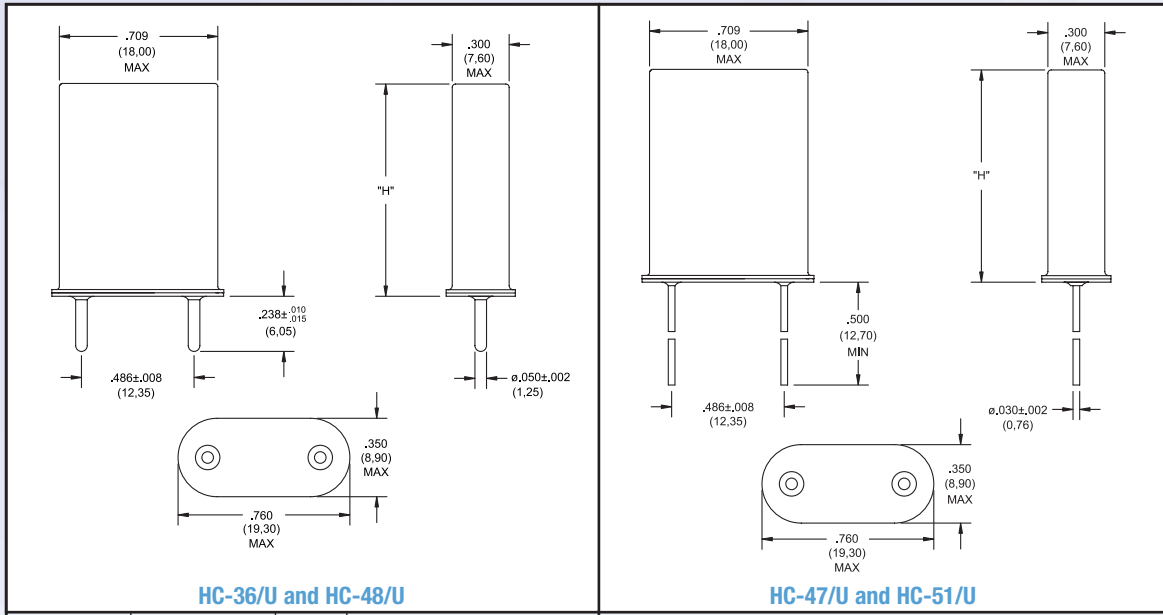


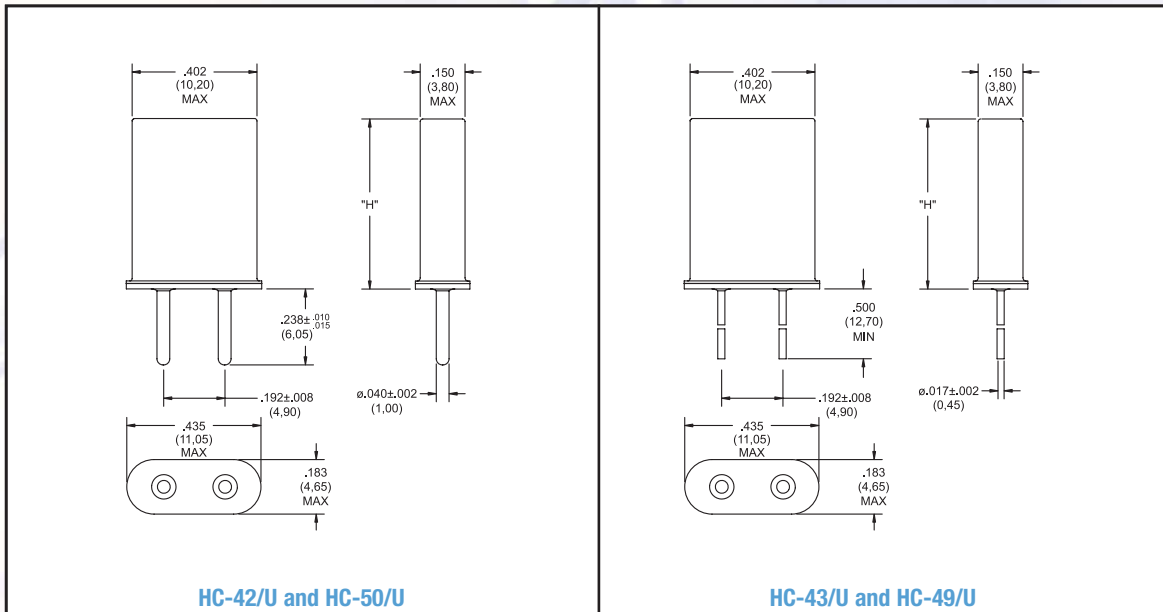
# CROVEN CRYSTALS



HC-36/U and HC-48/U

HC-47/U and HC-51/U

TYPE	SEAL	CODE	HEIGHT 'H' IN (mm)	Frequency Range (MHz)					
				Fund	3rd	5th	7th	9th	11th
HC-36/U	Cold Weld	360	0.775 (19,69) Max	1 - 35	4 - 105	10 - 165	80 - 230	160 - 300	216 - 360
HC-48/U	Resistance Weld	480	0.775 (19,69) Max	1 - 35	4 - 105	10 - 165	80 - 230	160 - 300	216 - 360
HC-47/U	Cold Weld	470	0.775 (19,69) Max	1 - 35	4 - 105	10 - 165	80 - 230	160 - 300	216 - 360
HC-51/U	Resistance Weld	510	0.775 (19,69) Max	1 - 35	4 - 105	10 - 165	80 - 230	160 - 300	216 - 360

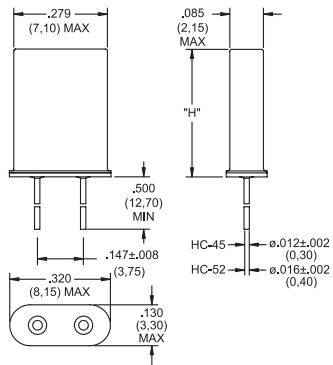


HC-42/U and HC-50/U

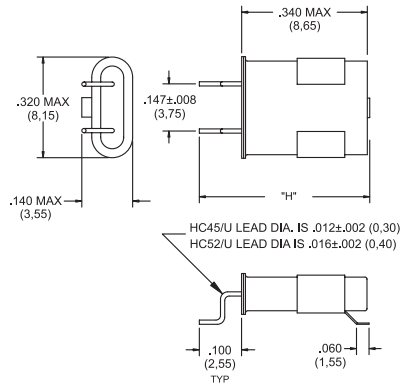
HC-43/U and HC-49/U

TYPE	SEAL	CODE	HEIGHT 'H' IN (mm)	Frequency Range (MHz)					
