



# HFF-Crystals

## High Fundamental Frequency – Crystals

Modern crystal applications require further miniaturisation and higher frequencies. In response to these market trends KVG has installed an innovative production line for High Frequency Fundamental Crystals.

The product line includes crystals with flat and MESA structured quartz blanks for high frequencies in fundamental mode up to 200MHz.

For voltage controlled oscillators the high fundamental frequencies offer the benefit of higher pullability compared to an overtone crystal design. Furthermore, the high frequencies in fundamental mode reduce the need for frequency multiplying.

Oscillators designed with such crystals have distinctive advantage in cost, physical size and reliability.

## Typical Data for High Fundamental Frequency - Crystals

Overtone	Frequency range [ MHz ]	C1 [ fF ]	C0 [ pF ]	Q [ *1000 ]
1	45 - 200	2.5 - 15	1.0 - 8.0	35 - 10
3	120 - 320	0.3 - 4.0	1.0 - 8.0	60 - 10

Adjustment tolerance :  $\pm 10$  ppm @ 25 °C

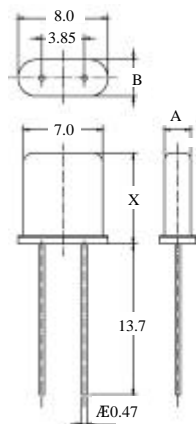
Temperature stability :  $\pm 20$  ppm from -20 to +70°C

Aging :  $\pm 3$  ppm / year max.

Customer specific data upon request.

Standard Frequencies : 44.736 MHz, 51.840 MHz, 61.440 MHz, 65.536 MHz  
68.736 MHz, 69.545 MHz, 139.264 MHz, 155.520 MHz

## Enclosures for HFF - Crystals



	X	A	B
HC-52/U:	8.9	2.3	3.3

All dimensions in mm (max),

SMD versions with metal clip

### KVG Quartz Crystal Technology

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