

### Features

Frequency range : 4MHz to 54MHz  
 Ultra compact and thin  
 SMD seam sealing ceramic package  
 Supply voltage : 1.8V ~ 3.3V  
 CMOS output  
 Tri-state function available  
 External dimensions (mm)  
 L : 2.0 x W : 1.6 x H : 0.75  
 RoHS compliant & Pb free

### Applications

Mobile phone, Wearables  
 SiP modules  
 Networking, Server, Storage  
 Wireless communications  
 BT, BLE, WLAN, NFC, USB  
 Notebook, HDD, SSD, Graphics card,  
 Computer peripherals  
 Audio, Video, Gaming, DSC, IP CAM,  
 Portable consumer products

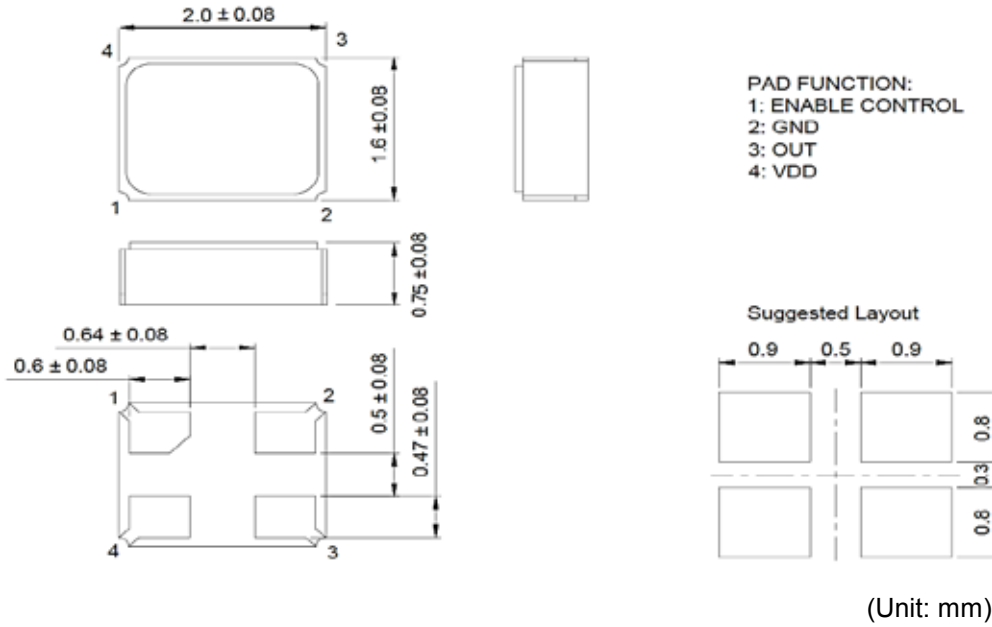
### Electrical Characteristics

Item	8N	Conditions
Frequency Range ( $F_0$ )	4MHz ~ 54MHz	
Frequency Stability ( $F_{stab}$ )	$\pm 50$ ppm, $\pm 25$ ppm	Note [1]
Operating Temperature Range ( $T_{OTR}$ )	-40°C ~ +85°C	
Supply Voltage ( $V_{DD}$ )	1.8V, 2.5V, 3.3V	$V_{DD} \pm 10\%$
Current Consumption ( $I_{DD}$ )	5 mA Max.	
Output Type	CMOS	
Output Load ( $C_L$ )	15 pF	
Output Voltage High ( $V_{OH}$ )	90% $V_{DD}$ Min.	
Output Voltage Low ( $V_{OL}$ )	10% $V_{DD}$ Max.	
Rise & Fall Time ( $T_r / T_f$ )	6 ns Max.	10% ~ 90% of $V_{DD}$
Duty Cycle	45% ~ 55%	
Start-up Time	5 ms Max.	
Enable Voltage High, Logic "1"	70% $V_{DD}$ Min.	Input to Pin1 Note [2]
Enable Voltage Low, Logic "0"	30% $V_{DD}$ Max.	
Phase Jitter, RMS	1 ps Max.	Note [3]
Aging ( $F_{aging}$ )	$\pm 3$ ppm Max.	at 25°C $\pm 3$ °C, first year
Storage Temperature Range ( $T_{STR}$ )	-55°C ~ +125°C	