				Fund	3rd	5th	7th	9th	11th
HC-42/U	Cold Weld	420	0.530 (13,46) Max	2.9 - 35	10 - 105	30 - 165	80 - 230	160 - 300	216 - 360
HC-42/U	Cold Weld	425	0.438 (11,13) Max	6 - 35	35 - 105	40 - 165	80 - 230	160 - 300	216 - 360
HC-50/U	Resistance Weld	500	0.530 (13,46) Max	2.9 - 35	10 - 105	30 - 165	80 - 230	160 - 300	216 - 360
HC-50/U	Resistance Weld	506	0.455 (11,56) Max	6 - 35	35 - 105	40 - 165	80 - 230	160 - 300	216 - 360
HC-43/U	Cold Weld	430	0.530 (13,46) Max	2.9 - 35	10 - 105	30 - 165	80 - 230	160 - 300	216 - 360
HC-43/U	Cold Weld	435	0.438 (11,13) Max	6 - 35	35 - 105	40 - 165	80 - 230	160 - 300	216 - 360
HC-49/U	Resistance Weld	490	0.530 (13,46) Max	2.9 - 35	10 - 105	30 - 165	80 - 230	160 - 300	216 - 360
HC-49/U	Resistance Weld	496	0.455 (11,56) Max	6 - 35	35 - 105	40 - 165	80 - 230	160 - 300	216 - 360



