



SPECIFICATION

KSE-7U24000M8Z143ZA3

Crystal Resonators

SMD Seam 3.2×2.5×0.7mm 7U Series

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

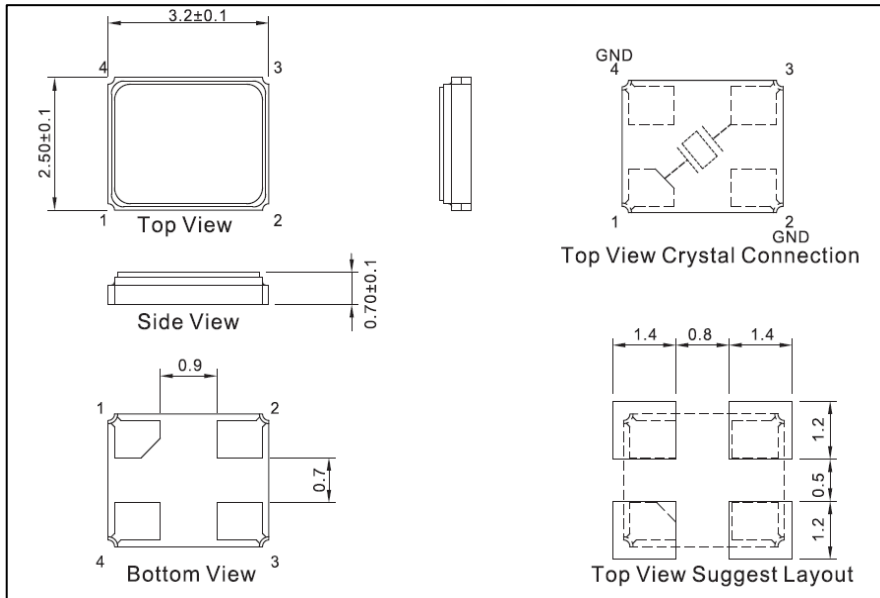
Nominal Frequency	24.000MHz
Mode	AT/Fundamental
Frequency Tolerance (at 25°C)	±10ppm
Frequency Stability Over Operating Temperature Characteristics	±30ppm
Operating Temperature Range	-40°C to +85°C
Storage Temperature Range	-55°C to +125°C
Shunt Capacitance (C0)	3.0 PF Max
Driver Level (DL)	100µW Typical
Load Capacitance(CL)	8PF
Equivalent Series Resistance(ESR)	60Ω Max
Aging @25°C first year (Max)	±3ppm/year

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

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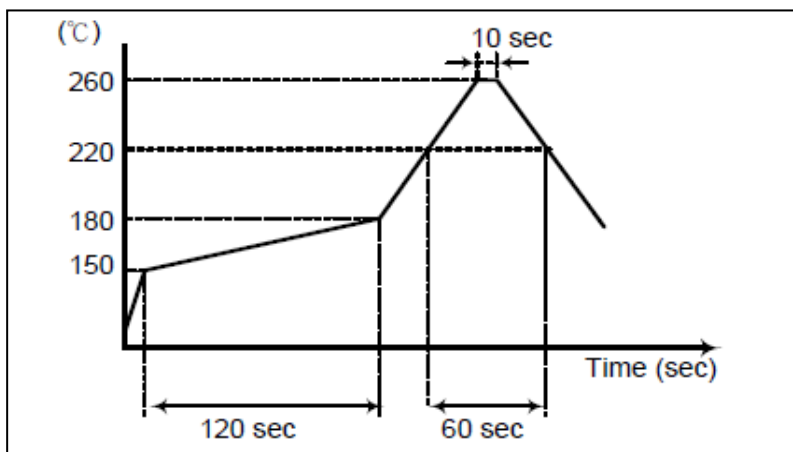
DIMENSION (Unit: mm)



