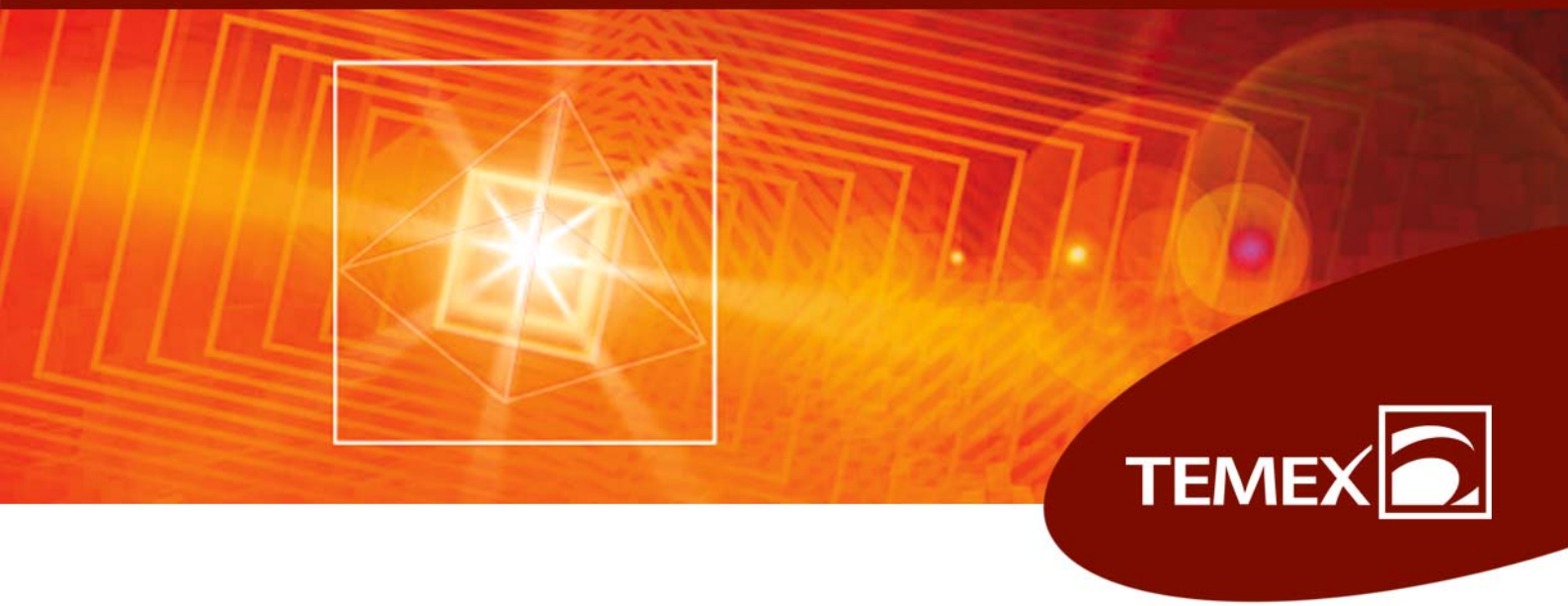
FREQUENCY



QEA95 / QEA95V

SMD 9.6x11.4 TCXO / VC-TCXO – Communications equipment applications

Specification (Rev-E)

- Electrical Characteristics P01
- Environmental Specifications.....P02
- Mechanical Characteristics P02
- Ordering Information P03
- Test Circuit.....P03
- Packaging Drawing P04
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QEA95 / QEA95V

SMD 9.6x11.4 TCXO / VC-TCXO – Communications equipment applications

Specification (rev-E)

March 16th, 2006

Electrical Characteristics

- Output : Clipped SineWave
- Load : 10KΩ//10pF
- Standard frequency : 10.0 – 12.8 – 13.0 – 14.4 – 14.7456 – 16.384 – 19.2 – 19.44 – 20.0 – 21.4 MHz