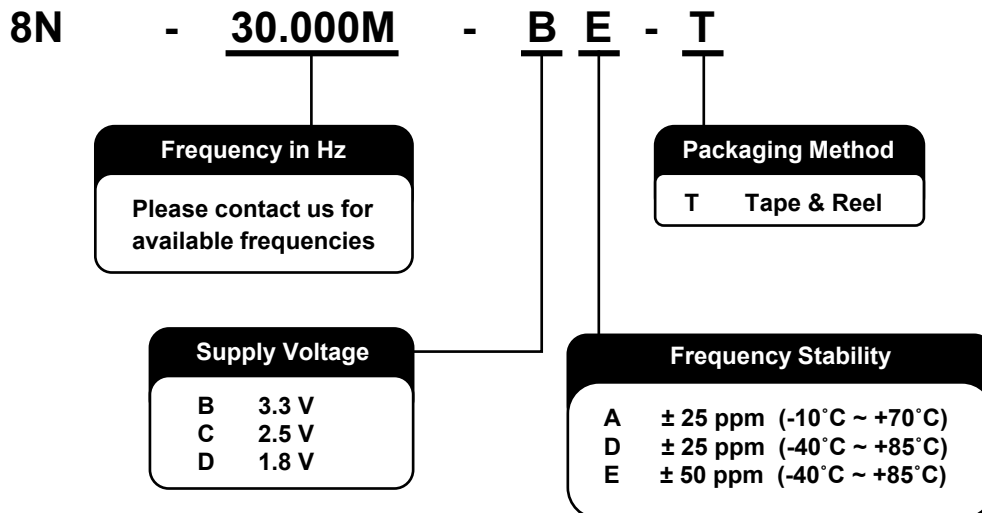
#### Notes:

- [1] Inclusive of frequency tolerance at 25°C, 1st year aging at 25°C, and variations over operating temperature, supply voltage, and load.
- [2] Output will be enable if Pin1 is Logic "1" or Open; Output will be disable if Pin1 is Logic "0".
- [3] Freq. 10MHz~40MHz, integrated 12kHz~5MHz; Freq. >40MHz, integrated 12kHz~20MHz.

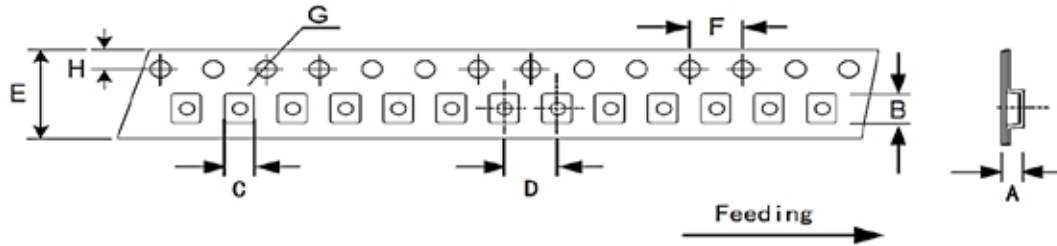
## Dimensions



## Ordering Information

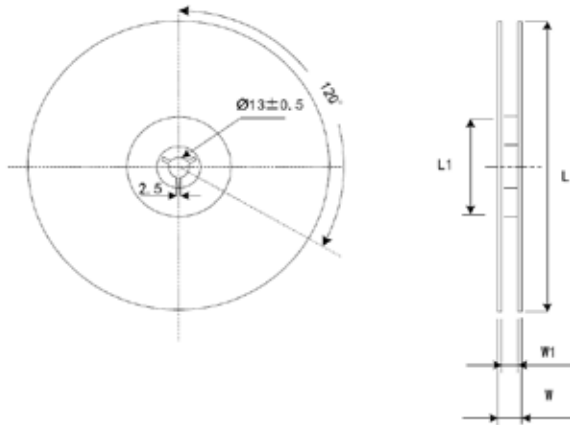


### Packing



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 :  $220^\circ\text{C} \pm 10^\circ\text{C}$ , 60 sec. Min.

Peak temperature :  $260^\circ\text{C} \pm 10^\circ\text{C}$ , 10 sec. Min.

