

QUARTZ CRYSTALS

| Crystal type | Package type | Frequency range (overtone) | Frequency tolerance, *10 ⁻⁶ | Motional resistance, Ohm |
|---------------------|------------------------|----------------------------|--|--------------------------|
| QR-MV-379 | HC-49 | 420...550 kHz (1) | ±30 | < 3000 |
| QR-MV-379 | HC-49, HC49-SMD | 4000... 45000 kHz (1) | ±5...±30 | 20...100 |
| | | 20 ...90 MHz (3) | | |
| | 60 ...200 MHz (5) | | | |
| HC-52, HC52-SMD | 5000 ... 45000 kHz (1) | ±5...±30 | 30...150 | |
| | 20...140 MHz (3) | | | |
| HC-33 | 60 ...200 MHz (5) | ±10...±20 | 30...600 | |
| | 750...8000 kHz (1) | | | |
| 1000...8000 kHz (1) | | | | |
| QR-MV-432 | HC-49/S | 10000...25000 kHz (1) | ±15...±50 | < 25 |

Standard frequency stability versus temperature changes

| Temperature range, °C | Frequency stability × 10 ⁻⁶ | | | | | | | | | |
|-----------------------|--|----|------|-----|-----|-----|-----|-----|-----|-----|
| | ±3 | ±5 | ±7,5 | ±10 | ±15 | ±20 | ±25 | ±30 | ±40 | ±50 |
| | I | K | L | M | N | P | R | S | T | U |
| A -10...+60 | A | A | A | A | A | A | A | A | A | A |
| B -30...+60 | NA | NA | C | A | A | A | A | A | A | A |
| C -40...+70 | NA | NA | NA | C | A | A | A | A | A | A |
| D -60...+85 | NA | NA | NA | NA | NA | A | A | A | A | A |

A - available, NA - not available, C - consult factory

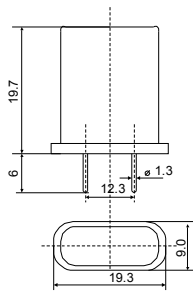
Frequency tolerance accuracy

| Frequency accuracy, *10 ⁻⁶ | + 0,5 | + 1 | + 3 | + 5 | + 10 | + 15 | + 20 | + 30 | + 50 | + 75 | + 100 |
|---------------------------------------|-------|-----|-----|-----|------|------|------|------|------|------|-------|
| Designation | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |

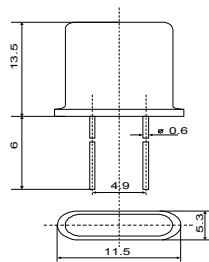
Ordering guide: QR-MV-379-HC-52-5AI-38.4625M, where

- QRMV-379 - crystal type;
- HC-52 - package type (HC-49, HC-52, HC-33);
- 5 - designation of frequency accuracy;
- A - temperature range;
- I - frequency stability.

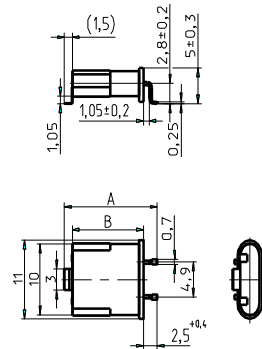
Drawings of packages of the crystal units



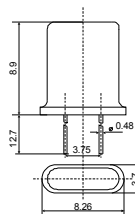
“HC-33”



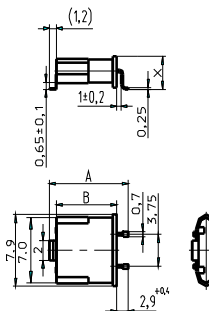
“HC-49”



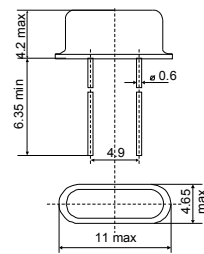
“HC-49-SMD”



“HC-52”



“HC-52-SMD”



“HC-49/S”