Electrical Parameters	Unit	Minimum	Typical	Maximum	Test conditions
Frequency Range	MHz	9.6		40	
Operating Temperature Range	°C		-30 to 75	-40 to 85	Refer to Ordering Information
Storage Temperature Range	°C	-40		85	
Power supply	V	3.0		5.0	Refer to Ordering Information
Frequency Adjustment - type QEA95 - type QEA95V - type QEA95V1	± ppm	3.0 3.0 Trimmerless			Mechanical Trimmer
Preset Frequency - type QEA95 - type QEA95V - type QEA95V1	± ppm			0.5 0.5 2.0	At 25°C ± 2°C
Stability vs Operating Temperature Range	± ppm		2.5		Refer to Ordering Information
Stability vs voltage variation (± 5%)	± ppm			0.3	For frequency less than 28MHz (see Note 1)
Stability vs load variation (± 10%)	± ppm			0.3	
Aging (First year at 25°C)	± ppm			1.0	For frequency less than 28MHz (see Note 2)
Supply Current 9.6MHz ≤ Fo < 16.000MHz 16.0MHz ≤ Fo ≤ 40.000MHz	mA			1.5 2.0	With load 10KΩ//10pF
Output voltage 9.6MHz ≤ Fo < 16.000MHz 16.0MHz ≤ Fo ≤ 40.000MHz	Vp-p			0.8 0.7	Clipped Sine DCcut
Pulling Range - type QEA95 - type QEA95V - type QEA95V1	ppm	- 5 8		- 10 14	5V => Vc=2.50 ± 2.00V 3.3V=> Vc=1.65 ± 1.35V 3.0V=> Vc=1.50 ± 1.00V
Phase Noise offset 10Hz offset 100Hz offset 1KHz offset 10KHz	dBc/Hz		-90 -128 -147 -148		Typical value for 10MHz TCXO.

Note 1 : for frequency ≥ 28MHz, stability vs voltage variation (± 5%) is ± 1.0ppm max

Note 2 : for frequency ≥ 28MHz, aging first year ± 2.0ppm max

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QEA95 / QEA95V

SMD 9.6x11.4 TCXO / VC-TCXO – Communications equipment applications

Specification (rev-E)

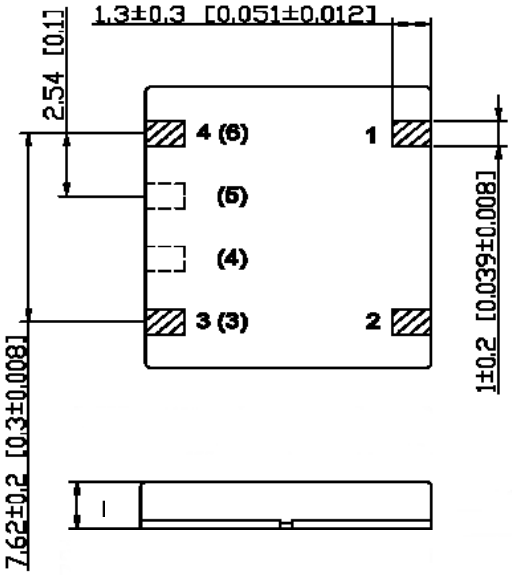
March 16th, 2006

Environmental Specifications

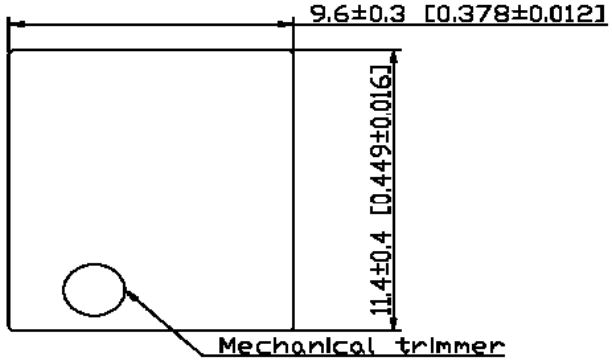
Item	Specifications
Vibration Test	Freq : 10 ~ 55Hz Cycle : 2.00mm, 3 directions each 2 hours
Shock Test	Random drop onto concrete 10 times from height of 75 cm
Humidity	RH : 90% at 40degC during 200 hours

