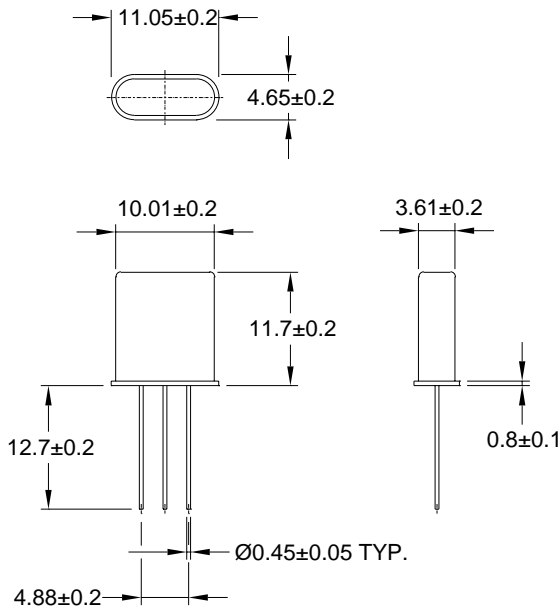
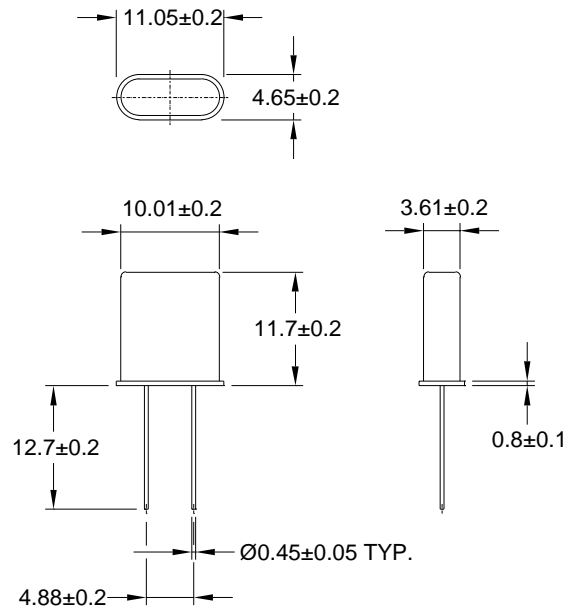


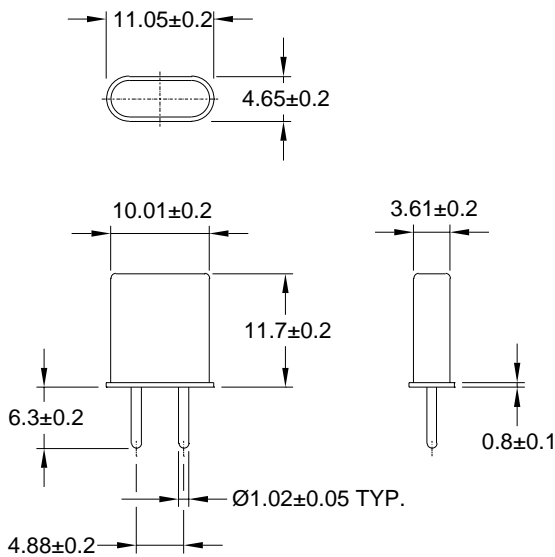
QC53



QC55



QC56



STANDARD PERFORMANCE REPRESENTATION

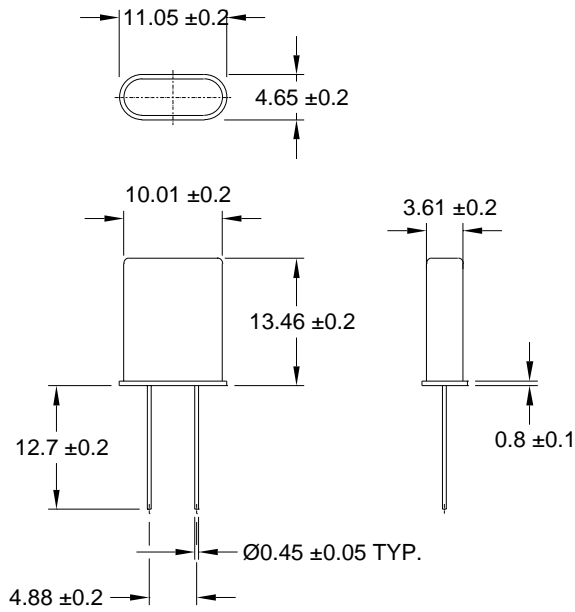
- Temperature Range -10°C to 60°C
- Stability (ppm) ± 3 to ± 100
- Load Capacitance (C_L) Series to 150pF
- Calibration ppm at 25°C ± 5 to ± 50 (± 10 ppm typical)
- ESR R_1 Refer table
- Shunt (C_O) 7pF Maximum
- Motional Capacitance (C_1) Refer table
- Drive Level 0.5mW Typical

