

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

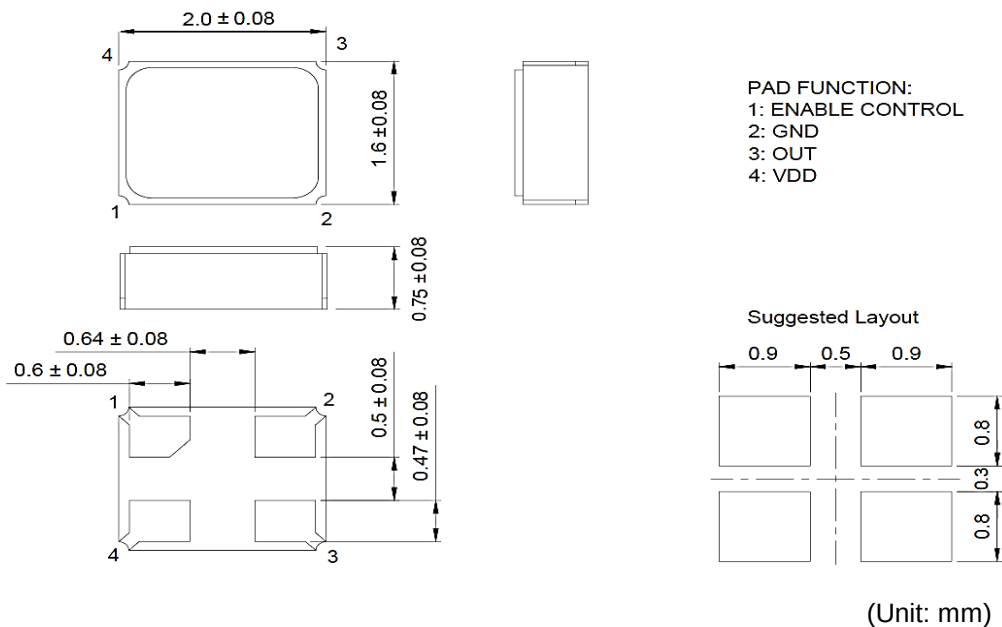
Electrical Characteristics

Item	QTM216	Conditions
Frequency Range (F_0)	4MHz ~ 54MHz	
Frequency Stability (F_{stab})	$\pm 50\text{ppm}$, $\pm 25\text{ppm}$	Note [1]
Operating Temperature Range (T_{OTR})	$-40^\circ\text{C} \sim +85^\circ\text{C}$	
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})	± 3 ppm Max.	at $25^\circ\text{C} \pm 3^\circ\text{C}$, first year
Storage Temperature Range (T_{STR})	$-55^\circ\text{C} \sim +125^\circ\text{C}$	

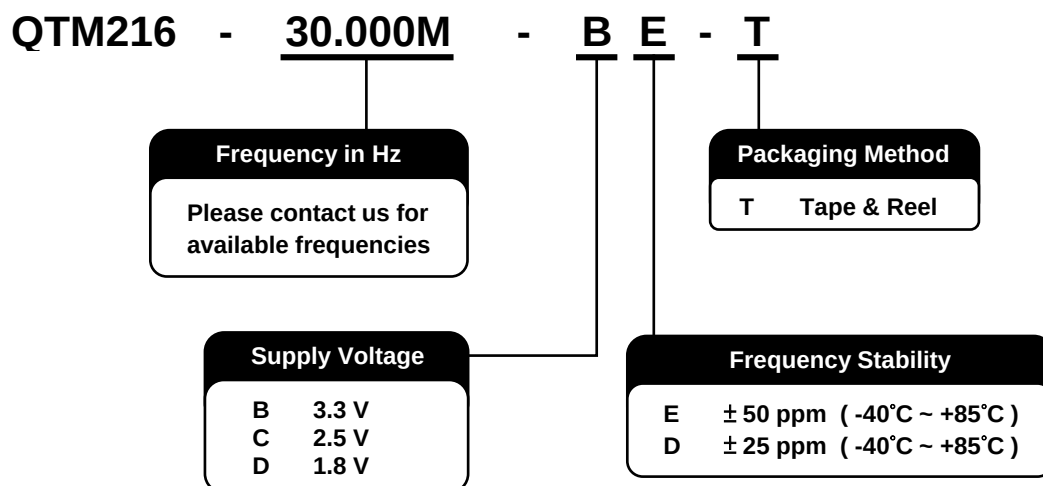
Notes:

- [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.

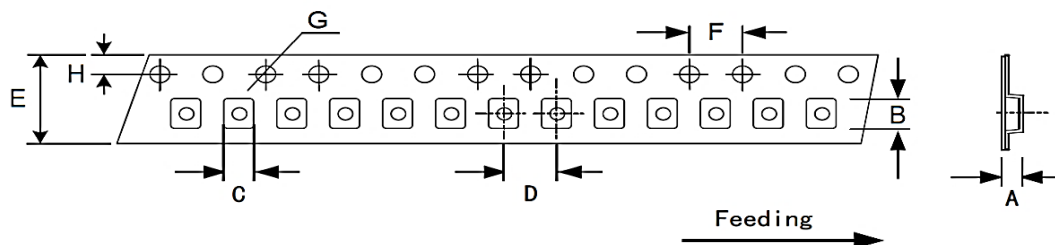
Dimensions



Ordering Information

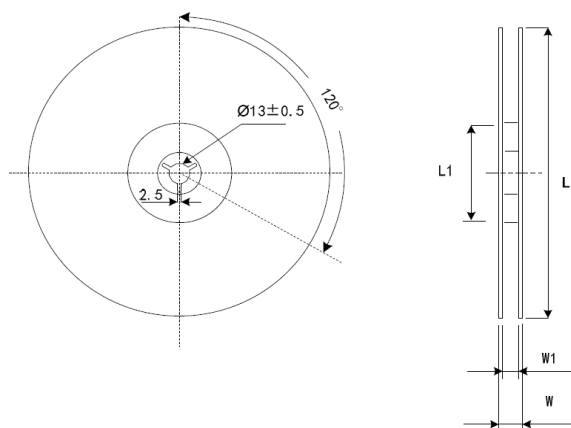


Packing



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)



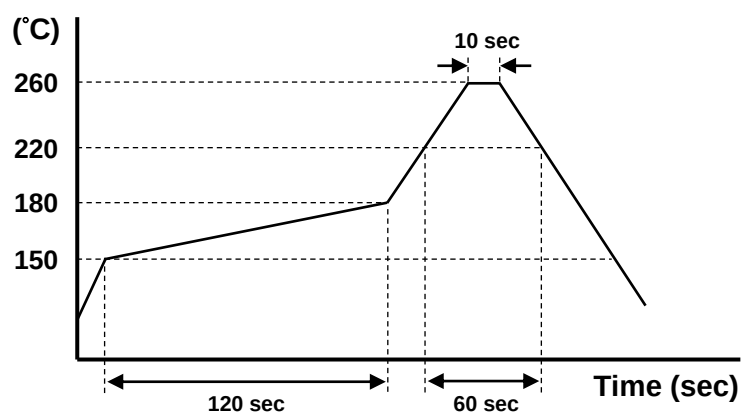
DIMENSIONS	L	L1	W	W1
	178 ±1.00	60.2 ±0.50	11.5 ±0.2	8 +1/-0

(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.



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