

# CRYSTAL OSCILLATOR

SERIES 3N, SEAM SEALED CERAMIC 3.2X2.5MM SURFACE MOUNT PACKAGE

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Approved by:
Checked by:
Issued by:

# SPECIFICATION

**MODEL: SJK-3N-20-3.3-50-X-C**

**深圳市晶科鑫实业有限公司**

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## FEATURE

- I Broad frequency range from 1Mhz to 106MHz
- I Compact and thin ceramic package with a metalized for surface mounting and automatically loaded
- I Reflow solder is possible
- I Lower noise and current with reduced power consumption
- I Built-in C-MOS IC with tri-state function
- I 5V and 3.3V supply model available
- I Ideally suited designed for use in PCs, NB, PCMCIA Cards, Palmtop Computer, Portable Applications

## ELECTRICAL SPECIFICATIONS

Nominal Frequency	20.000mhz
Frequency Stability	± 50ppm
Operating Temperature	-40~+85℃
Storge Temperature	-55~+125℃
Supply Voltage	3.3v ± 10%
Input Current	15mA
Output load:	15pF
Output Voltage High(min)	90%Vdd
Output Voltage Low(max)	10%Vdd
Rise Time	8 ns (10% → 90%VDD Level)
Fall Time	8 ns (10% → 90%VDD Level)
Symmetry (Duty ratio)	45~55%
Start-up Time	10ms
Enable Voltage High	70%Vdd
Disable Voltage Low	30%Vdd
Aging	± 5ppm(1 <sup>st</sup> ,year at 25 °C
Output Disable delay Time	150us
Oout Enable delay time	150us

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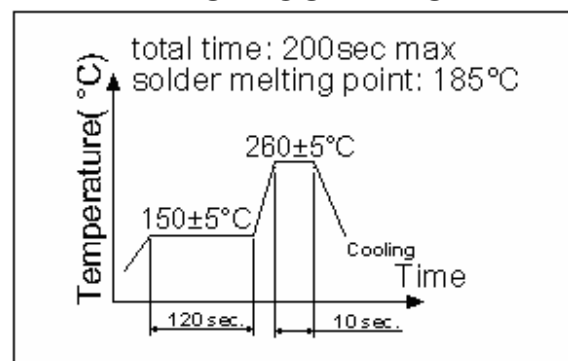
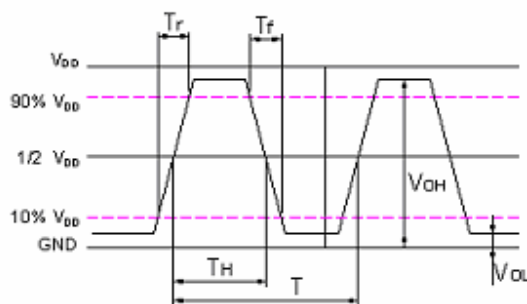
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PIN	FUNCTION
1	Tri-state
2	Ground
3	Output
4	Vdd

Marking Definitions (印字说明)  
 Y/Year(年的最后一位)the last digits of year(1,2001,2,2002,...)  
 M/Month(月度代码)A,B,C,D,E,F,G,H,I,J,K,L  
 UNIT(单位)mm