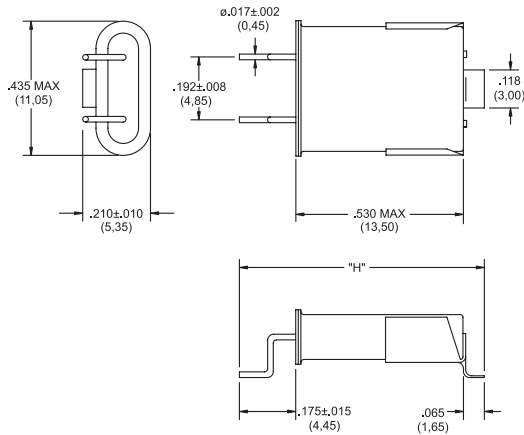


**HC-45/U and HC-52/U**

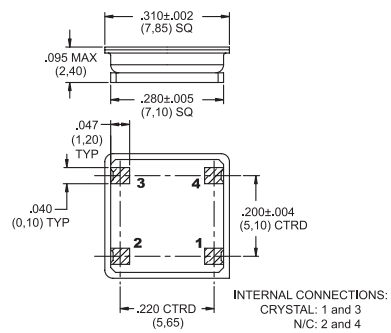


**HC-45/U SMD and HC-52/U SMD**

TYPE	SEAL	CODE	HEIGHT 'H' IN (mm)	Frequency Range (MHz)					
				Fund	3rd	5th	7th	9th	11th
HC-45/U	Cold Weld	450	0.342 (8,69) Max	9 - 175	27 - 360	40 - 360	80 - 360	160 - 360	216 - 360
HC-52/U	Resistance Weld	520	0.342 (8,69) Max	9 - 175	27 - 360	40 - 360	80 - 360	160 - 360	216 - 360
HC-45/U SMD	Cold Weld	451	0.445 ± 0.020 (11,30 ± 0,51)	9 - 175	27 - 360	40 - 360	80 - 360	160 - 360	216 - 360
HC-52/U SMD	Resistance Weld	521	0.445 ± 0.020 (11,30 ± 0,51)	9 - 175	27 - 360	40 - 360	80 - 360	160 - 360	216 - 360



