

Features

- Frequency range : 25MHz to 312.5MHz
- SMD seam sealing ceramic package
- Supply voltage : 2.5V, 3.3V
- LVPECL output
- Low phase noise and phase jitter
- Tri-state function available
- External dimensions (mm)
L : 7.0 x W : 5.0 x H : 1.4
- RoHS compliant & Pb free

Applications

- Networking, Telecommunication, Data communication, Switch, Server, Storage
- Fibre channel, Ethernet, SONET, SATA, SAS, PCI-Express
- Optical module
- Microprocessor, DSP, FPGA, Clock source for ADC and DAC
- Test and measurement

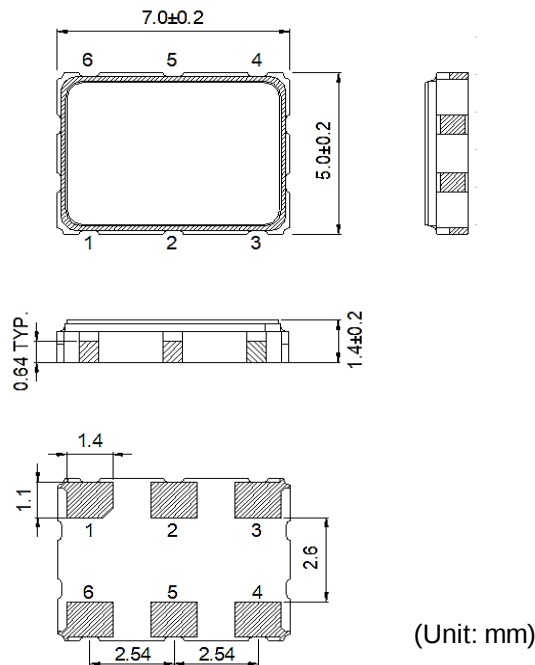
Electrical Characteristics

Item		QTM750P	Conditions
Frequency Range (F_0)		25MHz ~ 312.5MHz	
Frequency Stability (F_{stab}) over Operating Temperature Range (T_{OTR})		$\pm 50\text{ppm}$, $\pm 25\text{ppm}$	$-40^\circ\text{C} \sim +85^\circ\text{C}$, Note [1]
		$\pm 50\text{ppm}$	$-40^\circ\text{C} \sim +105^\circ\text{C}$, Note [1]
Operating Temperature Range (T_{OTR})		$-40^\circ\text{C} \sim +85^\circ\text{C}$	
		$-40^\circ\text{C} \sim +105^\circ\text{C}$	
Supply Voltage (V_{DD})		2.5V, 3.3V	$V_{DD} \pm 10\%$
Current Consumption (I_{DD})		70 mA Max.	
Output Type		LVPECL	
Output Load		50 Ω ($V_{DD} - 2.0\text{V}$)	
Output Voltage High (V_{OH})		$V_{DD} - 1.025$ Min.	
Output Voltage Low (V_{OL})		$V_{DD} - 1.62$ Max.	
Rise & Fall Time (T_r / T_f)		0.6 ns Max.	20% ~ 80% of output swing
Duty Cycle		45% ~ 55%	
Start-up Time		5 ms Max.	
Enable Voltage High, Logic "1"		70% V_{DD} Min.	Input to OE pin Note [2]
Enable Voltage Low, Logic "0"		30% V_{DD} Max.	
Phase Jitter	$F_0 = 156.25\text{MHz}$	100fs ~ 300fs Max.	12kHz ~ 20MHz, RMS
	$F_0 = 312.5\text{MHz}$	70fs Typ. / 100fs Max.	
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, variations over temperature, supply voltage and vibration.
- [2] Output will be enabled if OE is Logic "1" or Open; Output will be disabled if OE is Logic "0".
- [3] The standard testing environment except temperature test is 25°C±5°C, 40%~70% relative humidity.

