

Features

- Frequency range : 30MHz to 250MHz
- SMD seam sealing ceramic package
- Supply voltage : 3.3V
- LVPECL output
- Fundamental solution
- Low phase noise and phase jitter
- Tri-state function available
- External dimensions (mm)
L : 3.2 x W : 2.5 x H : 0.95
- RoHS compliant & Pb free

Applications

- Wireless communications, Smallcell, Base station
- Fibre channel, SONET, SDH, Ethernet
- Set-top box (STB)
- xDSL, VoIP, Cable modem
- Digital TV, Digital audio
- Phase-locked loop (PLL) circuits

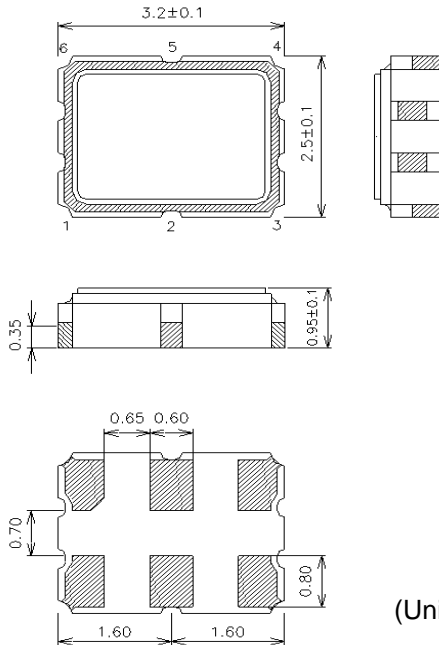
Electrical Characteristics

Item	QTV325P	Conditions
Frequency Range (F ₀)	30MHz ~ 250MHz	
Operating Temperature Range (T _{OTR})	-40°C ~ +85°C	
	-40°C ~ +105°C	
Supply Voltage (V _{DD})	3.3 V	V _{DD} ± 10%
Current Consumption (I _{DD})	80 mA Max.	RL = 50Ω to V _{DD} - 2.0V
Output Type	LVPECL	
Output Load	50Ω (V _{DD} - 2.0V)	
Output Voltage High (V _{OH})	V _{DD} - 1.025V Min.	
Output Voltage Low (V _{OL})	V _{DD} - 1.62V Max.	
Rise & Fall Time (T _r / T _f)	0.5 ns Max.	20% ~ 80% of output swing
Duty Cycle	45% ~ 55%	
Start-up Time	10 ms Max.	
Enable Voltage High, Logic "1"	70% VDD Min.	Input to Pin2 Note [1]
Enable Voltage Low, Logic "0"	30% VDD Max.	
Absolute Pulling Range (APR)	±50 ppm Min.	Note [2]
Control Voltage Range	0V ~ 3.3V	Nominal 1.65V
Linearity	10% Max.	
Phase Noise (F ₀ = 122.88MHz)	-128 dBc/Hz Typ.	at 1kHz offset
Phase Jitter (F ₀ = 122.88MHz)	0.11 ps Typ.	12kHz ~ 20MHz, RMS
Storage Temperature Range (T _{STR})	-55°C ~ +125°C	

Notes:

- [1] Output will be enabled if Pin2 is Logic "1" or open; Output will be disabled if Pin2 is Logic "0".
- [2] Absolute Pulling Range (APR) = Pulling Range - (Frequency tolerance at 25°C, variations over temperature, supply voltage, and aging).

