

## Features

Frequency range : 1MHz to 40MHz  
 SMD seam sealing ceramic package  
 Supply voltage : 1.8V ~ 3.3V  
 CMOS output  
 Phase modulation clock function  
 selectable for EMI reduction  
 External dimensions (mm)  
 L : 2.0 x W : 1.6 x H : 0.76  
 RoHS compliant & Pb free

## Applications

Imaging & Display Devices  
 HD Camera, DVR  
 HD Surveillance Camera  
 Computer Peripherals  
 Consumer products

## Electrical Characteristics

Item	8NE	Conditions
Frequency Range (F <sub>0</sub> )	1MHz ~ 40MHz	
Frequency Stability (F <sub>stab</sub> )	±50 ppm	Note [1] & [2]
Operating Temperature Range (T <sub>OTR</sub> )	-40°C ~ +85°C	
	-40°C ~ +105°C	
	-40°C ~ +125°C	
Supply Voltage (V <sub>DD</sub> )	1.8V, 2.5V, 3.3V	V <sub>DD</sub> ± 5%
Current Consumption (I <sub>DD</sub> )	10 mA Max.	
Output Type	CMOS	
Output Load (C <sub>L</sub> )	15 pF	
Output Voltage High (V <sub>OH</sub> )	80% V <sub>DD</sub> Min.	
Output Voltage Low (V <sub>OL</sub> )	20% V <sub>DD</sub> Max.	
Rise & Fall Time (T <sub>r</sub> / T <sub>f</sub> )	8 ns Max.	20% ~ 80% of V <sub>DD</sub>
Duty Cycle	45% ~ 55%	
Start-up Time	1 ms Max.	
Phase Jitter, RMS	1 ps Max.	Note [2] Integrated 12kHz~5MHz.
Phase Modulation Clock Mode	Enable	30% V <sub>DD</sub> Max. (Logic "0")
	Disable	70% V <sub>DD</sub> Min. (Logic "1")
		Input to Pin1; Note [3]
Aging (F <sub>aging</sub> )	±3 ppm Max.	at 25°C±3°C, first year
Storage Temperature Range (T <sub>STR</sub> )	-55°C ~ +125°C	

### Notes:

- [1] Inclusive of frequency tolerance at 25°C, variations over operating temperature, supply voltage, load and 1st year aging at 25°C.
- [2] Phase modulation clock mode is disabled.
- [3] Phase modulation clock mode will be enabled if Pin1 is Logic "0"; Phase modulation clock mode will be disabled if Pin1 is Logic "1" or open (Internal pull-high resistor).

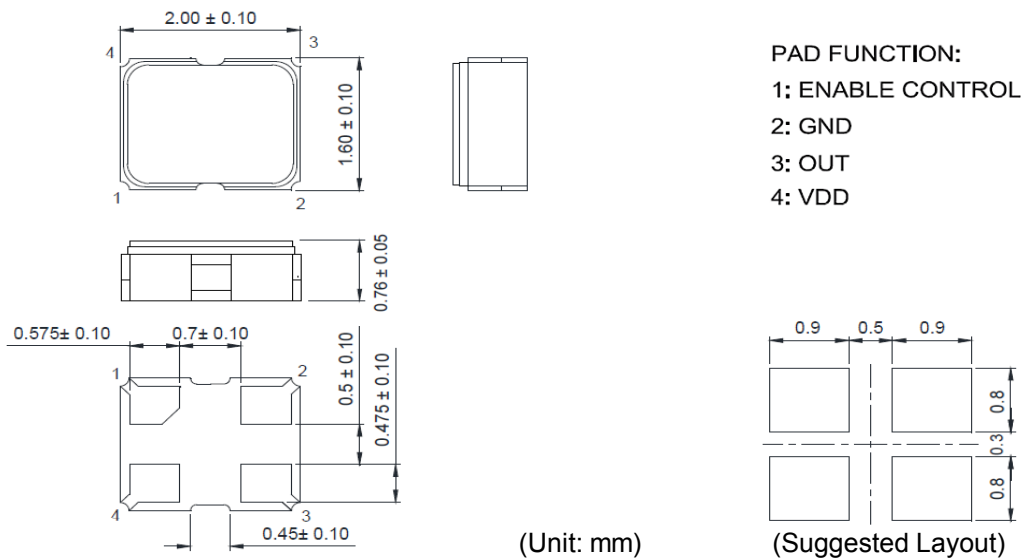
## Phase Modulation Mode Deviation [4]

