

### 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 : 5.0 x W : 3.2 x H : 1.2
- 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

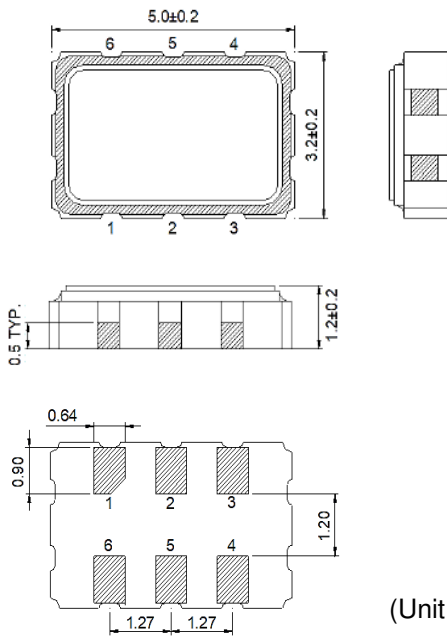
### Electrical Characteristics

Item	QTV532P	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	$V_{DD} \pm 10\%$
Current Consumption ( $I_{DD}$ )	80 mA Max.	$R_L = 50\Omega$ to $V_{DD} - 2.0V$
Output Type	LVPECL	
Output Load	50 $\Omega$ ( $V_{DD} - 2.0V$ )	
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)	$\pm 50$ 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**



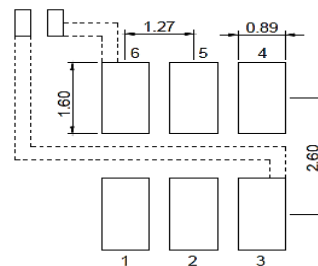
(Unit: mm)

\* Pad dimension tolerance is ±0.2mm

**Pin function**

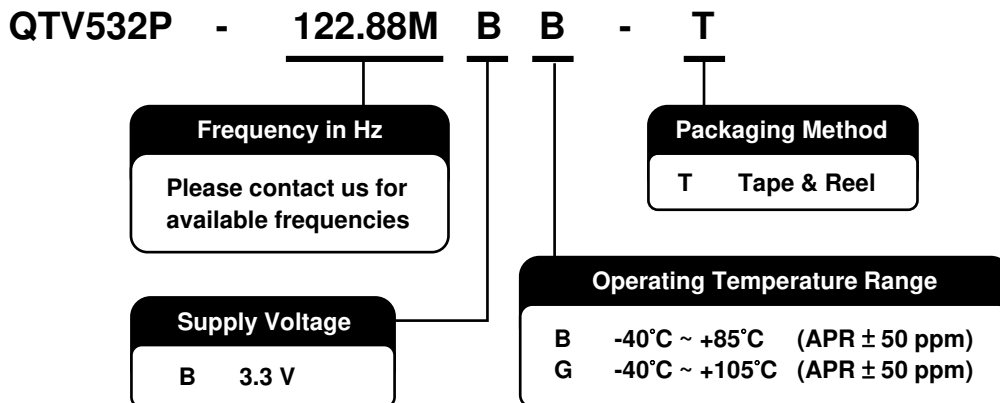
Pin 1	VC
Pin 2	OE
Pin 3	GND
Pin 4	OUT
Pin 5	$\overline{\text{OUT}}$
Pin 6	V <sub>DD</sub>

**Recommended pad layout**

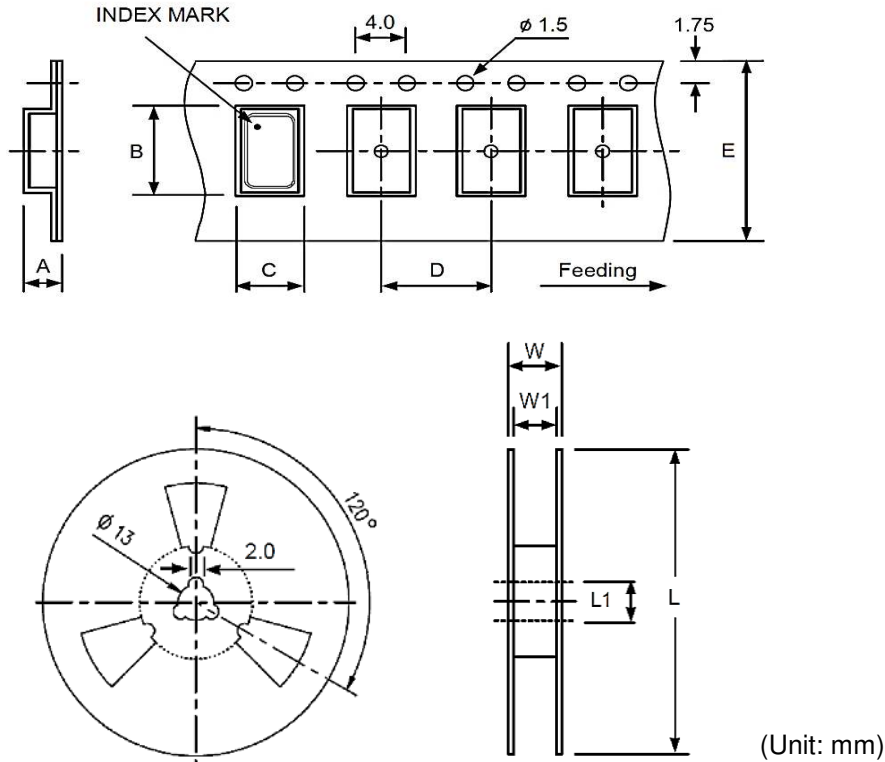


\* Power supply decoupling capacitor is required.

**Ordering Information**



### Packing



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

### 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.

