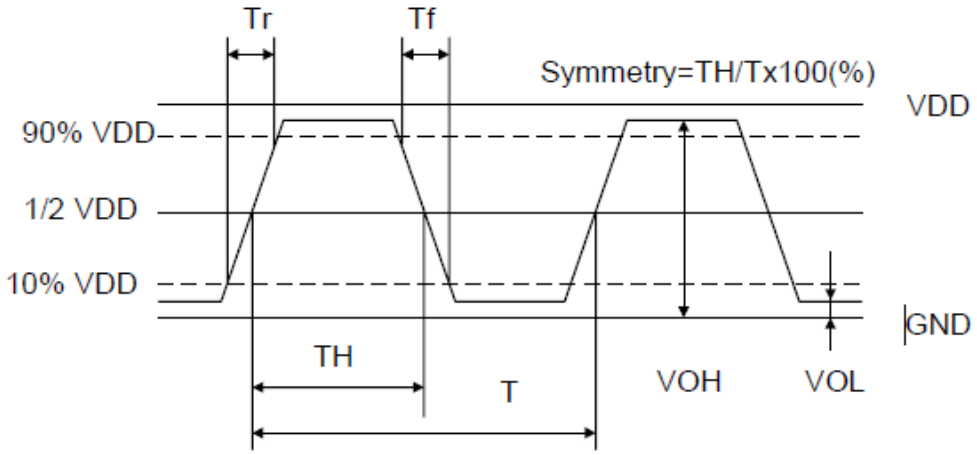


4. PART NUMBER GUIDE

SJK -	6N	—	22118	—	G	—	33	—	Y	—	C
			Frequency 22.1184MHz		Frequency tolerance G:±30ppm		Supply voltage 33:1.8~3.3V		Fan out type X:TTL/CMOS Y:CMOS Z:TTL		Temperature range C: -40-85℃

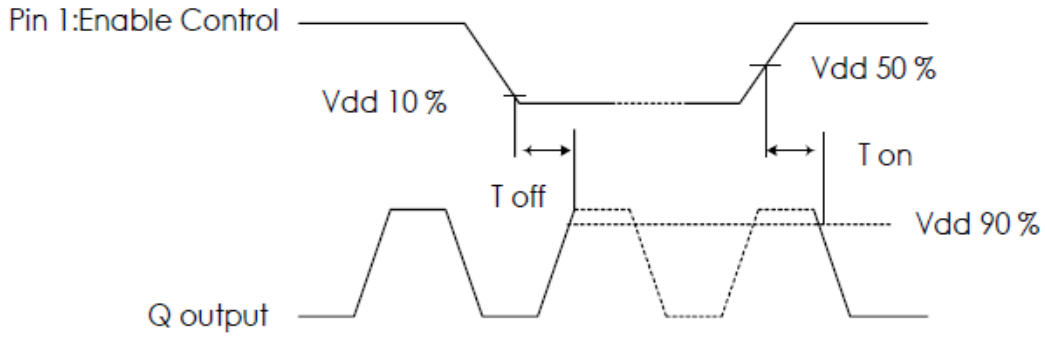
5. WAVEFORM CONDITIONS

Waveform measurement system should have a min. bandwidth of 5 times the frequency being tested.

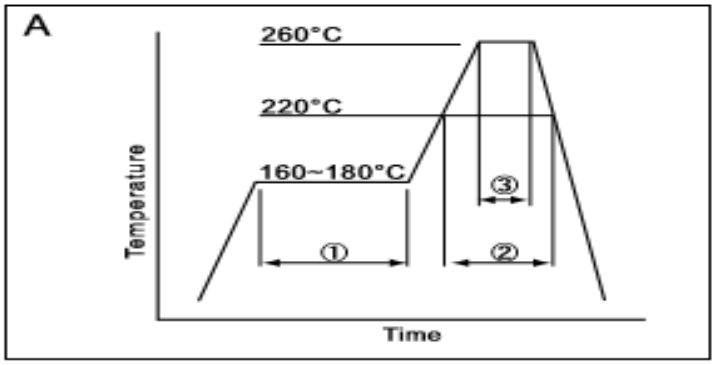


6. OUTPUT ENABLE / DISABLE DELAY

The following figure shows the oscillator timing during normal operation . Note that when the device is in standby,
the oscillator stops. When standby is released, the oscillator starts and stable oscillator output occurs after a short delay