Dimensions

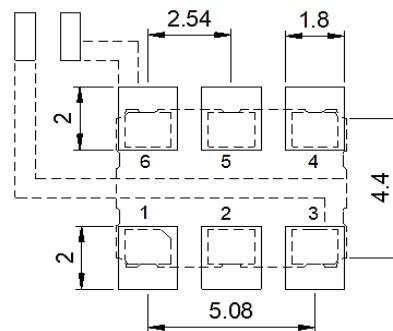


* Pad dimension tolerance is ±0.2mm

Pin function

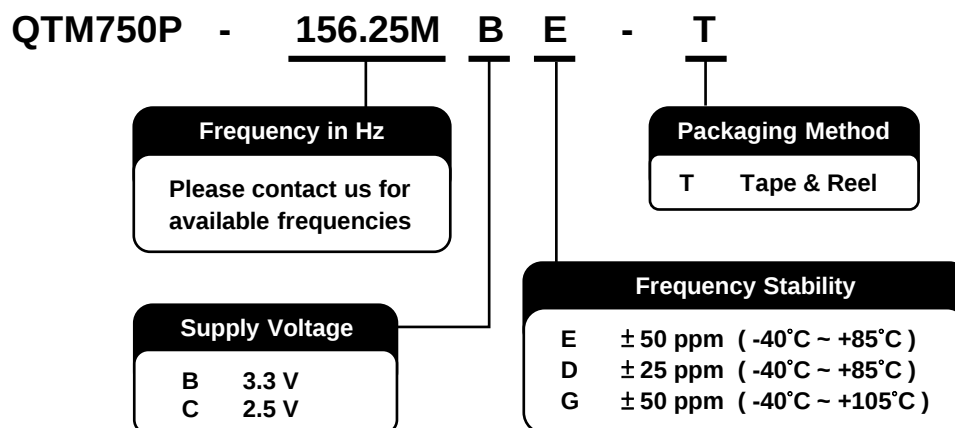
Pin 1	OE
Pin 2	NC
Pin 3	GND
Pin 4	OUT
Pin 5	$\overline{\text{OUT}}$
Pin 6	V _{DD}

Recommended pad layout

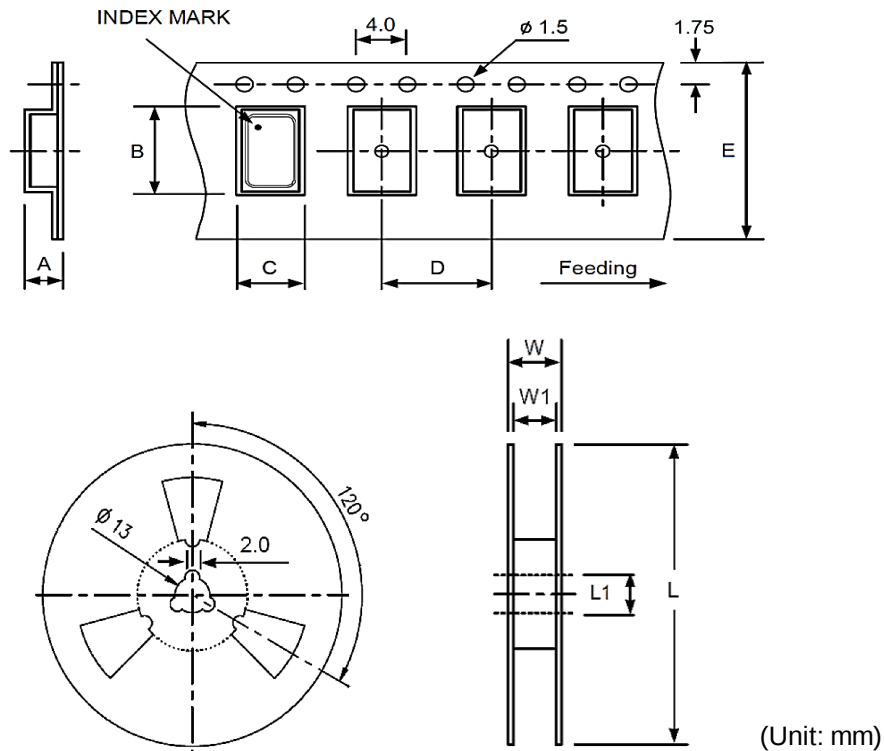


* Power supply decoupling capacitor is required.

Ordering Information



Packing

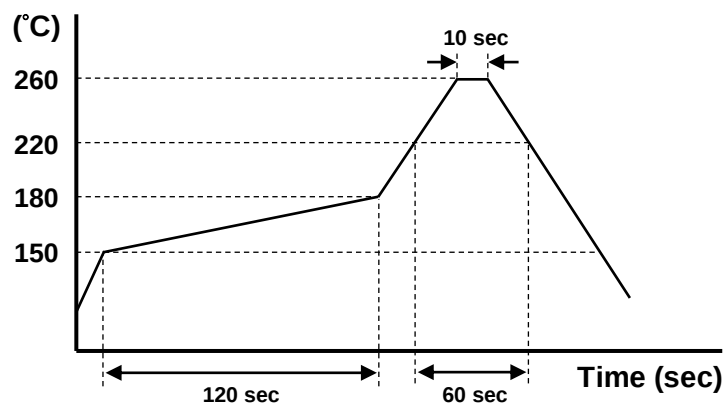


DIMENSIONS	A	B	C	D	E	L	L1	W	W1
	2.00	7.90	5.45	8.00	16.0	180.0	13.0	20.5	16.0

Reflow Profile

Solder melting point : $220^{\circ}\text{C} \pm 10^{\circ}\text{C}$, 60 sec. Min., 200 sec. Max.

Peak temperature : $260^{\circ}\text{C} \pm 10^{\circ}\text{C}$, 10 sec. Min., 30 sec. Max.



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