Dimensions

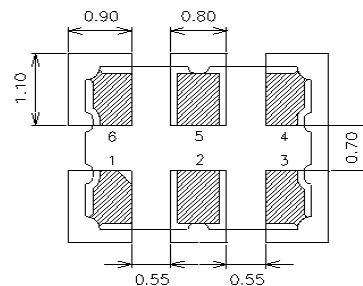


* Pad dimension tolerance is ±0.2mm

Pin function

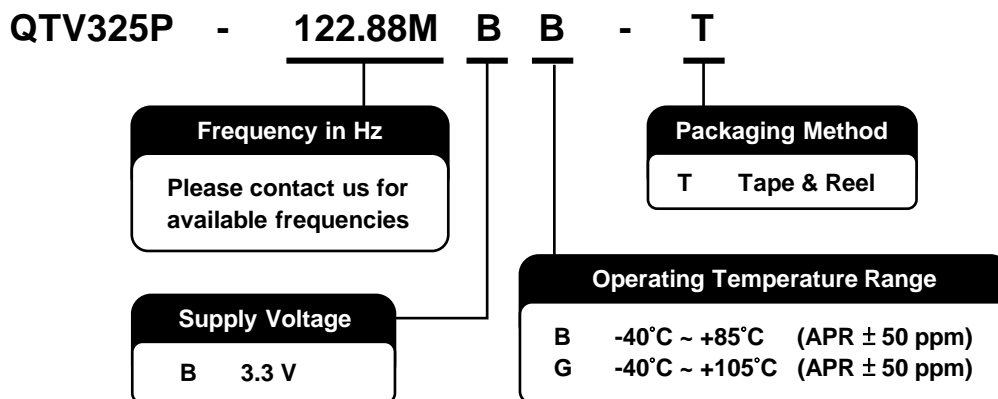
Pin 1	VC
Pin 2	OE
Pin 3	GND
Pin 4	OUT
Pin 5	$\overline{\text{OUT}}$
Pin 6	V _{DD}

Recommended pad layout

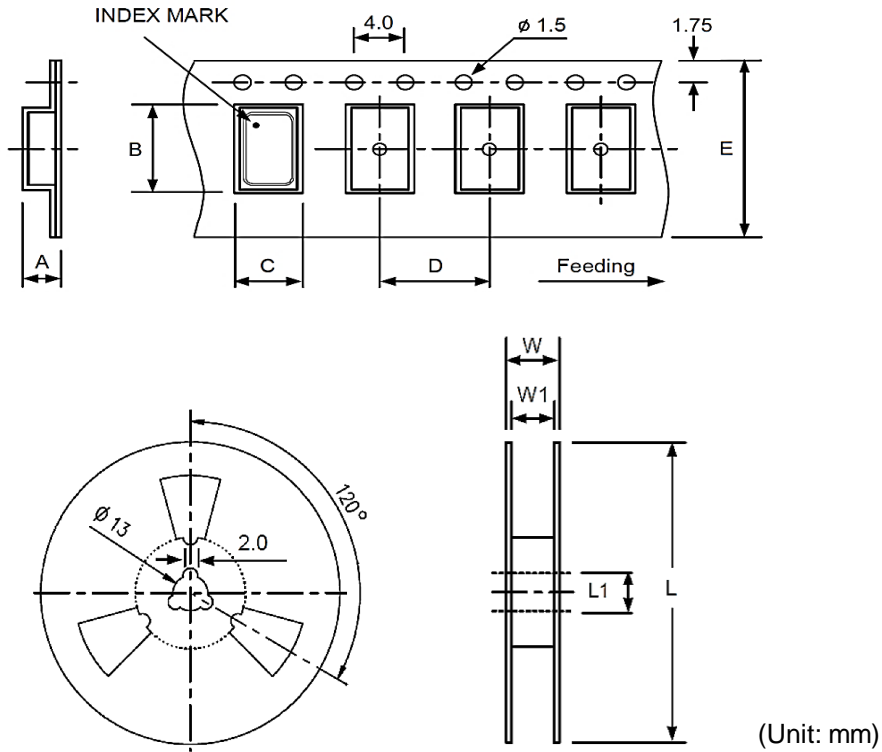


* Power supply decoupling capacitor is required.

Ordering Information



Packing



DIMENSIONS	A	B	C	D	E	L	L1	W	W1
	1.40	3.40	2.70	4.00	8.0	178.0	13.0	11.5	8.0

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.