MARK



REFLOW CONDITION



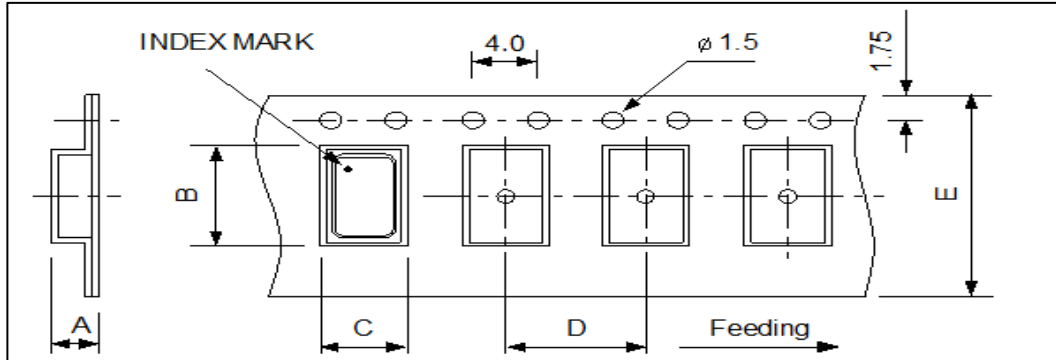
The reflow temperature profile may vary depending on the product model, specifications and frequency range. Refer to the individual product specifications for details

The design, manufacturing process, and specifications of this device are subject to change without notice.

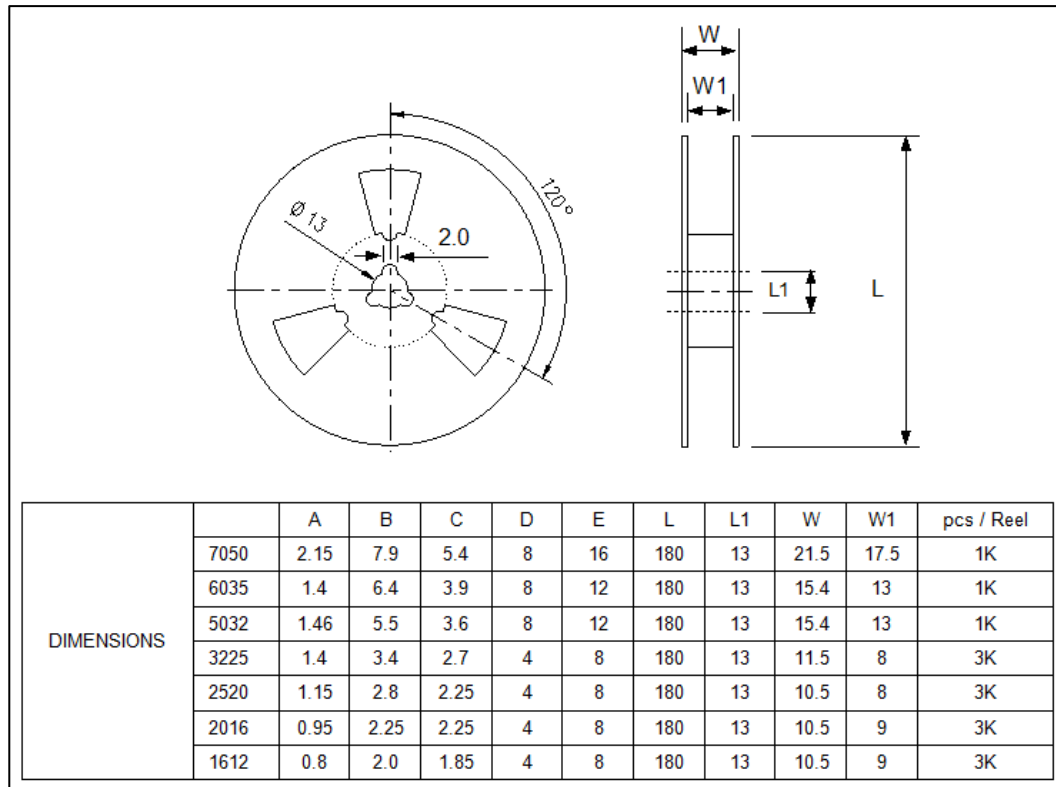
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CARRIER TYPE



REEL

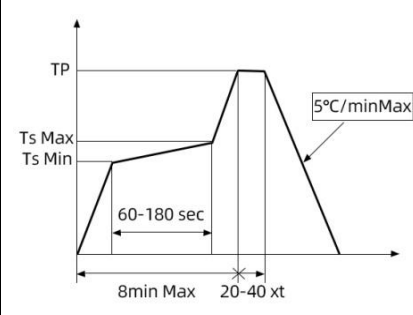


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RELIABILITY TEST SPECIFICATIONS

Test item	Equipment	Condition	Specification
1.SOLDERABILITY TEST	SK-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/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: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

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