

Crystal oscillator

SMD CMOS Output 7.0×5.0×1.3mm 6N Series

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# SPECIFICATION

**PN: KSE-6NxxxxxM3C045ZA3**

xxxxx - frequency, MHz; e.g. 08000=8MHz, 12000=12MHz

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### FEATURE

- Small SMD seam sealed clock crystal oscillator units.
- High precision characteristic covering up to wide frequency range.
- Designed for automatic mounting and reflow soldering.
- Tri-State function available.
- Supply voltage range : 1.8 V ~ 5.0 V.
- High stability, low jitter, low power consumption.
- Main application : wireless communication set, PC, and LCDM.
- RoHS Compliant / Pb Free.

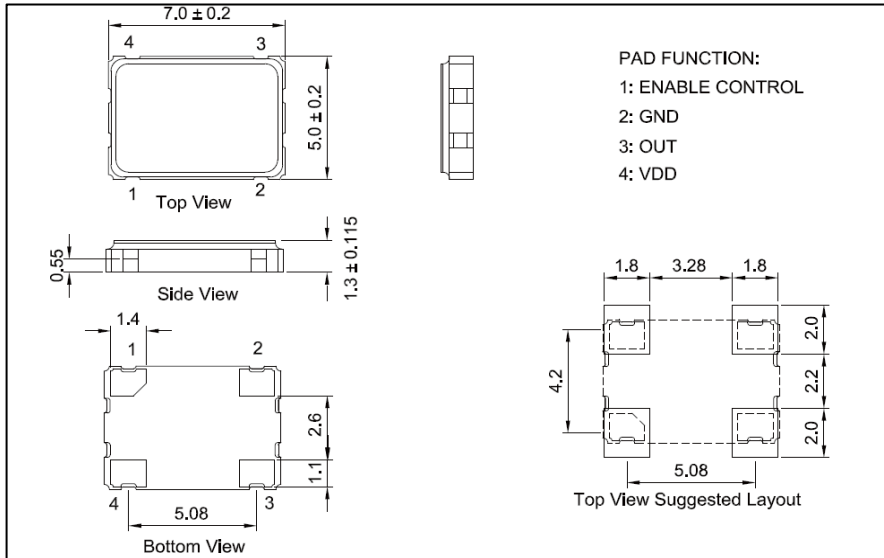
### ELECTRICAL SPECIFICATIONS

Parameters	Condition\Model	6N	
Fan Out Type		CMOS	
Supply Voltage		3.3V±10%	
Frequency		from 1 MHz to 170 MHz	
Operating Temperature		-40°C to +85°C	
Current		20mA max	
Frequency Stability	All Conditions	±50ppm	
Output Voltage	Vol(max)	10%VDD	
	VoH(min)	90%VDD	
Rise/Fall Time	AT 0.1Vdd~0.9Vdd	5ns max	
Load Capacitance		15pF	
Duty Cycle		50±10%	
Storage Temperature		-55~+125°C	
Start-upTime	Load RANGE	5mSec max	
Aging		±3ppm(1st ,year at 25 °C)	
Tri-State	Output Active	2.31V Min Pin 1 Tri-state	
	Output in High-Impedance	0.99V Max	
PAD Connection		PIN#1 Tri-State/NC	PIN#3 OUT
		PIN#2 GND	PIN#4 Vdd

