FREQUENCY

TEMEX

QEV101

SMD 7x5 VCXO – Communications Equipment Application

Specification (Rev-F)

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Electrical Characteristics

Electrical Parameters	Unit	Minimum	Typical	Maximum	Test conditions
Frequency range	MHz	1.544		65.536	
Output logic	HCMOS / TTL Output				
Operating temperature range (see table 1)	°C		0 to +70	-40 to +85	Refer to Ordering Information
Storage temperature range	°C	-55		+125	
Power supply voltage (V_{CC}) 3.3V version 5.0V version	V_{DC}	 3.135 4.750	 3.3 5.0	 3.465 5.250	Refer to Ordering Information
Frequency Stability (see note 1)	± ppm	±25 or ±50			Refer to Ordering Information
Aging (First Year)	± ppm			3	Ref at 25°C
Input current 3.3V version 5.0V version	mA			 40mA 55mA	
HCMOS Output load	pF		15	30	
Output Logic Levels Output Logic High (V_{OH}) Output Logic Low (V_{OL})	V_{DC}	 90%V_{CC}		 10%V_{CC}	With 30pF HCMOS Load
Pullability 3.3V ⇒ V_C=1.65 ±1.50V 5.0V ⇒ V_C=2.50 ±2.00V	± ppm	±50, ±100 or ±150 Positive slope			Refer to Ordering Information
Linearity	%			20	
Duty cycle	%	45	50	55	
Rise & Fall time	ns			10	20% V_{CC} ~ 80% V_{CC}
Start-up time	ms			10	
Input Impedance	KΩ	100			

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

Table 1 : Stability Codes		
	± 25ppm	± 50ppm
0 to +70°C	C	A
- 40 to +85°C	D	B

Table 2 : Phase Noise	
	Maximum values for 20MHz VCXO
Unit	dBc/Hz
10Hz	- 60
100Hz	- 90
1KHz	-120
10KHz	-135
Floor	-145

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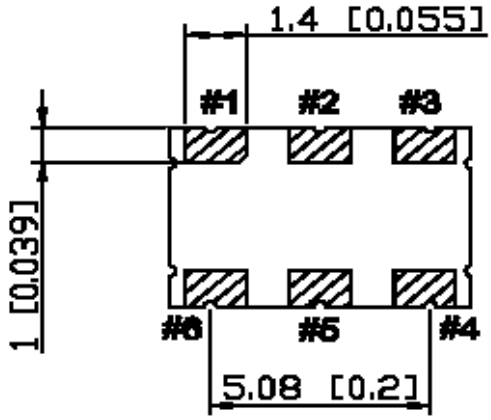
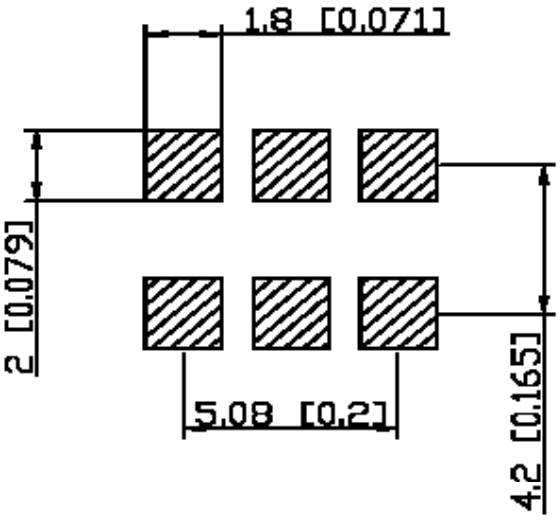
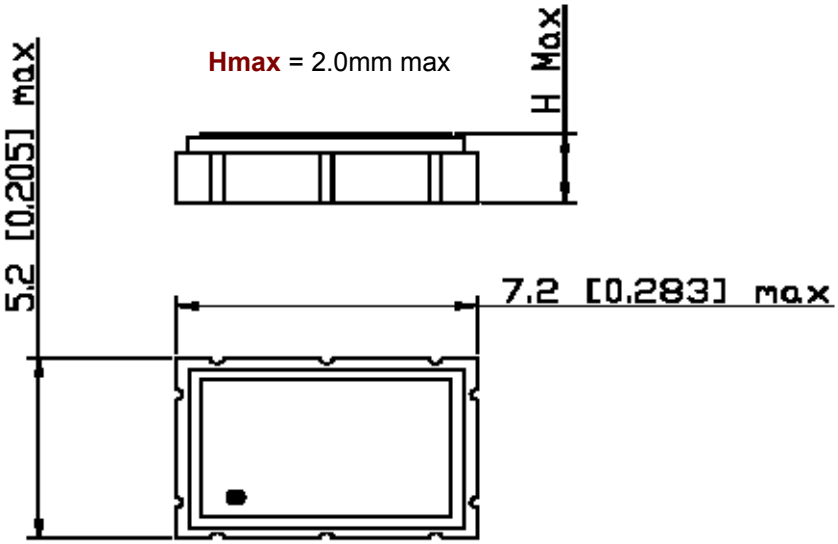
Mechanical Characteristics

BOTTOM VIEW



SUGGESTED PAD





Pin connections	
#1	$V_{CONTROL}$
#2	Tri state
#3	Ground
#4	Output
#5	N.C.
#6	$+V_{CC}$

Marking	
Line 1	Manufacturing code + V1 + stability/supply voltage/pulling code
Line 2	Frequency in MHz (6 digits)
Line 3	Date code (YYWW)

