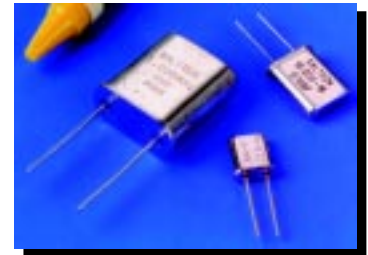


### ● FEATURES

- EXCELLENT CLOCK SIGNAL GENERATOR FOR CPU's
- WIDE FREQUENCY RANGE
- INDUSTRY STANDARD PACKAGES

### ● SPECIFICATIONS

|                                      |            |  |
|--------------------------------------|------------|--|
| FREQUENCY RANGE                      |            | 100.00 KHz TO 300.00 MHz   |
| HOLDER TYPES                         | A: HC-49/U | 1.00 MHz TO 300.00 MHz   |
|                                      | B: HC-51/U | 100.00 KHz TO 4.00 MHz   |
|                                      | C: UM-1    | 8.00 MHz TO 300.00 MHz   |
| FREQUENCY TOLERANCE AT 25 °C         |            | ±30 PPM TYPICAL<br>±50 PPM MAXIMUM   |
| FREQUENCY STABILITY OVER TEMPERATURE |            | ±50 PPM TYPICAL<br>±100 PPM MAXIMUM  |
| OPERATING TEMPERATURE RANGE          |            | -20 °C TO +70 °C STANDARD  |
|                                      |            | -40° C TO +85 °C EXTENDED  |
| STORAGE TEMPERATURE RANGE            |            | -55 °C TO +125 °C  |
| AGING                                |            | ±5 PPM PER YEAR MAXIMUM  |
| LOAD CAPACITANCE                     |            | 10 TO 32 pF 0R SERIES  |
| SHUNT CAPACITANCE                    |            | 7 pF MAXIMUM   |
| EQUIVALENT SERIES RESISTANCE (ESR)   |            | SEE PAGE 11  |
| DRIVE LEVEL                          |            | 0.1 mW TYPICAL<br>1 mW MAXIMUM   |
| SHOCK RESISTANCE                     |            | ±5 PPM MAXIMUM 75 cm DROP TEST IN 3 AXES ONTO A HARD SURFACE OR 1000 g's x 0.5 ms x ½ SINEWAVE IN 3 AXES |



### ● FREQUENCY RANGE AND MODE OF OSCILLATION BY HOLDER TYPE

| HOLDER TYPE     | FUNDAMENTAL (FUND)     | THIRD OVERTONE (3OT)   | FIFTH OVERTONE (5OT)    | SEVENTH OVERTONE (7OT)   | NINTH OVERTONE (9OT)     |
|-----------------|------------------------|------------------------|-------------------------|--------------------------|--------------------------|
| TYPE A: HC-49/U | 1.00 MHz TO 65.00 MHz  | 20.00 MHz TO 90.00 MHz | 60.00 MHz TO 130.00 MHz | 125.00 MHz TO 200.00 MHz | 180.00 MHz TO 300.00 MHz |
| TYPE B: HC-51/U | 100.00 KHz TO 4.00 MHz |                        |                         |                          |                          |
| TYPE C: UM-1    | 8.00 MHz TO 65.00 MHz  | 25.00 MHz TO 90.00 MHz | 60.00 MHz TO 130.00 MHz | 125.00 MHz TO 200.00 MHz | 180.00 MHz TO 300.00 MHz |

### ● PART NUMBERING SYSTEM

| HOLDER TYPE |                            | - | FREQUENCY | - | LOAD CAPACITANCE                        | - | MODE                             |   | - | EXTENDED TEMPERATURE |
|-------------|----------------------------|---|-----------|---|---|---|----------------------------------|---|---|----------------------|
| A<br>B<br>C | HC-49/U<br>HC-51/U<br>UM-1 |   | IN MHz    |   | 10 TO 32pF FOR PARALLEL<br>S FOR SERIES |   | FUND<br>3OT<br>5OT<br>7OT<br>9OT | FUNDAMENTAL<br>THIRD OVERTONE<br>FIFTH OVERTONE<br>SEVENTH OVERTONE<br>NINTH OVERTONE |   | EXT                  |