Mechanical Characteristics

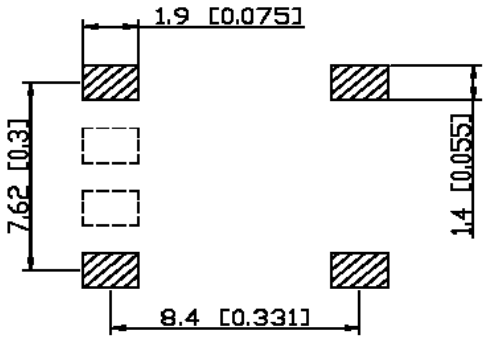
BOTTOM VIEW



Hmax = 2.00 mm



SUGGESTED PAD



Pin connections			
4 pins version		6 pins version	
#1	Vcont or NC	#5	Vcont or NC
#2	GND	#1,2,4	GND
#3	Output	#3	Output
#4	Vcc	#6	Vcc

Marking			
	QEA95	QEA95V	QEA95V1
Line 1	E2 AA0*	G2 AA0*	H2 AA0*
Line 2	Frequency in MHz (6 digits)		
Line 3	Date code (YYWW) – Manuf. code		

* : see letters for Temperature stability, supply voltage and output

Example for QEA95 AA0 / 10.000MHz

- ⇨ Line 1 : E2 AA0
- ⇨ Line 2 : 10.000
- ⇨ Line 3 : 0610-R

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QEA95 / QEA95V

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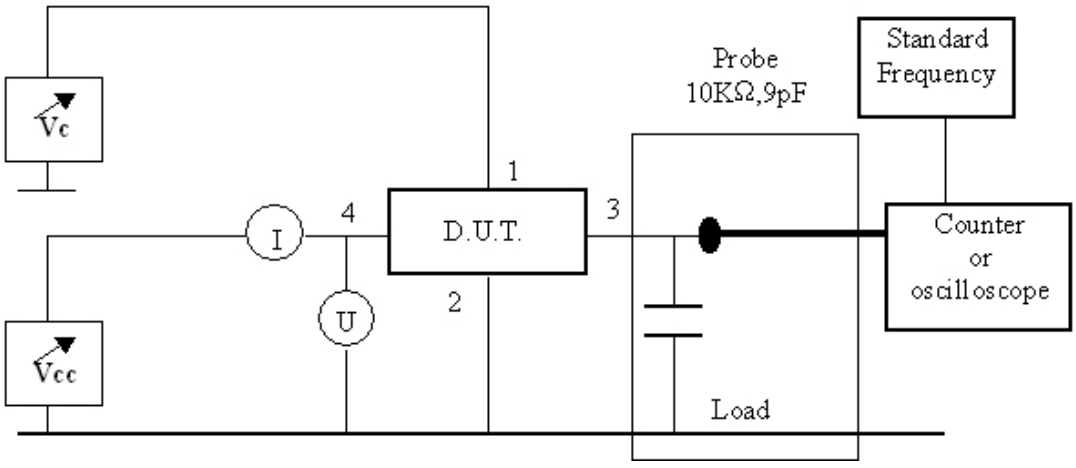
Specification (rev-E)

March 16th, 2006

Ordering Information

Part numbering system					
QEA95	V	A	E	O	12.800MHZ
Package type	Voltage Control	Temperature Stability	Supply voltage	Output	Nominal Frequency (MHz)
SMD Package **QEA95 :** SMD 9.6x11.4	**Blank** : TCXO with trimmer **V** : VC-TCXO with trimmer **V1** : VC-TCXO trimmerless	**A** : ± 2.5ppm vs –30 to +75°C **B** : ± 1.5ppm vs –20 to +70°C **C** : ± 3.5ppm vs –40 to +85°C **D** : ± 5.0ppm vs –40 to +85°C **E** : ± 2.0ppm vs –20 to +70°C	**A** : + 5.0V **D** : +3.3V **E** : + 3.0V	**0** : Clipped sine wave	Please enter the nominal frequency