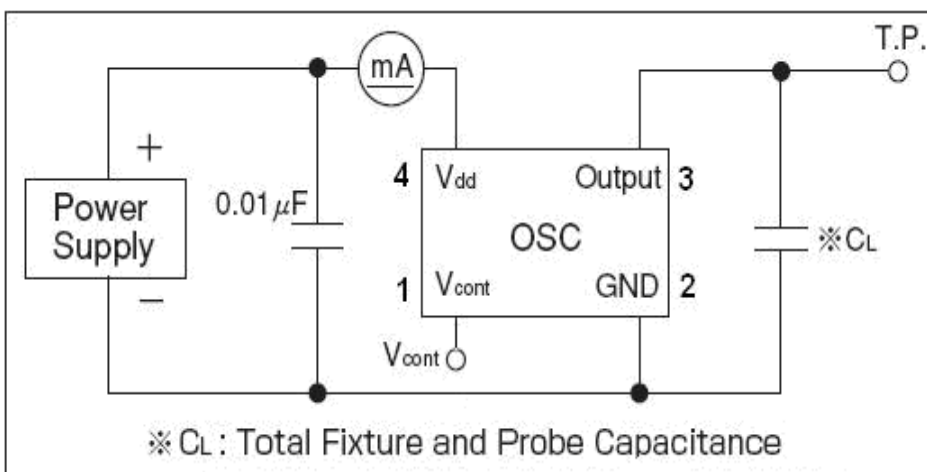
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### Dimension (Unit: mm)



### MEASUREMENT CIRCUIT

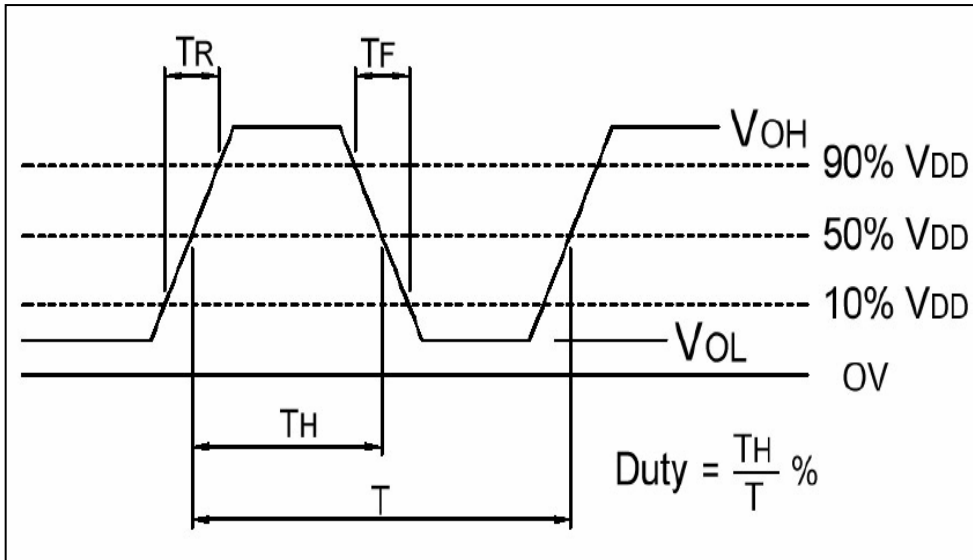


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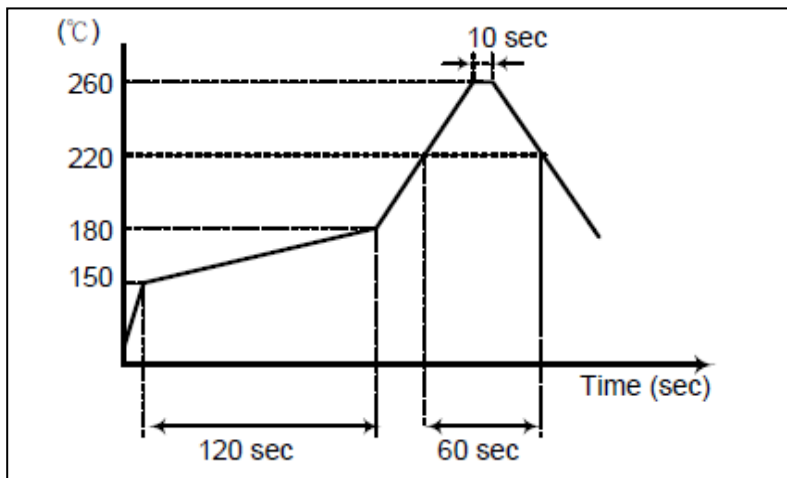
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### WAVEFORM CONDITIONS



