Fuel The Digital World

QTM532P
MHz LVPECL Oscillator

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 : 5.0 x W : 3.2 x H : 1.2
- 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		QTM532P	Conditions
Frequency Range (F_0)		25MHz ~ 312.5MHz	
Frequency Stability (F_{stab}) over Operating Temperature Range (T_{OTR})		±50ppm, ±25ppm	-40°C ~ +85°C, Note [1]
		±50ppm	-40°C ~ +105°C, Note [1]
Operating Temperature Range (T_{OTR})		-40°C ~ +85°C	
		-40°C ~ +105°C	
Supply Voltage (V_{DD})		2.5V, 3.3V	V_{DD} ± 10%
Current Consumption (I_{DD})		70 mA Max.	
Output Type		LVPECL	
Output Load		50 Ω (V_{DD} - 2.0V)	
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 = 156.25MHz	100fs ~ 300fs Max.	12kHz ~ 20MHz, RMS
	F_0 = 312.5MHz	70fs Typ. / 100fs Max.	
Aging (F_{aging})		±3 ppm Max.	at 25°C±3°C, first year
Storage Temperature Range (T_{STR})		-55°C ~ +125°C	

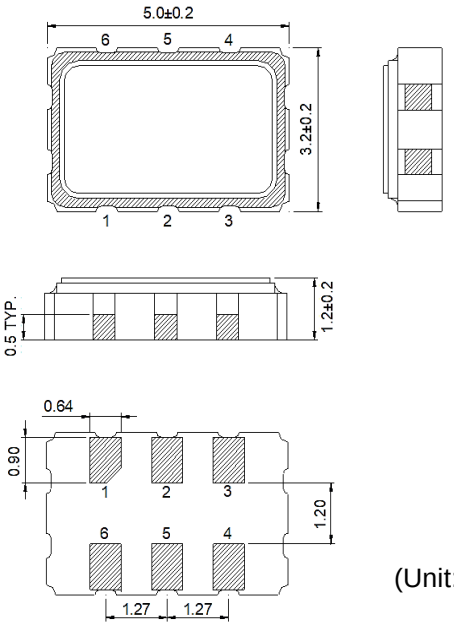
Notes:

[1] Inclusive of frequency tolerance at 25°C, variations over 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

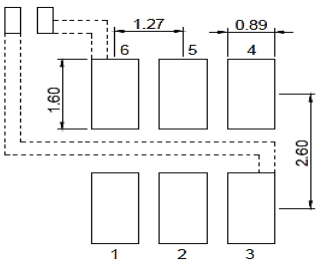


(Unit: mm)

Pin function

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

Recommended pad layout



* Pad dimension tolerance is ±0.2mm

* Power supply decoupling capacitor is required.

Ordering Information

QTM532P - 156.25M B E - T

Frequency in Hz

Please contact us for available frequencies

Supply Voltage

B	3.3 V
C	2.5 V

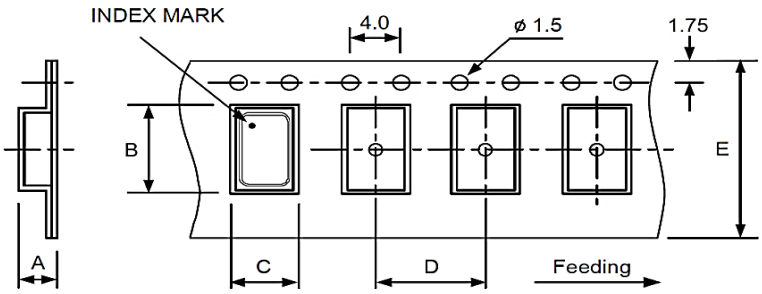
Frequency Stability

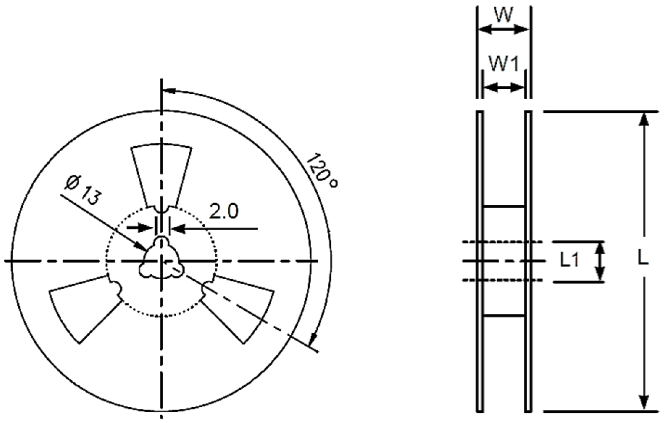
E	± 50 ppm (-40˚C ~ +85˚C)
D	± 25 ppm (-40˚C ~ +85˚C)
G	± 50 ppm (-40˚C ~ +105˚C)

Packaging Method

T	Tape & Reel

Packing





(Unit: mm)

DIMENSIONS	A	B	C	D	E	L	L1	W	W1
	1.40	5.40	3.60	8.00	12.0	180.0	13.0	16.5	12.0

Reflow Profile

Solder melting point : 220˚C ± 10˚C, 60 sec. Min., 200 sec. Max.
Peak temperature : 260˚C ± 10˚C, 10 sec. Min., 30 sec. Max.