Test Circuit



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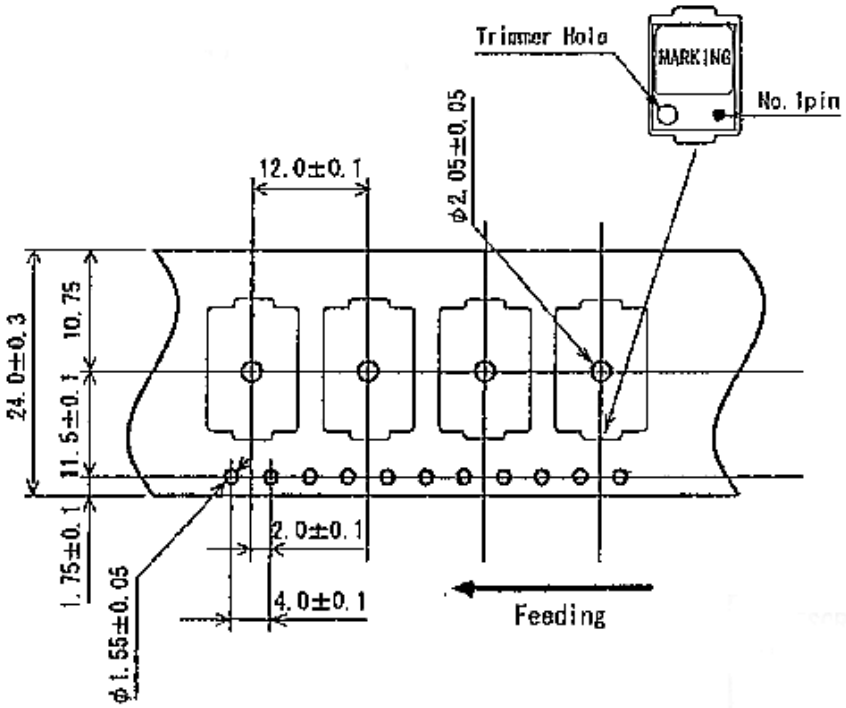
QEA95 / QEA95V

SMD 9.6x11.4 TCXO / VC-TCXO – Communications equipment applications

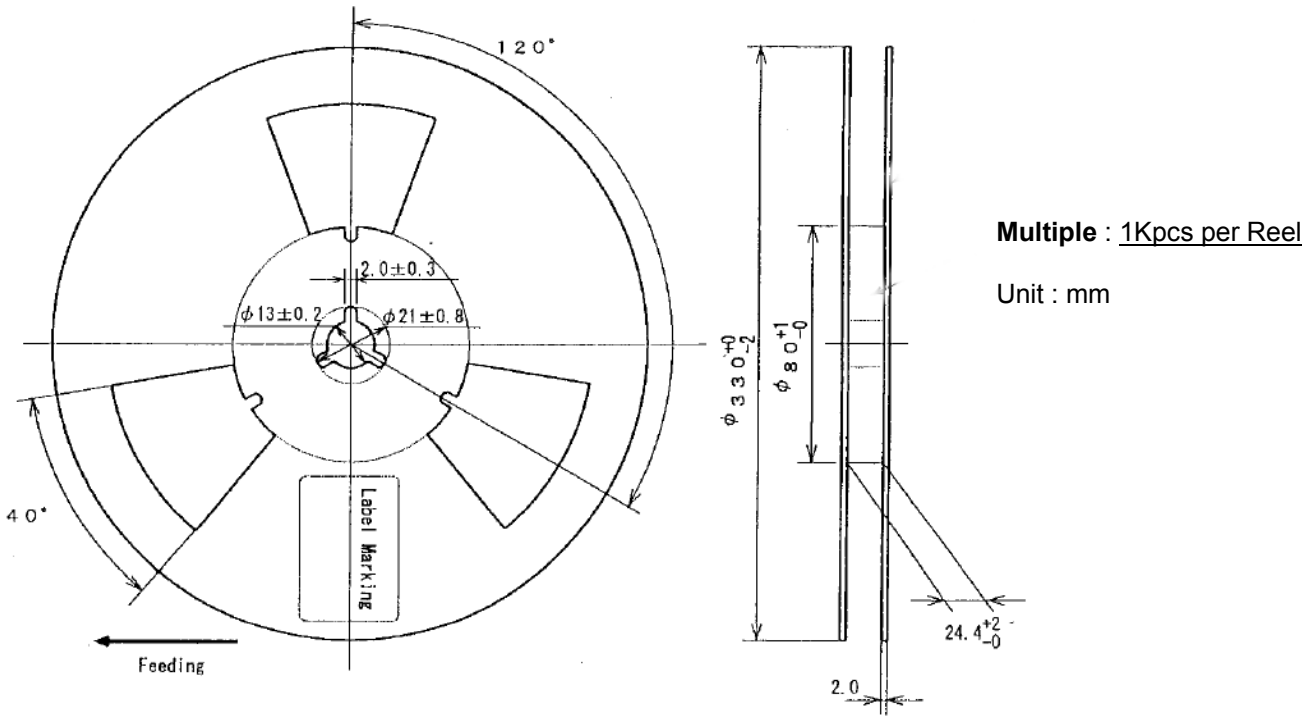
Specification (rev-E)