### REFLOW CONDITION

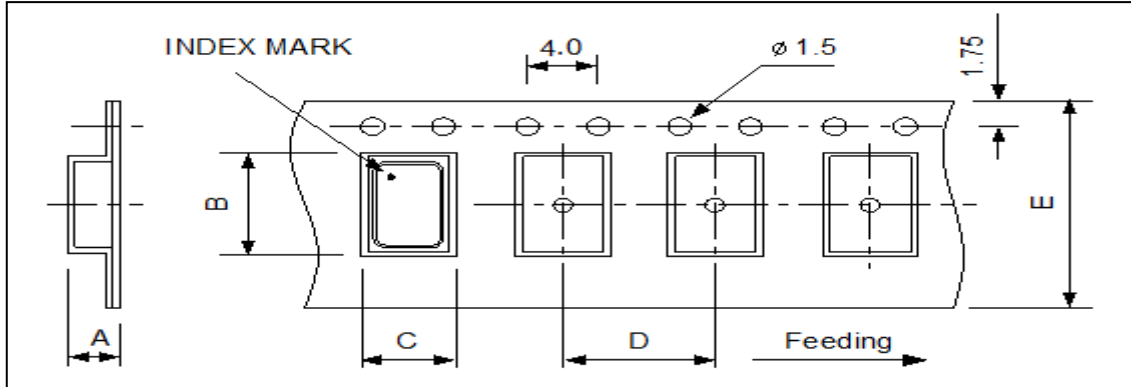


The reflow temperature profile may vary depending on the product model, specifications and frequency range. Refer to the individual product specifications for details

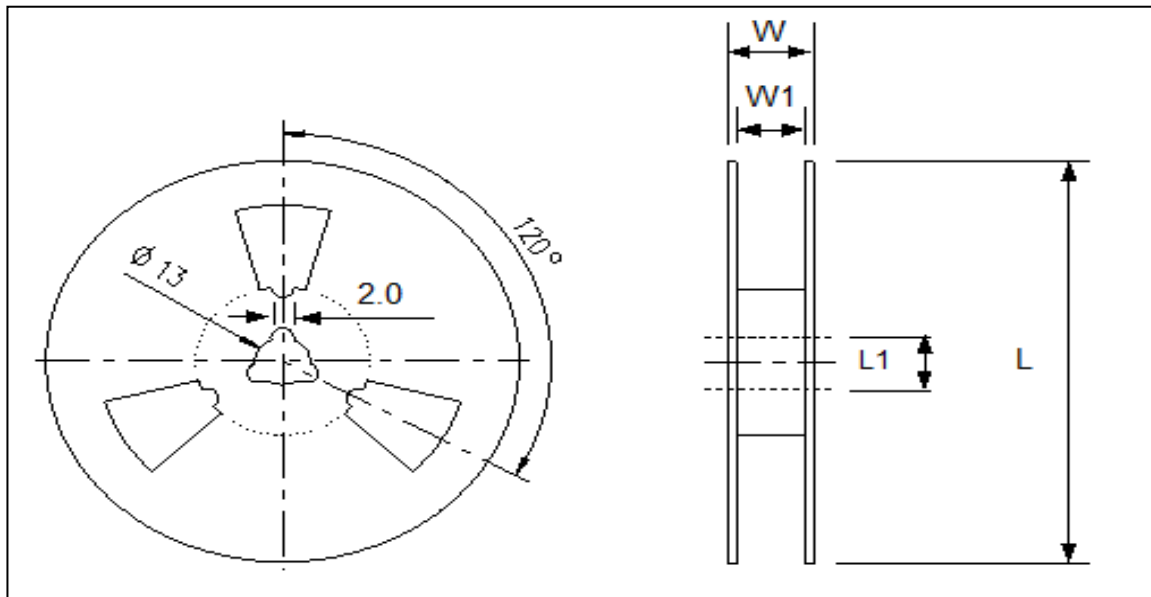
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### CARRIER TYPE



### REEL



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

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### RELIABILITY TEST SPECIFICATIONS

Test item	Equipment	Condition	Specification
1.SOLDERABILITY TEST	SK-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 <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. 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