



Approved by:
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SPECIFICATION

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

Add: RM#1805, East Wing, TianAn Hi-tech Plaza Phase2, TianAn Cyber Park Shenzhen, China
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E-mail: sjk@q-crystal.com HTTP://www.q-crystal.com

Crystal oscillator

SMD CMOS Output 7.0×5.0×1.3 6N Series



FEATURE

- I Small SMD seam sealed clock crystal oscillator units.
- I High precision characteristic covering up to wide frequency range. .Designed for automatic mounting and reflow soldering.
- I Tri-State function available.
- I Supply voltage range : 1.8 V ~ 5 V.
- I High stability, low jitter, low power consumption.
- I Main application : wireless communication, PC, and LCDM.
- I RoHS Compliant / Pb Free.

ELECTRICAL SPECIFICATIONS

Parameters	Condition/Model	6N
Fan Out Type		CMOS
Supply Voltage		3.3V±10%
Frequency		160.000MHz
Operating Temperature		-40~+85℃
Frequency Stability	All Conditions	±20ppm
Current		50mA Max
Output Voltage	Vol(max)	90%VDD Min
	VoH(min)	10%VDD Max
Rise/Fall Time	AT 0.1Vdd~0.9Vdd	5ns max
Load Capacitance		15pF
Duty Cycle		50±10%
Storage Temperature		-55~+125℃
Start-upTime	Load RANGE	8ms max
Aging		±3ppm(1 st ,year at 25℃)
Tri-State	Output Active	2.31V Min Pin 1 Tri-state
	Output in High-Impedance state	0.99V Max
PAD Connection	PIN#1 E/D	PIN#3 OUT
	PIN#2 GND	PIN#4 Vdd

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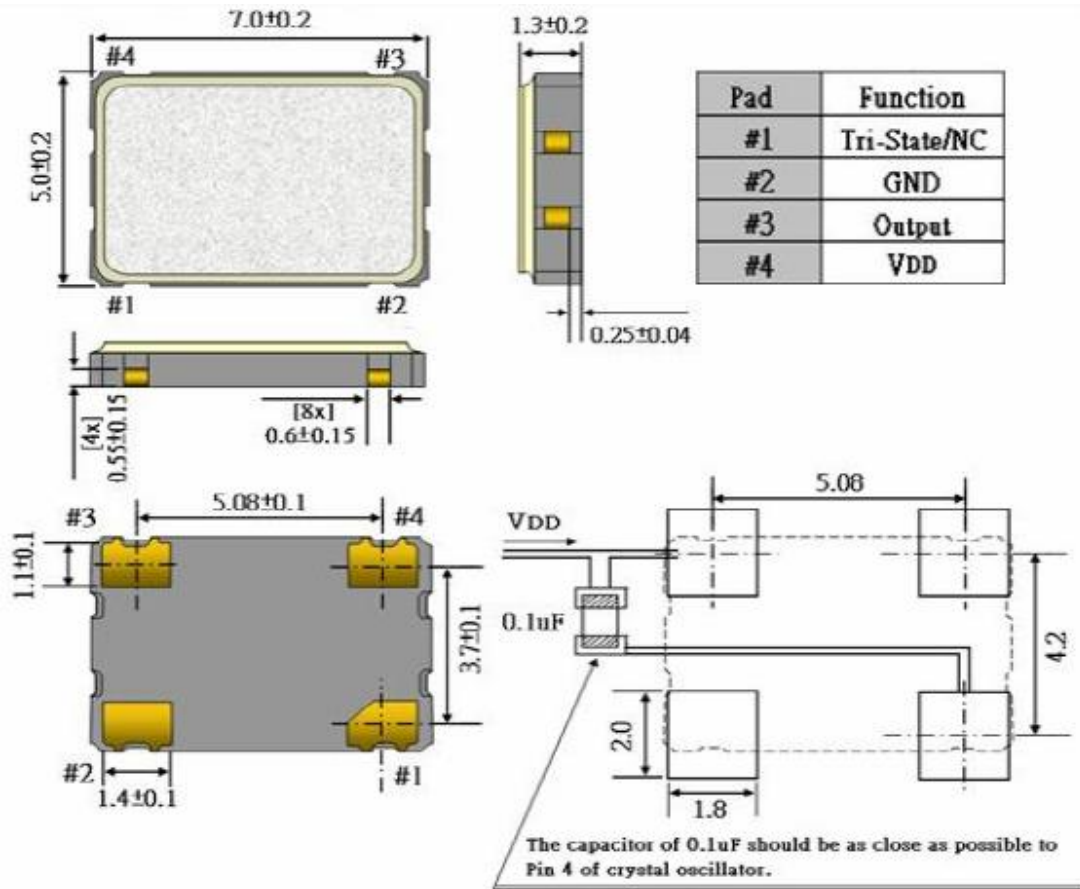
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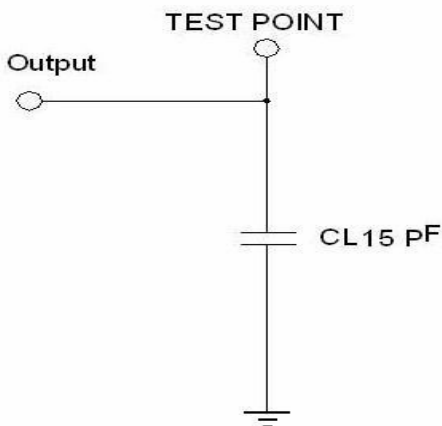
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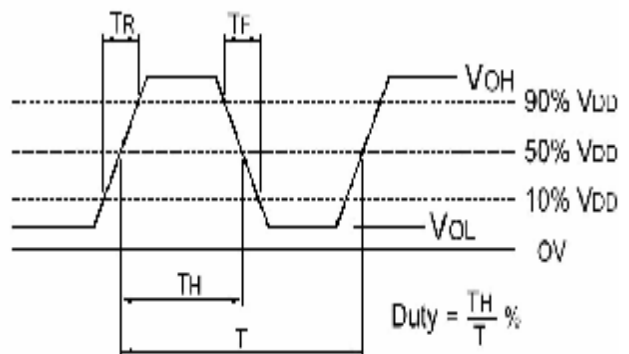
DIMENSIONS