## REFLOW CONDITION



## PART NUMBER GUIDE

SJK--	3N	20.000 Frequency 20.000:20.000 MHz	3.3 Supply voltage 5:5V 3.3:3.3V	50 Frequency tolerance 50:±50ppm 25:±25ppm	X Fan out type X:TTL/CMOS Y:CMOS Z:TTL	C Temperature range A: 0-60°C B:-20-70°C C:-40-85°C
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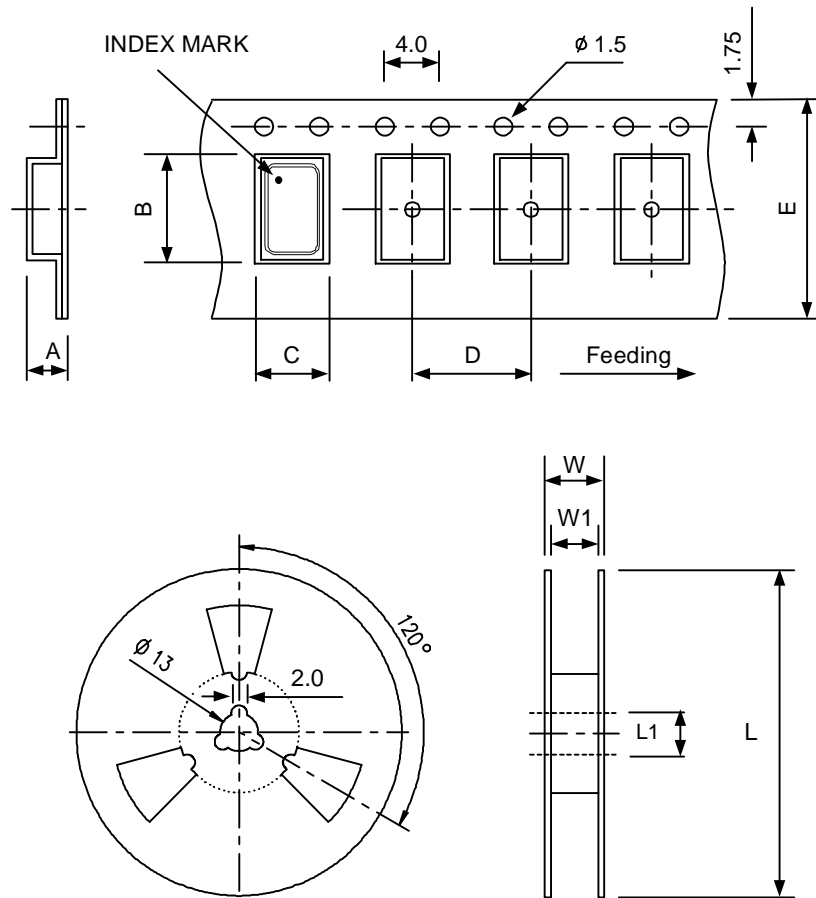
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## PACKING



DIMENSIONS		A	B	C	D	E	L	L1	W	W1	pcs / Reel
	7050	2.15	7.9	5.4	8.0	16	180	13	21.5	17.5	1K
5032	1.46	5.5	3.6	8.0	12	180	13	15.4	13		
3225	1.40	3.40	2.70	4.0	8.0	178	13	11.5	8		

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## RELIABILITY TEST SPECIFICATION

Test item	Equipment	Condition	Specification
1. SOLDERABILITY TEST	SJK-RELO01、RC-328A	1.solderability:235±5℃, 5±0.5S 2.heat resistance:260±5 ℃ ,10±1S restoration of 1 hour	MIL-STD-883E Method 2003. 7
2. HERMETICITY TEST	HELIOT-306S	FC-84 FLUOROCARBON, BUBBLE MACHINE	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/s <sup>2</sup> ) 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. SALT SPRAY	H-SST-60、RC-328A	5% NaCl, 35 ℃ ± 2 ℃ chamber, 48 hrs. , PH: 6.5~7.2	JIS C6701
7. 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-STD-883C, METHOD 1011. 8
8. TEMP & HUM CYCLING TEST	H-PTH-80CK CHAMBER , S&A 350B/250B	Temperature: -10 ℃ ± 2 ℃ ~ 65 ℃ ± 2 ℃, Humidity: 93±3%, 1 cycle need 24 hrs. 5cycles.	MIL-STD-883E Method 1005. 8
9. HIGH TEM. & HUM. STORAGE TEST	H-PTH-80CK CHAMBER , S&A350B/250B	temperature: 40℃ ± 2, Humidity: 85+3, - 2%, Store 96 hrs	JIS C6701
10. AGING TEST	H-PTH-80CK CHAMBER , S&A350B/250	temperature: 85℃ ± 2, 1000hrs	JIS C5023

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