

### 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

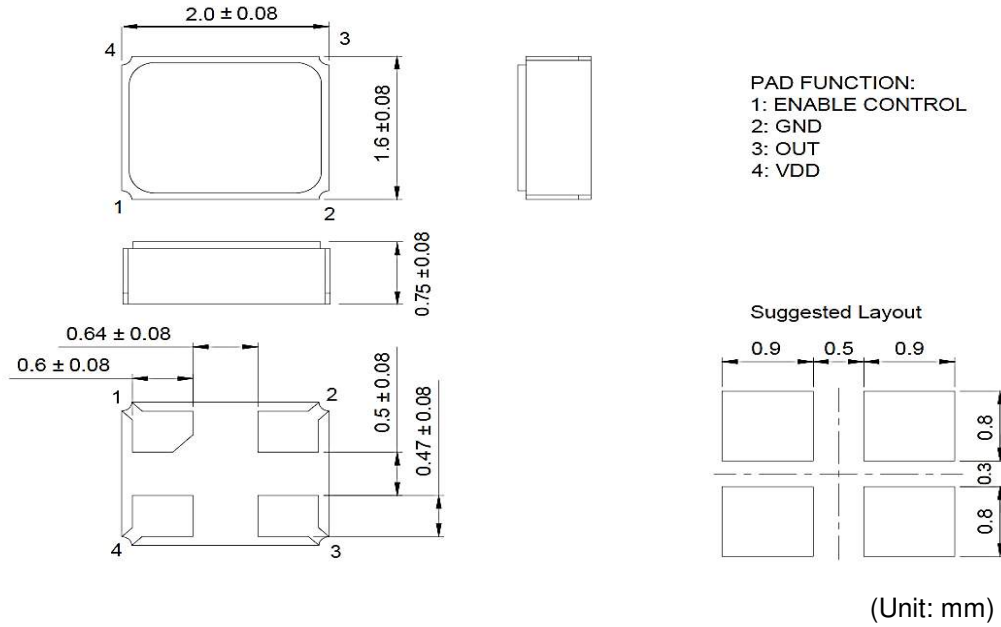
### Electrical Characteristics

Item	QTM216	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	

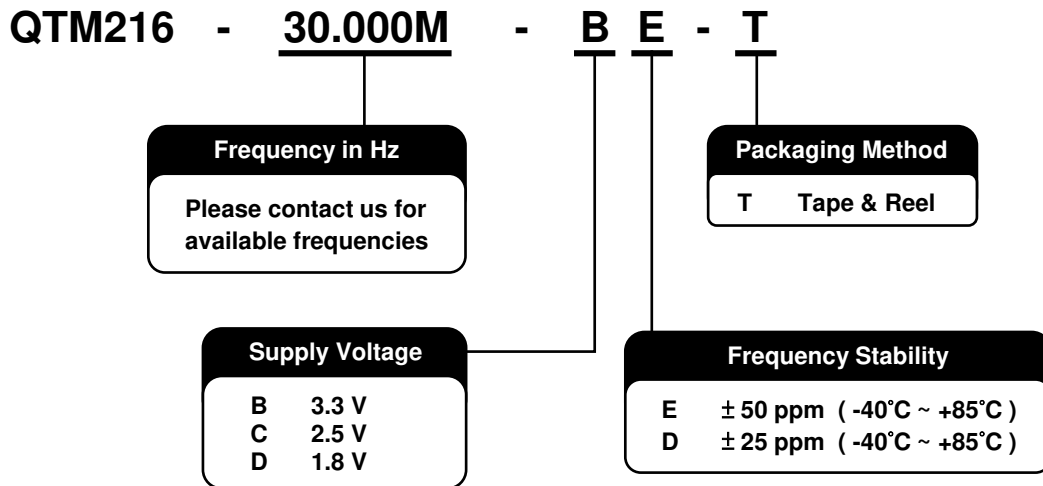
#### Notes:

- [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.

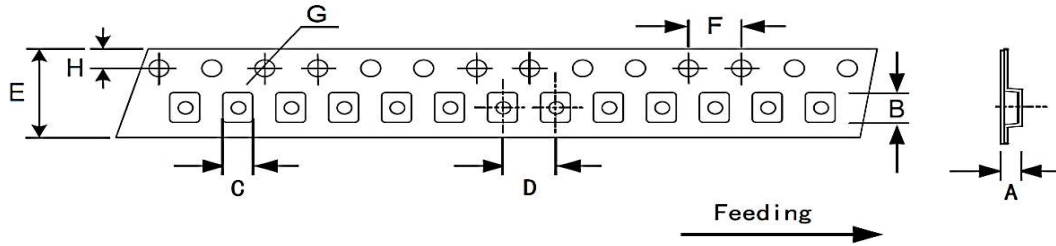
### Dimensions



### Ordering Information

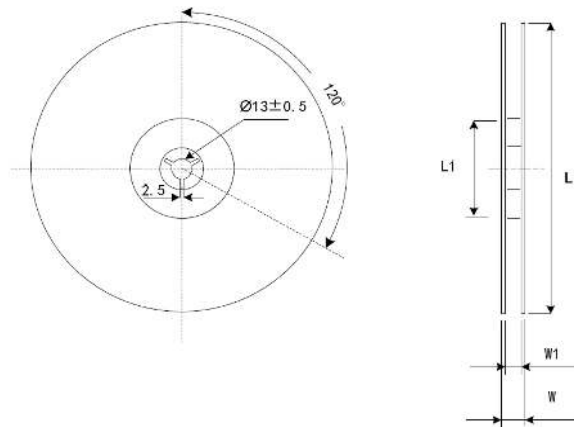


### Packing



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.

