



# QEV14

DIL14 Pin Full Size VCXO – Communications Equipment Application  
*Specification (Rev-C)*

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▣ Electrical Characteristics .....	P01
▣ Mechanical Characteristics .....	P02
▣ Ordering Information .....	P02

# QEV14

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June 13<sup>th</sup>, 2006

### Electrical Characteristics

Electrical Parameters	Unit	Minimum	Typical	Maximum	Test conditions
Frequency range	MHz	1		160	
Output logic	HCMOS / TTL Output				
Operating temperature range	°C		0 to +70	-40 to +85	Refer to Ordering Information
Storage temperature range	°C	-55		+125	
Power supply voltage (V <sub>CC</sub> ) 3.3V version 5.0V version	V <sub>DC</sub>	3.135 4.750	3.3 5.0	3.465 5.250	Refer to Ordering Information
Typical Calibration	± ppm		15		Ref at 25°C
Frequency Stability (see note 1)	± ppm	±15, ±25, ±50 or ±100			Refer to Ordering Information
Stability vs Supply voltage variation	± ppm			5	V <sub>CC</sub> ± 5%
Stability vs load variation	± ppm			3	15pF ± 10%
Aging (First Year)	± ppm			5	Ref at 25°C
Input current (see table 1)	mA				
HCMOS Output load	pF			15	
Output Logic Levels Output Logic High (V <sub>OH</sub> ) Output Logic Low (V <sub>OL</sub> )		90%V <sub>CC</sub>		10%V <sub>CC</sub>	
Frequency Pulling range 3.3V => V <sub>C</sub> = 1.65 ± 1.50V 5.0V => V <sub>C</sub> = 2.50 ± 2.00V	± ppm	± 50 ~ ± 150 minimum ± 50 ~ ± 200 minimum			Refer to Ordering Information
Linearity	%			10	
Duty cycle	%	40	50	60	
Rise & Fall time	ns			10	From 10% V <sub>CC</sub> to 90% V <sub>CC</sub>
Start-up time	ms			10	

**Note 1:** Include 25°C calibration, operating temperature range, input voltage change, load change, first year aging, shock and vibration.

**Note 2:** QEV14 is fully RoHS compliant.

Frequency range (MHz)	V <sub>CC</sub> =5V	V <sub>CC</sub> =3.3V
	CI=15 pF	CI=15pF
1.000 to 10.999	20 mA	10 mA
20.00 to 39.999	40 mA	30 mA
40.00 to 99.999	60 mA	50 mA
100.0 to 160.00	90 mA	80 mA

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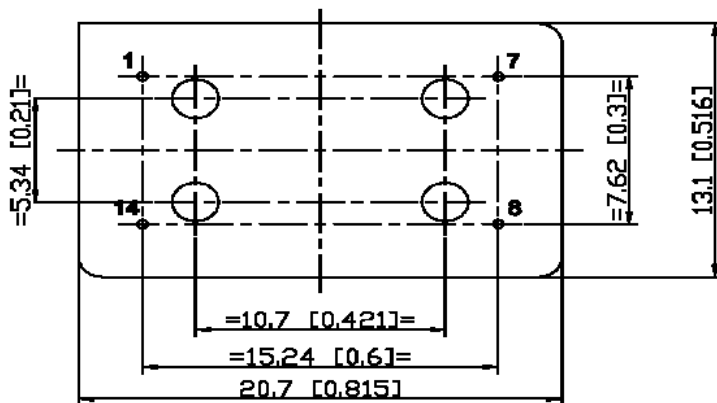
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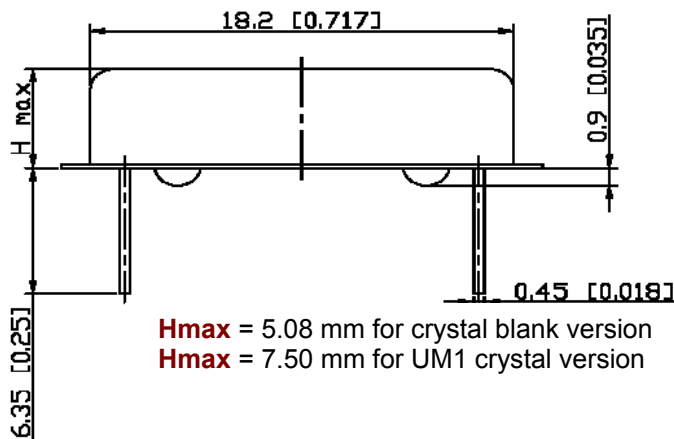
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### ▣ Mechanical Characteristics

#### BOTTOM VIEW



Pin connections	
#1	Voltage Control
#7	Ground
#8	Output
#14	+Vcc



**Hmax** = 5.08 mm for crystal blank version  
**Hmax** = 7.50 mm for UM1 crystal version

Marking	
Line 1	Temex part number
Line 2	Frequency in MHz (6 digits)
Line 3	Date code (YYWW) – Manufacturing code

Example for QEV14KH100LQ50 / 16.384MHz

- ⇒ Line 1 : QEV14KH 100LQ50
- ⇒ Line 2 : 16.384
- ⇒ Line 3 : 0624-G

**Packaging** : Antistatic Tube (25pcs/tube)

### ▣ Ordering Information

Part numbering system					
QEV14	KH	100	LQ	50	16.384MHZ
Package type	Supply Voltage	Pulling Range	Operating temperature range	Frequency stability	Nominal Frequency (MHz)
<b>DIL Package</b> QEV14 : 14 Pin Full Size	KH : +5.0V BH : +3.3V	50 : ±50ppm min 75 : ±75ppm min 100 : ±100ppm min 150 : ±150ppm min 200 : ±200ppm min	LQ : 0 to +70°C JQ : -10 to +70°C HQ : -20 to +70°C DT : -40 to +85°C	15 : ±15ppm 25 : ±25ppm 50 : ±50ppm 100 : ±100ppm	Please enter the nominal frequency