

Crystal Resonators

SMD Seam 3.2×2.5×0.7mm 7U Series



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SPECIFICATION

PN: ECN-7U24000MAF143ZA3

深圳市晶科鑫实业有限公司

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FEATURE

- Reliable seam sealed ceramic package.
- Wide operating temperature range.
- Superior performance and stringent reliability in harsh environment.
- Application: TPMS, ECM, ABS and sensor modules.
- Compact size.
- RoHS Compliant / Pb Free.

ELECTRICAL SPECIFICATIONS (电气参数)

Output Frequency Range	24.000MHz
Mode	AT/Fundamental
Frequency Tolerance (at 25°C)	±10ppm
Frequency Stability Over Operating Temperature Characteristics	±30ppm
Operating Temperature Range	-40°C to +85°C
Storage Temperature Range	-55°C to +125°C
Shunt Capacitance (C0)	3.0 PF Max
Driver Level (Typical)	100μW
Load Capacitance(CL)	16PF
Equivalent Series Resistance(ESR)	60Ω Max
Aging @25°C 1 st year (Max)	±3ppm/year

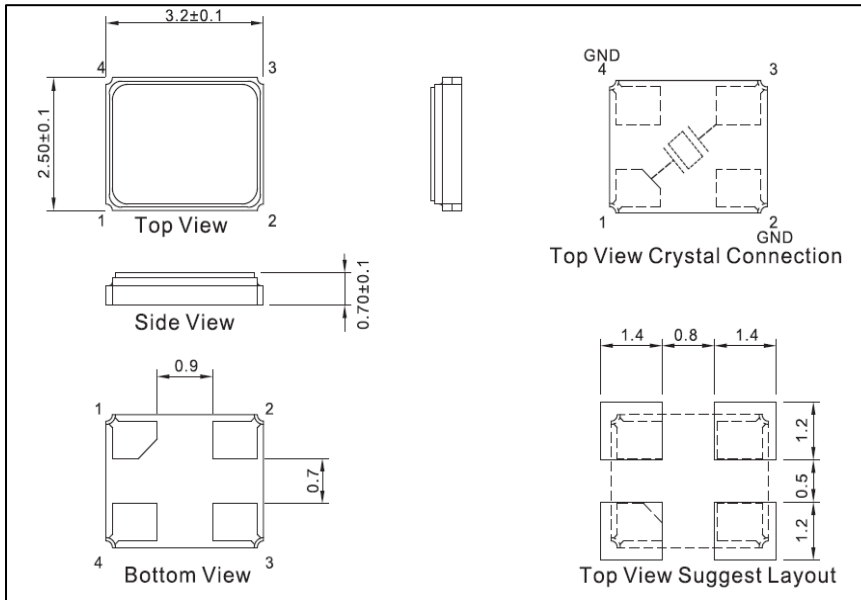
REMARK: SPECIFICATIONS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE. PLEASE
CONFIRM WITH OUR SALES ENGINEER.

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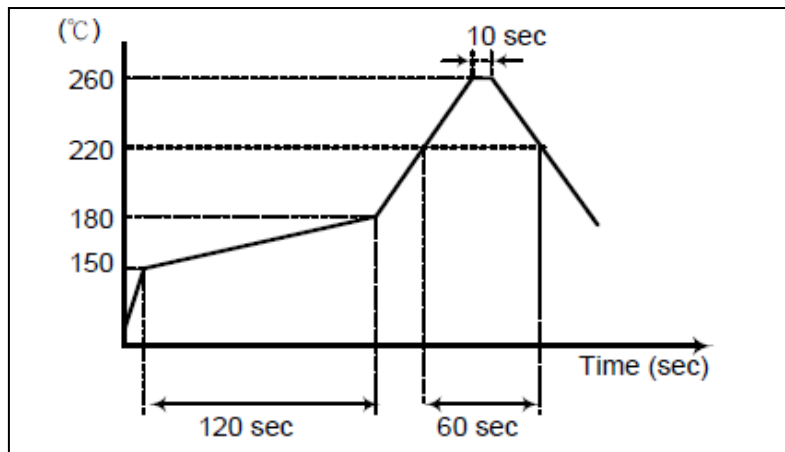
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Dimension (尺寸) (Unit: mm)