Example for QEV101BAB / 10MHz

- ⇨ Line 1 : NV1BAB
- ⇨ Line 2 : 10.000
- ⇨ Line 3 : 0614

Tristate Function	
Pin ≠1	Output (Pin ≠4)
Open	Active
"1"	Active
"0"	High Z

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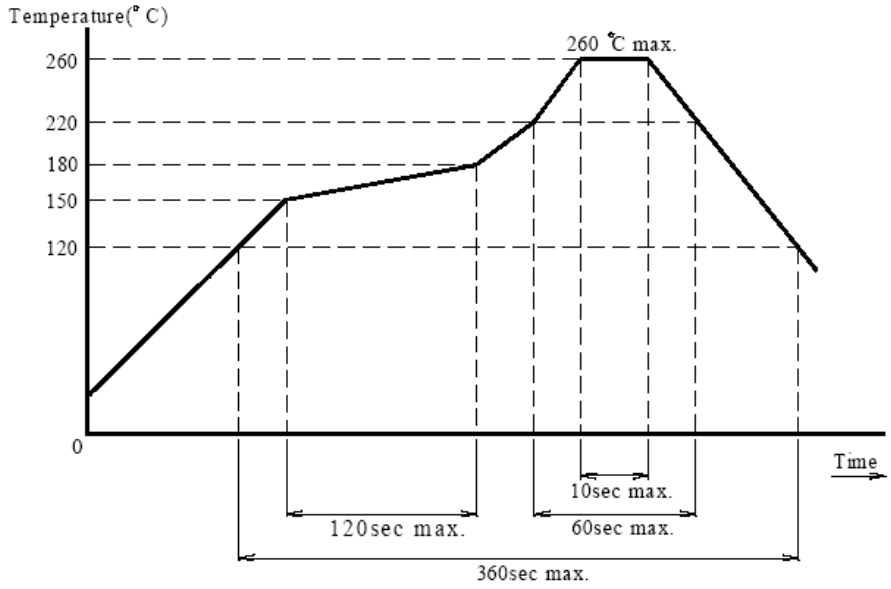
Ordering Information

Part numbering system				
QEV101	B	A	B	10.000MHZ
↓	↓	↓	↓	↓
Package type	**Temperature Stability**	**Supply Voltage**	**Pulling Range**	**Nominal Frequency (MHz)**
SMD Package **QEV101 :** SMD 7x5	**A** : ± 50ppm vs 0 to +70°C **B** :± 50ppm vs -40 to +85°C **C** : ± 25ppm vs 0 to +70°C **D** :± 50ppm vs -40 to +85°C	**A** : + 5.0V **D** : +3.3V	**A** : ± 100ppm min **B** : ± 150ppm min **D** : ± 50ppm min	Please enter the nominal frequency

Suggested Reflow Soldering Profile



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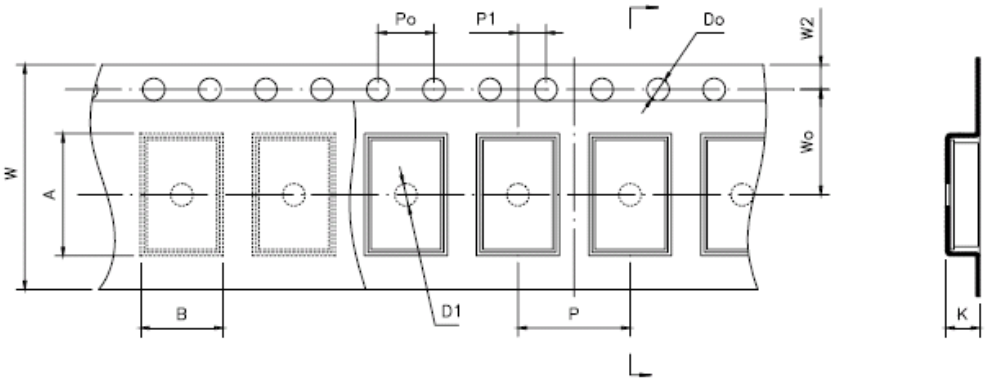
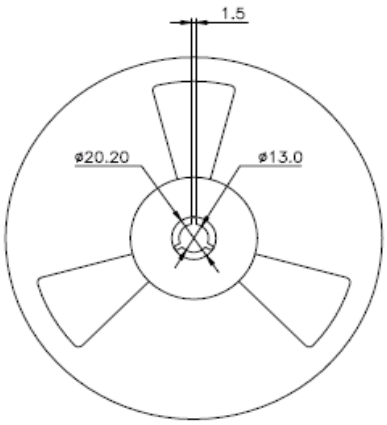
Tape Drawing



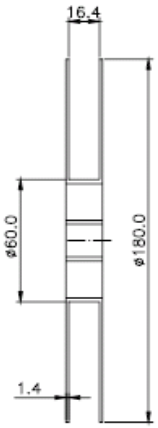
Item	Code	Dimension	Tolerance
Pitch of components	P	8.0	± 0.1
Pitch of sprocket hole	Po	4.0	± 0.1
Length from hole center to component center	P1	2.0	± 0.1
Width of carrier tape	W	16.0	+0.3/-0.1
Width of adhesive tape	W0	7.5	± 0.1
Height of component hole	A	8.18	± 0.1
Width of component hole	B	5.56	± 0.1
Gap of hold down tape and carrier tape	W2	1.75	± 0.1
Diameter of sprocket hole	Do	∅ 1.5	± 0.05
Diameter of feed hole	D1	∅ 1.5	± 0.25
Total of tape thickness	K	2.16	± 0.1

Reel Drawing



Multiple : 1Kpcs per Reel

Unit : mm



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