March 16th, 2006

Tape Drawing



Reel Drawing



Multiple : 1Kpcs per Reel

Unit : mm

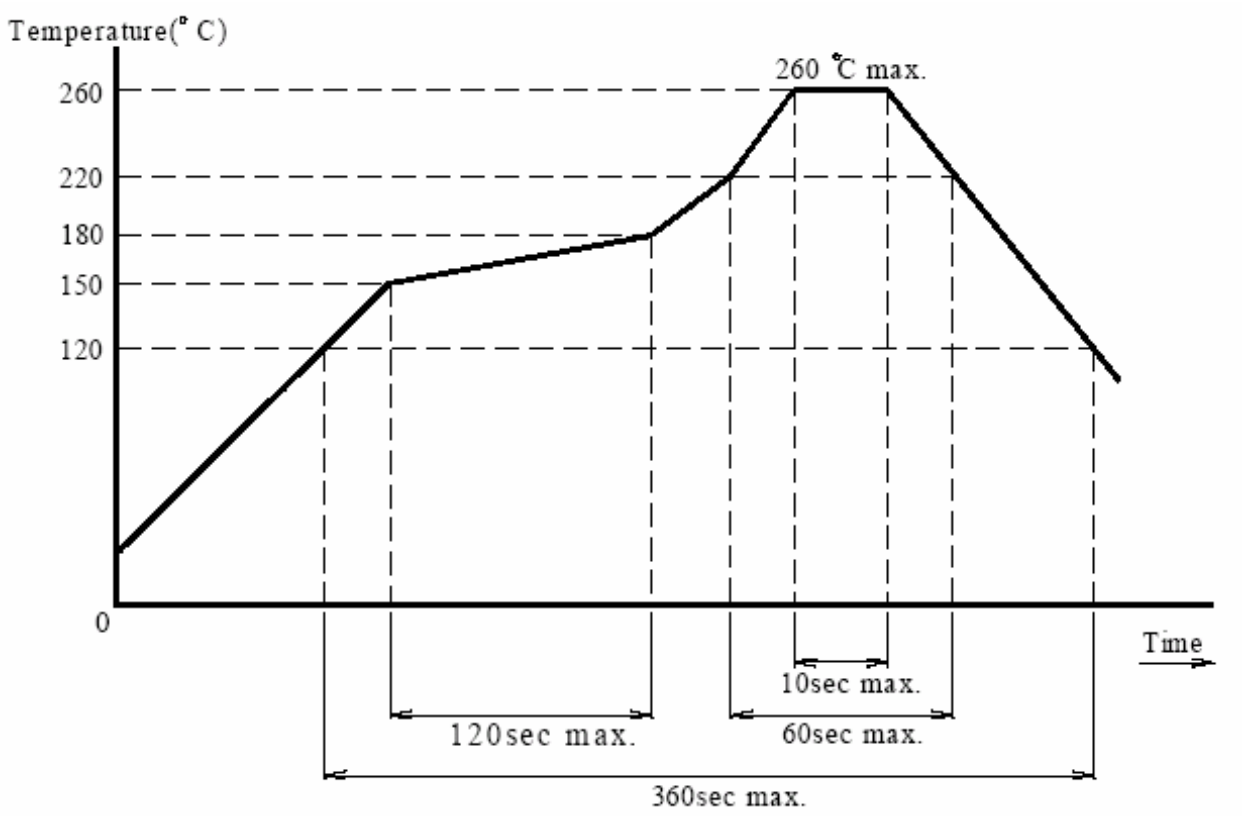
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QEA95 / QEA95V

SMD 9.6x11.4 TCXO / VC-TCXO – Communications equipment applications

Specification (rev-E) March 16th, 2006

Suggested Reflow Soldering Profile



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