REFLOW CONDITION (回流焊)



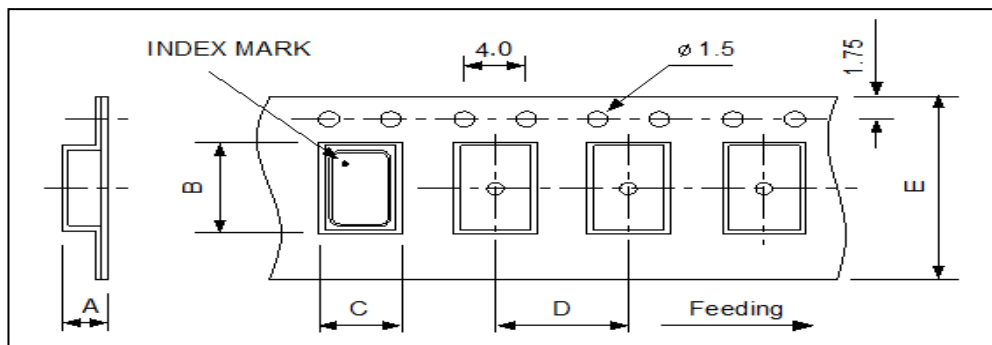
The reflow temperature profile may vary depending on the product model, specifications and frequency range. Refer to the individual product specifications for details

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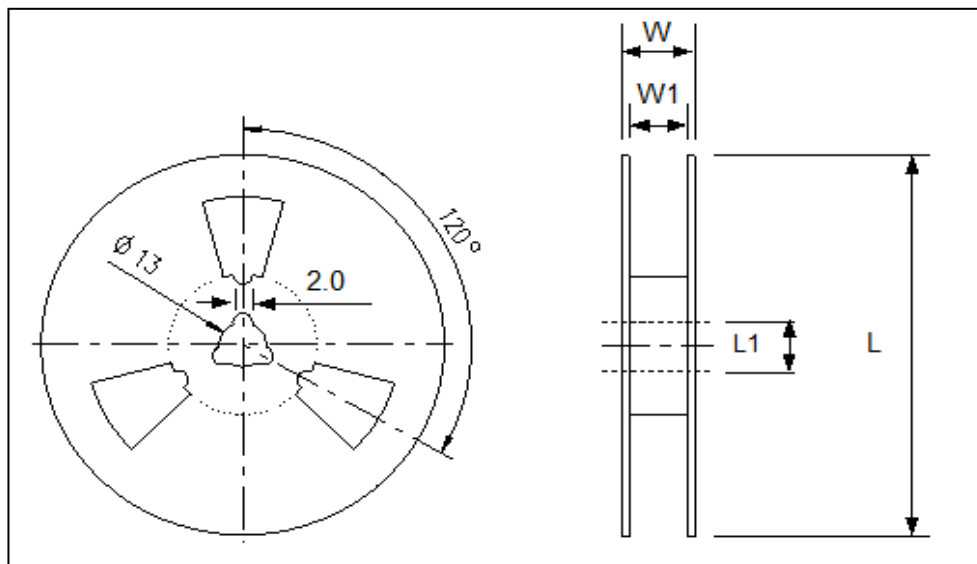
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CARRIER TYPE (載帶)



REEL (卷盘)



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
	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
	1210	0.45	1.30	1.10	4	8	180	13	10.5	8	3K

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RELIABILITY TEST SPECIFICATIONS (可靠性测试标准)

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. 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:40℃±2, Humidity:85+3,-2%,Store 96 hrs	JIS C6701
9.AGING TEST	H-PTH-80CK CHAMBE, S&A350B/250	Temperature:40℃±2, Humidity:85+3,-2%,Store 96 hrs	JIS C5023

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