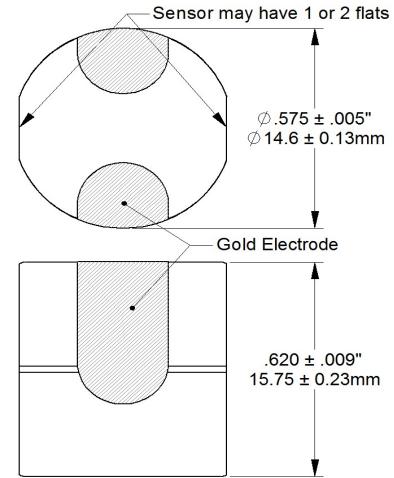
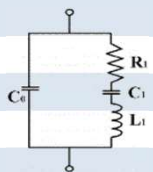


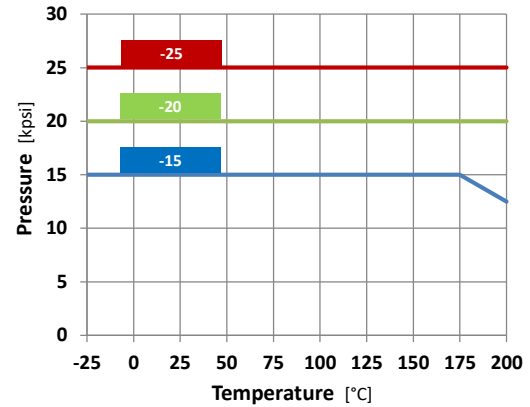
## Standard Size Quartz Pressure Sensors



	-15	-20	-25
Calibration Pressure(s)	up to 15 kpsi 1035 bar	up to 20 kpsi 1380 bar	up to 25 kpsi 1725 bar
Calibration Temperature(s)	varies with pressure; see chart		
<sup>1</sup> Achievable Accuracy	0.020% FS	0.020% FS	0.020% FS
Sensor Sensitivity at 25°C	2.6 Hz/psi 38 Hz/bar	2.4 Hz/psi 35 Hz/bar	2.2 Hz/psi 32 Hz/bar
<sup>2</sup> Resolution at Amb/25°C	0.001 psi (8 Pa)	0.001 psi (8 Pa)	0.001 psi (9 Pa)
Resolution at P <sub>max</sub> /200°C	0.006 psi (43 Pa)	0.008 psi (55 Pa)	0.011 psi (76 Pa)
Aging on the shelf	Negligible		
Longterm stability at max P/T	0.020% FS		
<sup>3</sup> Max overpressure at T <sub>max</sub>	16.5 kpsi 1140 bar	22 kpsi 1520 bar	27.5 kpsi 1900 bar
Recommended Fill-Fluid	Paratherm <sup>TM</sup> NF / non-corrosive dielectric oil		
<sup>4</sup> Frequency (3 <sup>rd</sup> OT)	7210 ± 7 kHz		
<sup>4</sup> Series Resistance, R <sub>1</sub>	40 - 70 Ω		
<sup>4</sup> Motional Capacitance, C <sub>1</sub>	0.43 ff typ.		
<sup>4</sup> Inductance, L <sub>1</sub>	1.11 henry typ.		
<sup>4</sup> Static Capacitance, C <sub>0</sub>	2.0 pf typ.		
<sup>4</sup> Max Drive Level	100 μW		
<sup>4</sup> DLD (ΔR <sub>1</sub> , 10 steps 1-100μW)	5 Ω		



### Recommended Calibration Limits



<sup>1</sup> Conformance to primary pressure standard. Includes repeatability, hysteresis, and corrected linearity. Accuracy improves with narrower temperature and lower pressure ranges (i.e., a 16k/175°C calibration yields better absolute accuracy than a 20k/200°C cal.)

Pressure resolution is a function of sensor sensitivity, pressure, temperature, timebase, circuit jitter, counting method, and sample time. This calculation used: 7.20MHz, 150ns, reciprocal, and 1 second, respectively.

<sup>3</sup> Recalibration may be necessary after overpressure.

