

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 : 2.5 x W : 2.0 x H : 0.8
- RoHS compliant & Pb free

Applications

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

Electrical Characteristics

Item	QTM252E	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} ± 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).

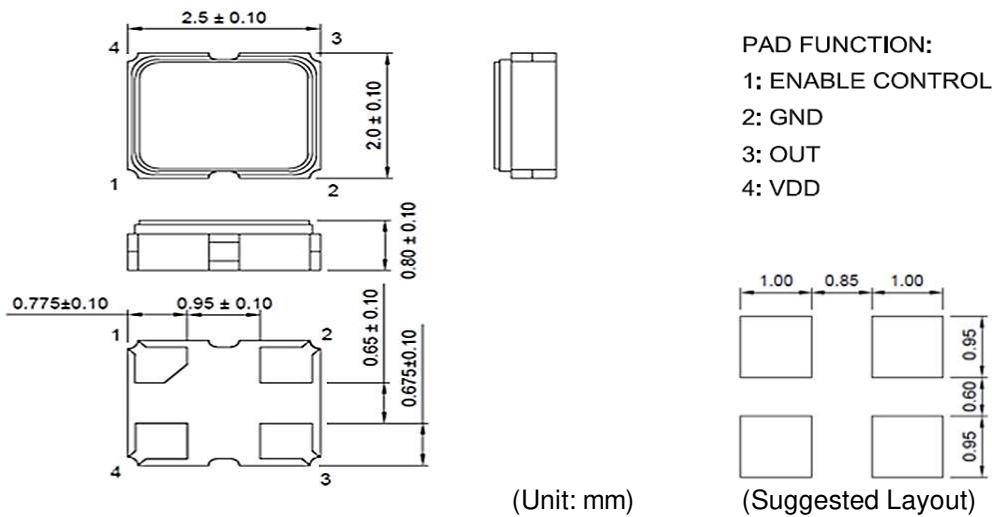
Phase Modulation Mode Deviation [4]

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

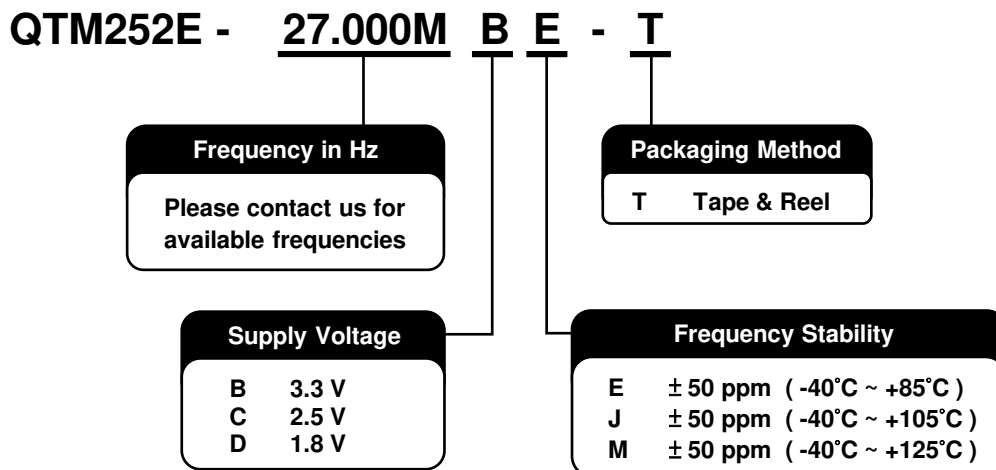
Notes:

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

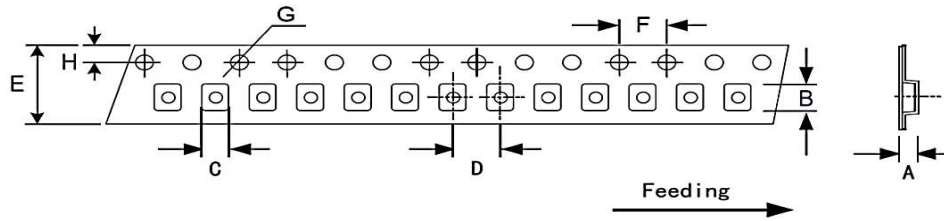
Dimensions



Ordering Information

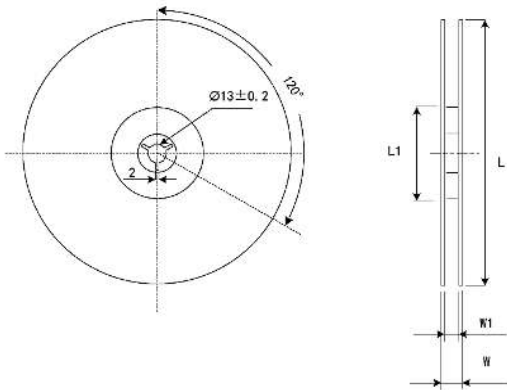


Packing



DIMENSIONS	A	B	C	D	E	F	G	H
	1.15 ±0.05	2.70 ±0.05	2.25 ±0.05	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
	180 0/-3	60 +1/0	11.4 ±0.1	9 ±0.3

(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.