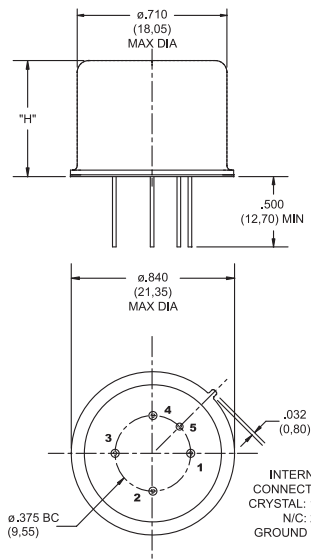
**HC-43/U SMD and HC-49/U SMD**



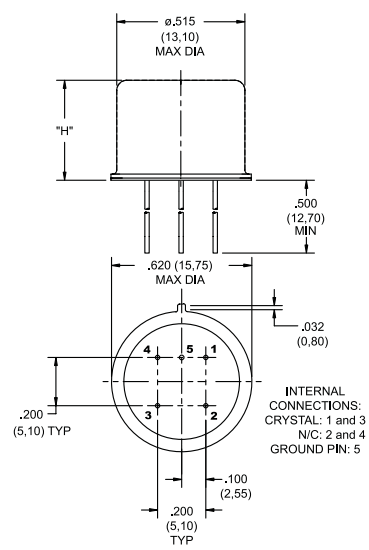
**SM1**

TYPE	SEAL	CODE	HEIGHT 'H' IN (mm)	Frequency Range (MHz)					
				Fund	3rd	5th	7th	9th	11th
HC-43/U SMD	Cold Weld	431	0.660 ± 0.015 (16,76 ± 0,38)	6 - 35	35 - 105	40 - 165	80 - 230	160 - 300	216 - 360
HC-43/U SMD	Cold Weld	432	0.725 ± 0.015 (18,42 ± 0,38)	2.9 - 35	10 - 105	30 - 165	80 - 230	160 - 300	216 - 360
HC-49/U SMD	Resistance Weld	491	0.660 ± 0.015 (16,76 ± 0,38)	6 - 35	35 - 105	40 - 165	80 - 230	160 - 300	216 - 360
HC-49/U SMD	Resistance Weld	492	0.725 ± 0.015 (18,42 ± 0,38)	2.9 - 35	10 - 105	30 - 165	80 - 230	160 - 300	216 - 360
SM1	Resistance Weld	900	0.095 (2,41) Max	7 - 175	20 - 360	40 - 360	80 - 360	160 - 360	216 - 360

# CROVEN CRYSTALS

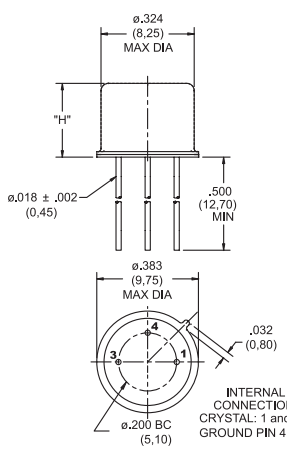


**HC-40/U (E0-7) (also available in pin version)**



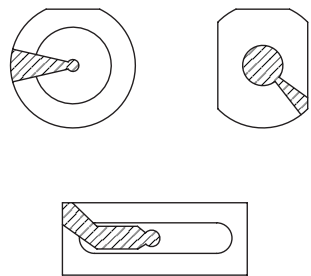
**HC-37/U (T0-8) (also available in pin version)**

TYPE	SEAL	CODE	HEIGHT 'H' IN (mm)	Frequency Range (MHz)					
				Fund	3rd	5th	7th	9th	11th
HC-40/U	Cold Weld	400	0.355 (9,01) Max	1 - 10	4 - 30	8 - 50	n/a	n/a	n/a
HC-37/U	Cold Weld	370	0.265 (6,73) Max	2.5 - 25	5 - 60	10 - 100	25 - 125	n/a	n/a
HC-37/U	Cold Weld	375	0.235 (5,95) Max	2.5 - 25	5 - 60	10 - 100	25 - 125	n/a	n/a
HC-37/U	Cold Weld	379	0.160 (4,06) Max	4 - 20	10 - 60	10 - 100	25 - 125	n/a	n/a



**HC-35/U (T0-5)**

In addition to the providing sealed crystals in standard enclosures, CROVEN CRYSTALS also provides custom hybrid blanks for oscillator, sensor and other applications. These blanks are available in a variety of shapes, sizes and electrode finishes. Consult the factory for your particular requirements.



**Hybrid Blanks**

TYPE	SEAL	CODE	HEIGHT 'H' IN (mm)	Frequency Range (MHz)					
				Fund	3rd	5th	7th	9th	11th
HC-35/U	Cold Weld	350	0.265 (6,73) Max	7 - 175	20 - 360	40 - 360	80 - 360	160 - 360	216 - 360
HC-35/U	Cold Weld	355	0.220 (5,59) Max	7 - 175	20 - 360	40 - 360	80 - 360	160 - 360	216 - 360
HC-35/U	Cold Weld	356	0.208 (5,28) Max	7 - 175	20 - 360	40 - 360	80 - 360	160 - 360	216 - 360

**NOTES:**

- (1) HC-37/U and HC-40/U have 4-point internal mount construction. HC-35/U is also available as 4-point mount when specified.
- (2) For holder styles and sizes not illustrated in this catalogue, please consult the factory.

