

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	QTM216E	Conditions
Frequency Range (F_0)	1MHz ~ 40MHz	
Frequency Stability (F_{stab})	±50 ppm	Note [1] & [2]
Operating Temperature Range (T_{OTR})	-40°C ~ +85°C	
	-40°C ~ +105°C	
	-40°C ~ +125°C	
Supply Voltage (V_{DD})	1.8V, 2.5V, 3.3V	$V_{DD} \pm 5\%$
Current Consumption (I_{DD})	10 mA Max.	
Output Type	CMOS	
Output Load (C_L)	15 pF	
Output Voltage High (V_{OH})	80% V_{DD} Min.	
Output Voltage Low (V_{OL})	20% V_{DD} Max.	
Rise & Fall Time (T_r / T_f)	8 ns Max.	20% ~ 80% of V_{DD}
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_{DD} Max. (Logic "0")
	Disable	70% V_{DD} Min. (Logic "1")
		Input to Pin1; Note [3]
Aging (F_{aging})	±3 ppm Max.	at 25°C±3°C, first year
Storage Temperature Range (T_{STR})	-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).

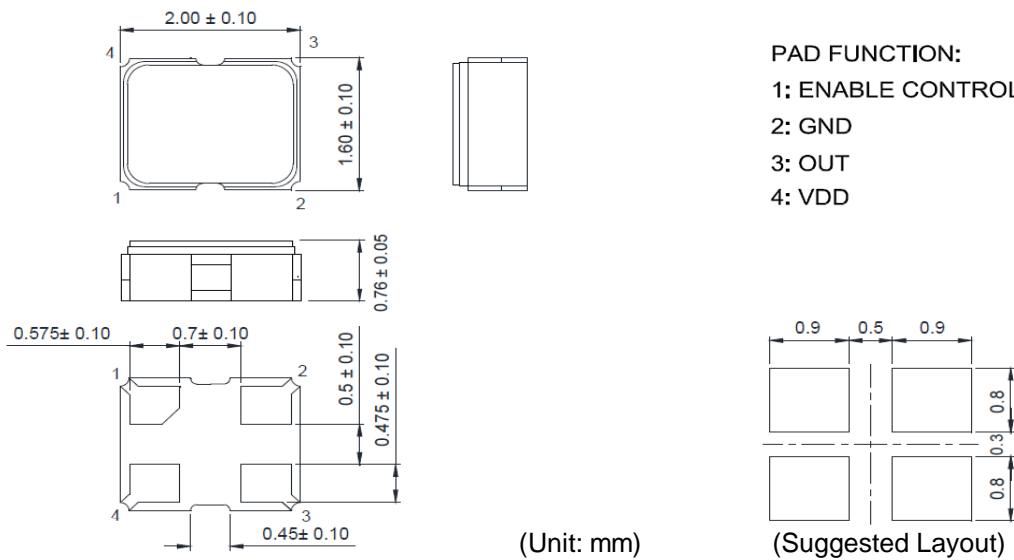
Phase Modulation Mode Deviation [4]

Frequency (MHz)	Deviation range (%)		
	V _{DD} 1.8V	V _{DD} 2.5V	V _{DD} 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

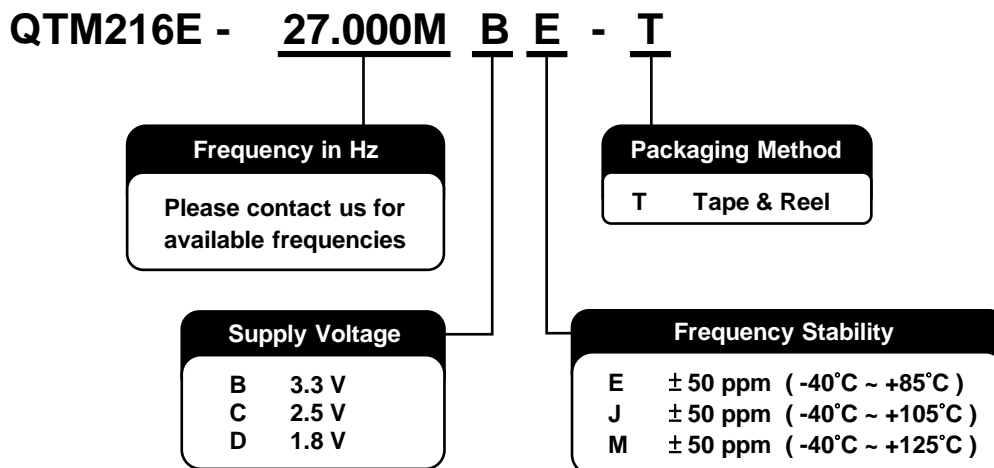
Notes:

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

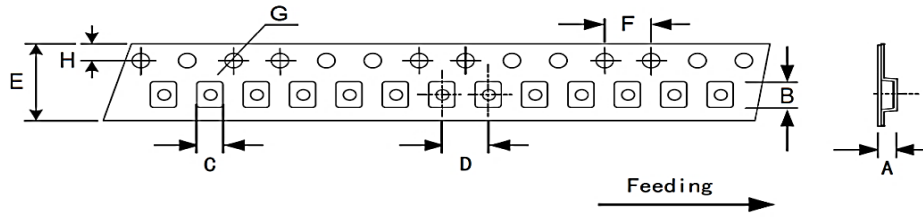
Dimensions



Ordering Information

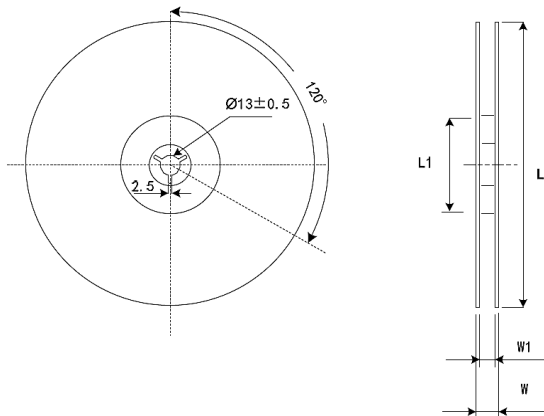


Packing



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

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