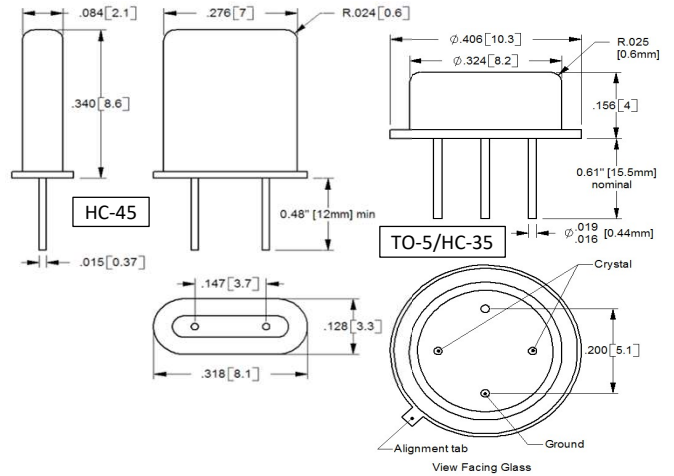
<sup>4</sup> Sensors measured using a S&A 250B network analyzer with no capacitance load at 25°C

<sup>5</sup> Précis may substitute higher pressure sensors to fill an order for lower pressure sensors.



## Quartz Temp/Ref Crystals

	QTC	QTC-Y	QRC
Purpose	Temperature	Temperature	Reference
<sup>6</sup> Package Availability	TO-5/HC-35	HC-45	TO-5/HC-35
Operating Range	-20 to 200°C   -4 to 392°F		
Average Sensitivity, 25-200°C	200 Hz/°C	700 Hz/°C	100 ppm
<sup>7</sup> Resolution at 25°C	0.0010°C	0.0007°C	-
Resolution at 200°C	0.0002°C	0.0001°C	-
Aging on the shelf	Negligible		
Aging at 180°C	< 2 ppm/yr		
<sup>4</sup> Frequency	7150 ± 6 kHz	7045 ± 10 kHz	7200 ± 5 kHz
<sup>4</sup> Series Resistance, R <sub>1</sub>	< 25 Ω	< 40 Ω	< 25 Ω
<sup>4</sup> Motional Capacitance, C <sub>1</sub>	3.9 ff typ.	5.9 ff typ.	1.4 ff typ.
<sup>4</sup> Inductance, L <sub>1</sub>	130 mH typ.	85 mH typ.	360 mH typ.
<sup>4</sup> Static Capacitance, C <sub>0</sub>	1.2 pf typ.	1.1 pf typ.	2.1 pf typ.
<sup>4</sup> Max Drive Level	10 μW	10 μW	10 μW
<sup>4</sup> DLD (ΔR <sub>1</sub> , 10 steps 1-10μW)	2.5 Ω	3.5 Ω	2.5 Ω

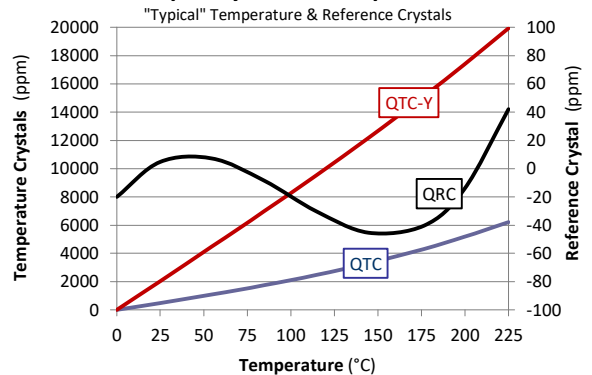


<sup>6</sup> The TO-5/HC-35 package is a 4-point mount (more rugged).

The HC-45 package is a 2-point mount and fits in smaller spaces.

<sup>7</sup> Temperature resolution is a function of sensitivity, temperature, timebase, circuit jitter, counting method, and sample time. See Note 2 above for parameters used.

### Frequency versus Temperature



Contact us for additional mechanical packaging options.