Frequency (MHz)	Deviaton range (%)		
	V <sub>DD</sub> 1.8V	V <sub>DD</sub> 2.5V	V <sub>DD</sub> 3.3V
20	± 0.54	± 0.36	± 0.29
24	± 0.62	± 0.42	± 0.34
25	± 0.65	± 0.45	± 0.35
27	± 0.70	± 0.54	± 0.40

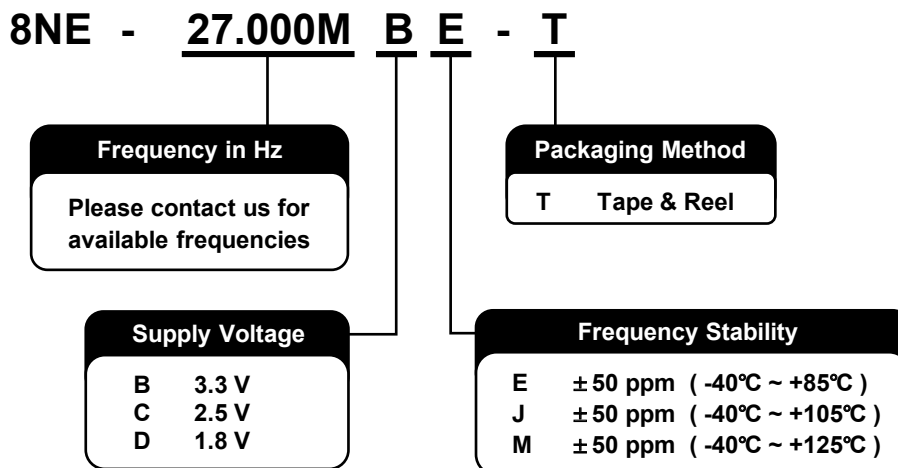
**Notes:**

[4] Contact us for available frequencies and deviation range.

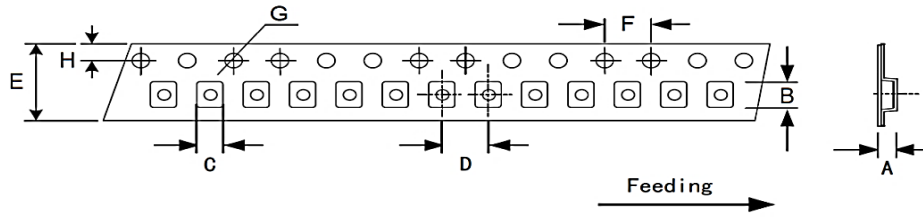
## Dimensions



## Ordering Information

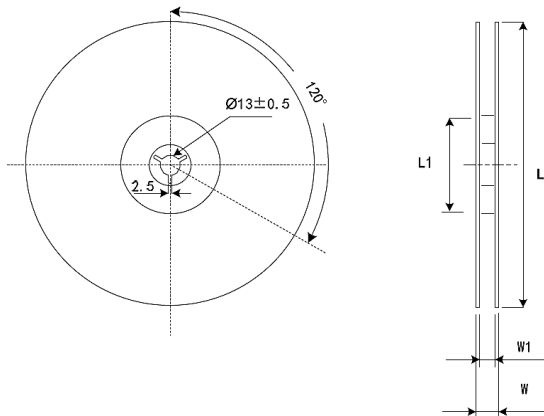


### Packing



DIMENSIONS	A	B	C	D	E	F	G	H
	0.90 ±0.10	2.30 ±0.10	1.90 ±0.10	4.00 ±0.10	8.00 ±0.20	4.00 ±0.10	1.55 ±0.05	1.75 ±0.10

(Unit: mm)



DIMENSIONS	L	L1	W	W1
	178 ±1.00	60.2 ±0.50	11.5 ±0.2	8 +1/-0

(Unit: mm)

### Reflow Profile

Solder melting point : 220°C ± 10°C, 60 sec. Min.

Peak temperature : 260°C ± 10°C, 10 sec. Min.