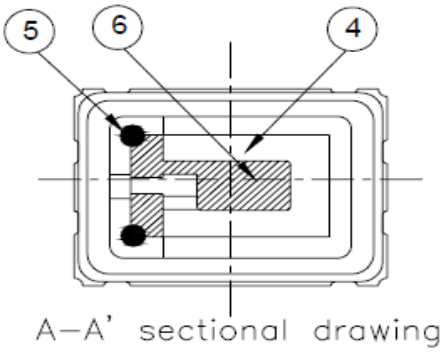
7. SUGGESTED REFLOW PROFILE



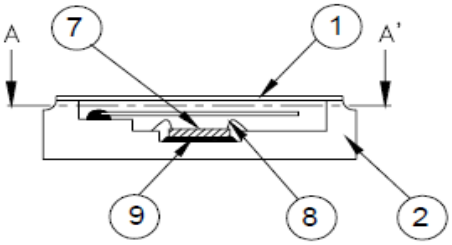
①	Preheat	160~180°C	120sec.
②	Primary heat	220°C	60sec.
③	Peak	260°C	10sec. max

Total time : 200 sec. Max / Solder melting point :220 ℃

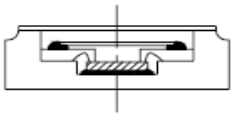
8. STRUCTURE ILLUSTRATION



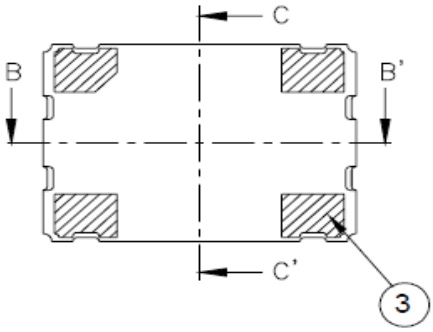
A–A' sectional drawing



B–B' sectional drawing

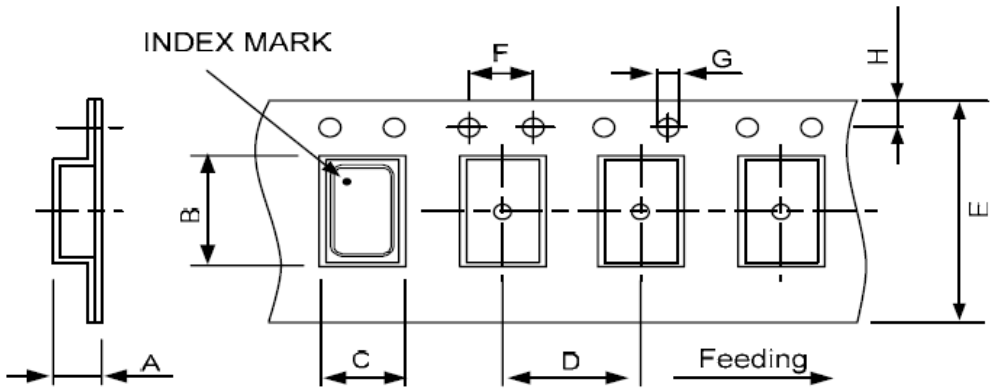


C–C' sectional drawing



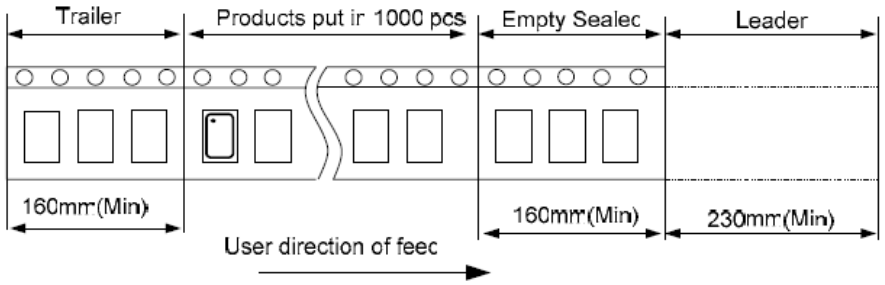
NO	COMPONENTS	MATERIALS	FINISH/SPECIFICATIONS
1	LID	Kovar (Fe/Co/Ni)	
2	Base(Package)	Ceramic (AI2O3) + Kovar (Fe/Co/Ni)+ Ag/Cu	Color black
3	PAD	Au	Tungsten metalize + Ni plating + Au plating
4	Crystal blank	SiO2	
5	Conductive adhesive	Ag	Silicon resin
6	Electrode	Noble Metal	
7	IC chip		
8	Bonding wire	Au	Pad 1 options : NC is 5 wires , EN is 6 wires.
9	Die attached	Conductive (Ag)	Epoxy resin