Mode	Frequency Range (MHz)	Max. ESR (Ohms)*	C_1 Typ. (fF)*
Fund.	3 to 45	20 to 180	5 to 30
3rd	18 to 90	40	1 to 2.5
5th	60 to 150	60	0.70
7th	125 to 175	120	0.35
9th	175 to 200	120	0.20

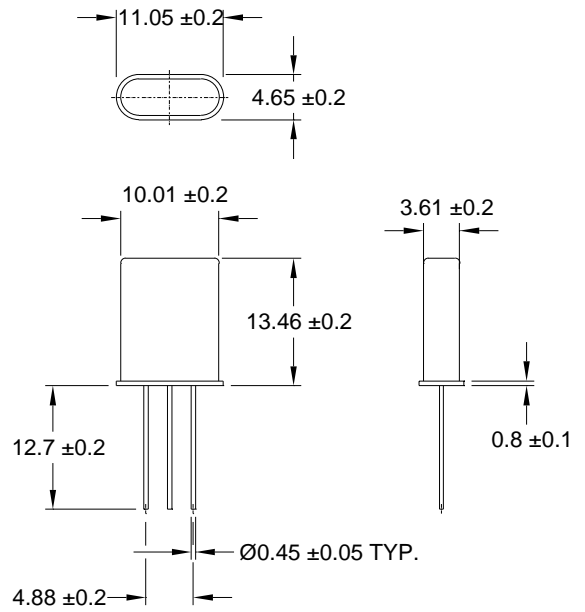
Note:

Above parameters are for standard crystal units.
Hy-Q sales office should be contacted for special requirements.
* Value dependent upon frequency.

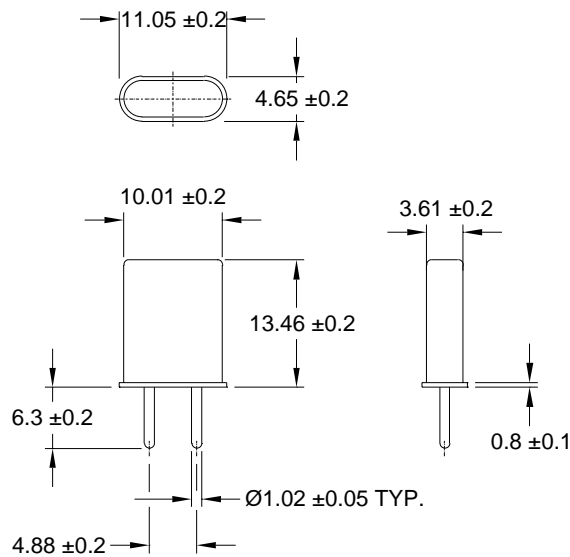
QC49



QC59



QC50



STANDARD PERFORMANCE REPRESENTATION

- Temperature Range -10°C to 60°C
- Stability (ppm) ± 3 to ± 100
- Load Capacitance (C_L) Series to 150pF
- Calibration ppm at 25°C ± 5 to ± 50 (± 10 ppm typical)
- ESR R_1 Refer table
- Shunt (C_O) 7pF Maximum
- Motional Capacitance (C_1) Refer table
- Drive Level 0.5mW Typical

Mode	Frequency Range (MHz)	Max. ESR (Ohms)*	C_1 Typ. (fF)*
Fund.	3 to 45	20 to 180	5 to 30
3rd	18 to 90	40	1 to 2.5
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Note:

Above parameters are for standard crystal units.
Hy-Q sales office should be contacted for special requirements.
* Value dependent upon frequency.