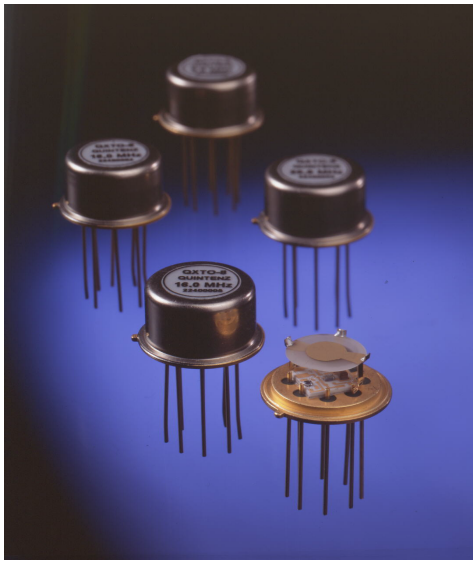
Precision Crystal Clock-Oscillator

Series QXTO-8



Features:

TO-8 package
Hermetically sealed enclosure
HC-MOS technology
Wide temperature range
MIL-STD Screening

Typical Applications:

Test Equipment
Clock
Rough environmental conditions

Base models can be modified to your specification within the performance ranges shown below.

General Performance of QXTO-8..series

		available	from	typ.	to		
1.	Frequency range		1		40	MHz	
2.	HF- Output		HC-MOS / TTL comp.				
2.1	Output Level	<	0.4V / > 4.5			V	
2.2	Symmetry		45/55 .. 55/45 @ 1.4V				
2.4	Fall- / Rise-time	<	4			ns	
3.	Frequency stability						
3.1	Frequency overall tolerances [1]	<=±	10	30	100	ppm	
3.2	Aging [2]	<=±	0,50	1	2	ppm	*first year*
5.1	Operating temperature range		0 ... +50	-20...+70	-55...+115	°C	
5.2	Storage temperature range		-62 ...+125			°C	
6.	Enable/disable function		H or open = enable, L = disable				
7.	Supply voltage		3,3	5	5	V	±5%
8.1	Current consumption [3]	<=	25			mA	
9.	Enclosure		TO-8 / 8-pin			mm^3	
10.	Weight	<=	2			g	

Further frequencies, tolerances and specifications upon request possible

Notes:

1) Including adj. tol., tol. vs temperature range, vs supply voltage change, vs. load change and 15 years aging
2) depends on specification; after 15 days continuous operation
3) depends on nominal frequency

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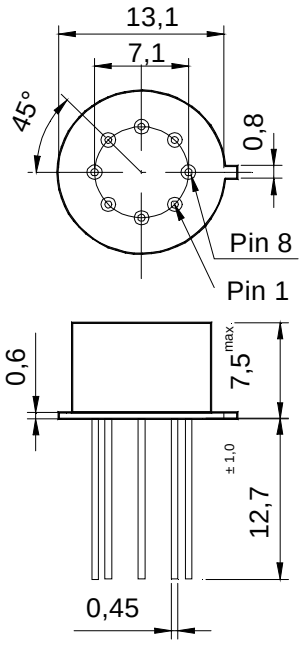
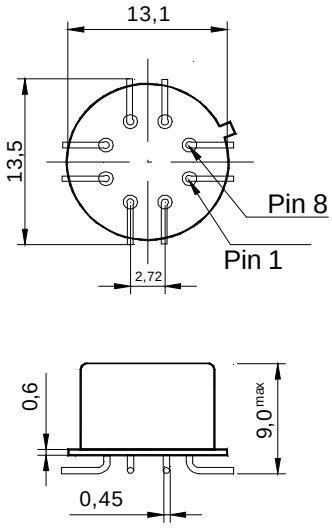
Drawing:

QXTO-8



QXTO-8 S SMD-Version



Pin	connections
1	EN (H-active)
2	int. X-tal
3	HF out
4	GND
5	n.c.
6	int. X-tal
7	n.c.
8	Vcc

all dimensions in mm

Marking:

Manufacturer name, Article/Series code,
Center Frequency, date code and series no.

Environmental conditions:

The crystal oscillators are approved in the following environmental conditions:

Test	**IEC 68 -**	**MILSTD-**	**Test conditions**
Sealing test	2-17	883E - Meth. 1014	Fine leak: A1 2 x 10-8
Shock	2-27	202F - Meth. 213B E:	1000g; 0,5ms;half-sine
Vibration, sinus	2-6	202F - Meth. 204D:	20..2000 Hz 20g; 20 min/axis
Thermal Shock	2-14	883E - Meth. 1014 A:	100°C to 0°C, water,15 cycles

Endurance tests: burn in 72 h @ 125°C; aging 10 days @ 55°C (100%); >1000 days @ 55°C (approval samples)

The oscillator hybrid microcircuit design and construction is in accordance with applicable design and construction requirements.

The final test procedure includes all points of electrical specification especially a 100% test of

-frequency adjustment – calibration
-frequency stability vs. operating temperature range
-long-term stability measurement
-output waveform