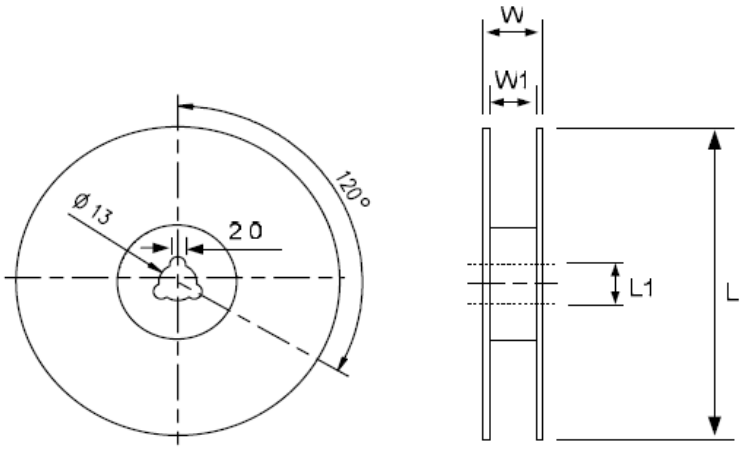
9. PACKING



DIMENSIONS	A	B	C	D	E	F	G	H	
	2.30	7.90	5.45	8.00	16.00	4.00	1.50	1.75	(UNIT : mm)

REMARK :





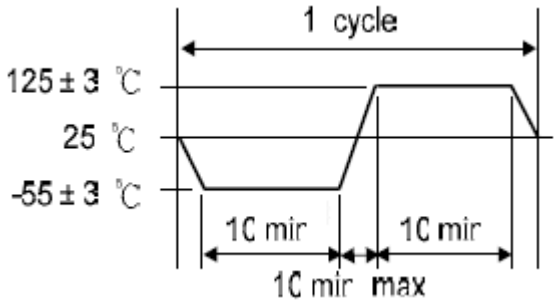
DIMENSIONS	L	L1	W	W1	pcs / Reel (UNIT : mm)
	180	13	20.5	16	Standard Reel Quantity is 1,000 pcs per reel

10. RELIABILITY TEST SPECIFICATION

1.Mechanical Endurance

No.	Test Item	Test Methods	REF. DOC
1	Drop Test	75 cm height,3 times on concrete floor .	JIS C6701
2	Mechanical Shock	Device are shocked to half sine wave (1000 G) three mutually perpendicular axes each 3 times. 0.5m sec. duration time	MIL-STD-202F
3	Vibration	Frequency range 10 ~ 2000 Hz Amplitude 1.52 mm/20G Sweep time 20 minutes Perpendicular axes each test time 4 Hrs (Total test time 12 Hrs)	MIL-STD-883E
4	Gross Leak	Standard Sample For Automatic Gross Leak Detector, Test Pressure: 2kg / cm2	MIL-STD-883E
5	Fine Leak	Helium Bomging 4.5 kgf / cm 2 for 2 Hrs	
6	Solderability	Temperature 245 ℃ ± 5℃ Immersing depth 0.5 mm minimum Immersion time 5 ± 1 seconds Flux Rosin resin methyl alcohol solvent (1 : 4)	MIL-STD-883E

2.Environmental Endurance

No.	Test Item	Test Methods	REF. DOC
1	Resistance To Soldering Heat	Pre-heat temperature 125 ℃ Pre-heat time 60 ~ 120 sec. Test temperature 260 ± 5 ℃ Test time 10 ± 1 sec.	MIL-STD-202F
2	High Temp. Storage	+ 125 ℃ ± 3 ℃ for 1000 ± 12 Hrs	MIL-STD-883E
3	Low Temp. Storage	- 40 ℃ ± 3 ℃ for 1000 ± 12 Hrs	
4	Thermal Shock	Total 100 cycles of the following temperature cycle 	MIL-STD-883E
5	Pressure Cooker Storage	121 ± 3℃ , RH100% , 2 bar , 240 Hrs	JIS C6701
6	High Temp&Humidity	85℃ ± 3℃, RH 85% , 1000 Hrs	JIS C5023

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