TEST CIRCUIT (CMOS LOAD)



OUTPUT WAVEFORM (CMOS LOAD)



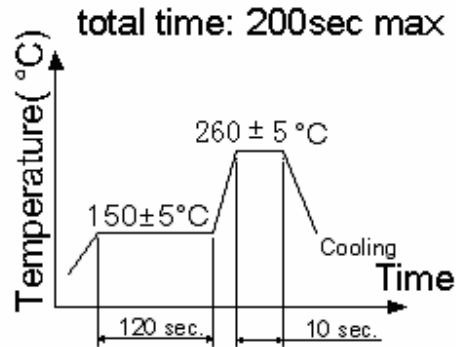
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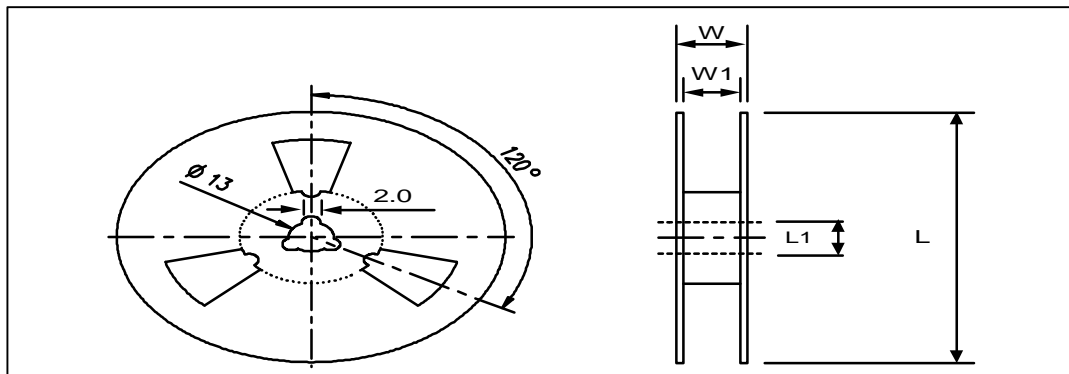
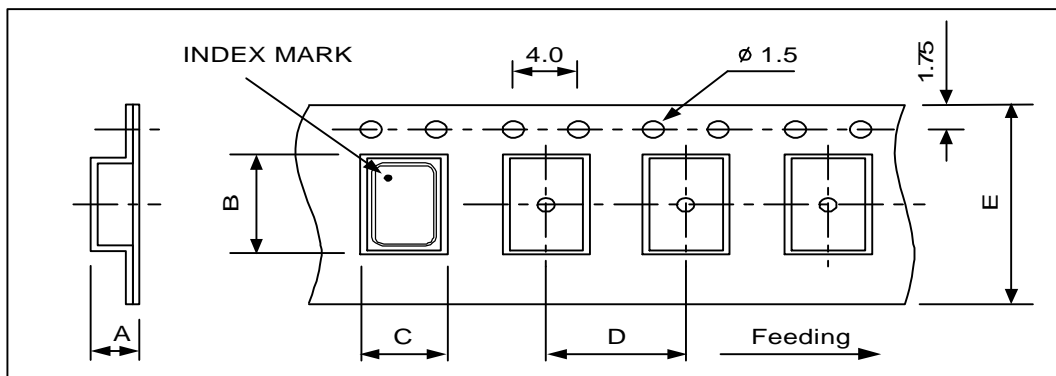
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REFLOW CONDITION



PACKING



DIMENSIONS		A	B	C	D	E	L	L1	W	W1	pcs/ Reel
	7050	2.15	7.9	5.4	8	16	180	13	21.5	17.5	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	178	13	11.5	8	3K
	2520	1.15	2.75	2.25	4	8	178	13	11.5	8	3K

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RELIABILITY TEST SPECIFICATION

Test item	Equipment	Condition	Specification
1.SOLDERABILITY TEST	SJK-REL001、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 ²) 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 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
9. HIGH TEM. & HUM. STORAGE TEST	H-PTH-80CK CHAMBE , S&A350B/250B	temperature:40℃±2 , Humidity:85+3,-2%,Store 96 hrs	JIS C6701
10.AGING TEST	H-PTH-80CK CHAMBE , S&A350B/250	temperature: 85℃±2, 1000hrs	JIS C5023

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