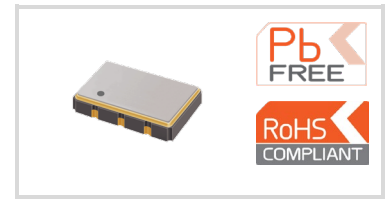


QEV05

5.0 x 3.2 mm, SMD



Frequency and Electrical Characteristics

Parameter	Min.	Typ.	Max.	Unit	Test condition / Description
Nominal frequency (Fn)					
1.8 to 2.5V (Pin 1 Vc=1.25±1.05V)	4		54	MHz	
3.3V (Pin 1 Vc=1.65±1.35V)	1		170		
5.0V (Pin 1 Vc=2.5±2.0V)	1		100		
Operating temperature range		0 to +70	-40 to +85	°C	See 'Order Part Example'
Frequency stability over temperature ¹			±25 to ±100	ppm	Referenced to frequency reading at 25°C and the specified load capacitance
Storage temperature range	-55		+125	°C	
Long-term stability (Ageing)			±3	ppm	Frequency drift over 1 year at 25°C
Power supply voltage(V _{CC})				V _{DC}	See 'Order Part Example'
1.8V (N option)	1.710	1.8	1.890		
2.5V (M option)	2.375	2.5	2.625		
3.3V (D option)	3.135	3.3	3.465		
5.0V (A option)	4.750	5.0	5.250		
Input current			35	mA	Custom option available on request
Output load (CMOS)		15		pF	
Output logic levels				V _{DC}	With 15pF CMOS load
Output logic high (V _{OH})	90%V _{CC}		10%V _{CC}		
Output logic low (V _{OL})					
Pullability	±50			±ppm	Custom option available on request
Linearity			10	%	
Frequency slope					Positive
Duty cycle	45	50	55	%	
Rise time (Tr) & Fall time (Tf)			10	ns	
Start-up time			5	ms	
Input impedance	100			KΩ	
RMS phase jitter [12kHz ~ 20MHz]			1.0	ps	
Period jitter (pk-pk)			25	ps	
Modulation bandwidth	15			kHz	At -3dB

¹ Include 25°C tolerance, operating temperature range, input voltage change (V_{CC}±5%), load change (15pF ±10%), first year ageing, shock and vibration.

Order Part Example – QE05BAB / 10.000MHZ

Parameter	Product family and package	Frequency stability over Temperature (FvT)	Supply Voltage (Vcc)	Pullability	Nominal Frequency (Fn. MHz)
Code	QE05	B	A	B	10.000MHZ
Decode	QE V = VCXO 05 = 5.0 x 3.2 mm, SMD	A = ±50ppm vs 0 to +70°C B = ±50ppm vs -40 to +85°C C = ±25ppm vs 0 to +70°C D = ±25ppm vs -40 to +85°C	A = 5.0V D = 3.3V M = 2.5V N = 1.8V	A = ±100ppm min B = ±150ppm min D = ±50ppm min	Please enter Fn

Model Outline, Recommended Pad Layout and Marking

TOP VIEW

FRONT VIEW

SIDE VIEW

BOTTOM VIEW

Marking	Note
Line 1	NV5BAB
Line 2	10.000
Line 3	2214

Note: Product code: N = Manufacturing code, V5 = 5x3.2 SMD VCXO, B = ±50ppm vs -40 to +85°C, A = Vcc 5.0V, B = Pullability ±150ppm min.
Frequency in MHz (6 digits)
Date code: 22 = 2022, 14 = Week 14 of the year

Pin	Connections
1	Vc
2	Tri-State (Enable 70% Vcc min) / NC
3	GND
4	Output
5	Tri-State (Disable 30% Vcc max)
6	Vcc

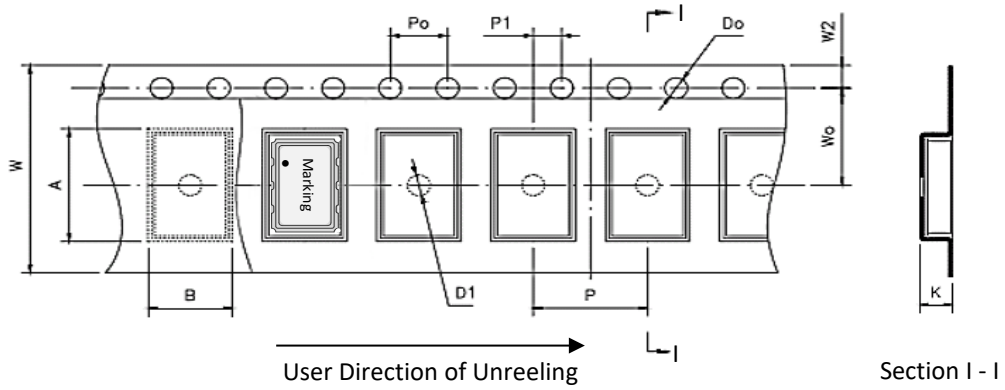
NOTE:
Dimension unit is in millimetre.

RECOMMENDED PAD LAYOUT

RECOMMENDED PAD LAYOUT TOP VIEW

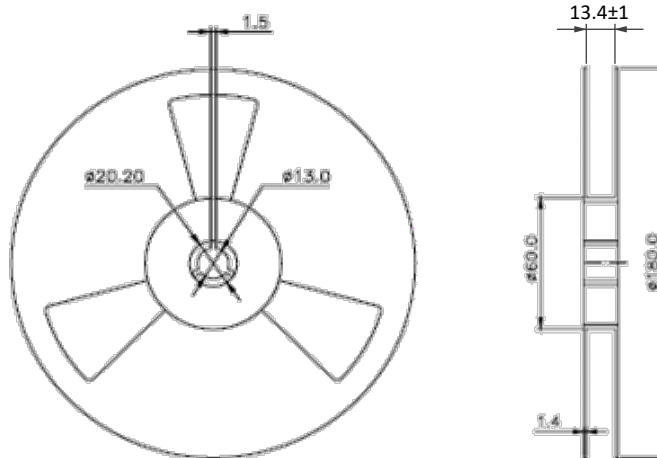
Packaging

TAPRE DETAILS:



Parameter	Code	Dimension	Tolerance
Pitch of components	P	8.0	± 0.1
Pitch of sprocket hole	P ₀	4.0	± 0.1
Length from hole center to component center	P ₁	2.0	± 0.1
Width of carrier tape	W	12.0	±0.3
Width of adhesive tape	W ₀	5.5	± 0.1
Height of component pocket	A	5.7	± 0.1
Width of component pocket	B	3.7	± 0.1
Gap of hold down tape and carrier tape	W ₂	1.75	± 0.1
Diameter of sprocket hole	D ₀	Φ 1.5	± 0.05
Diameter of feed hole	D ₁	Φ 1.5	± 0.25
Total of tape thickness	K	1.5	± 0.1

REEL DETAILS



NOTE:

- Standard Packing Quantity (SPQ): 1000 pcs/reel
- Unit: mm

Reflow soldering Profile