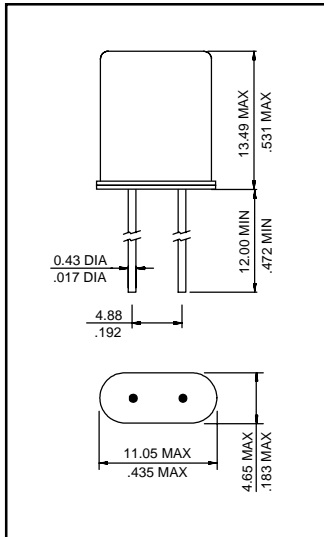
| MECHANICAL OPTIONS |   |                                |   |        | - | TAPE AND REEL |    |
|--------------------|---|--------------------------------|---|--------|---|---------------|----|
| THREE PIN BASE     | - | THIRD LEAD<br>(TOP OF HOUSING) | - | SPACER |   | -             | TR |
| 3PIN               |   | 3RD                            |   | SP     |   |               |    |

† FUNDAMENTAL MODE NOT NEEDED IN PART NUMBER

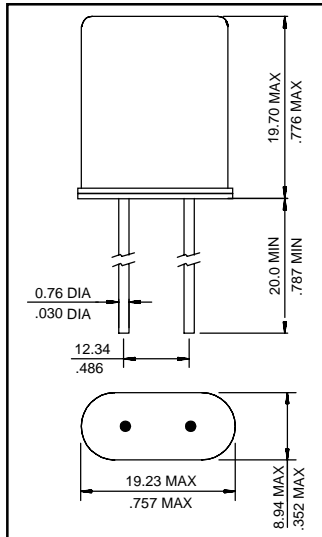
EXAMPLE: A-4.000-S

A-3.579545-18-EXT-3PIN-SP-SL-TR

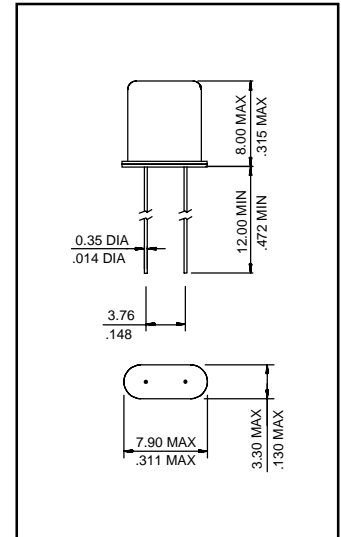
C-65.000-S-30T



TYPE A (HC-49/U)

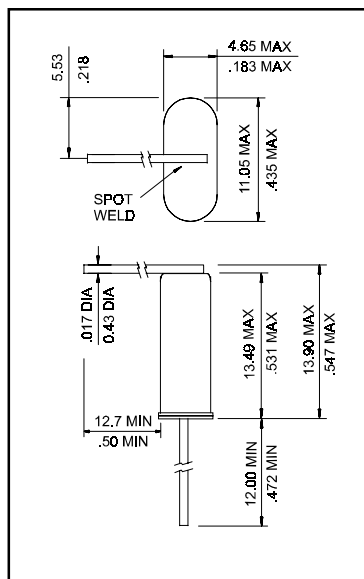


TYPE B (HC-51/U)

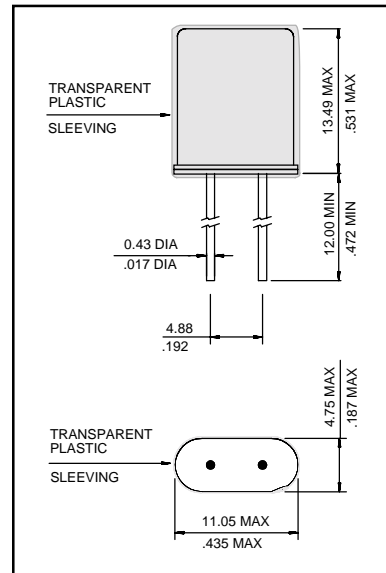


TYPE C (UM-1)

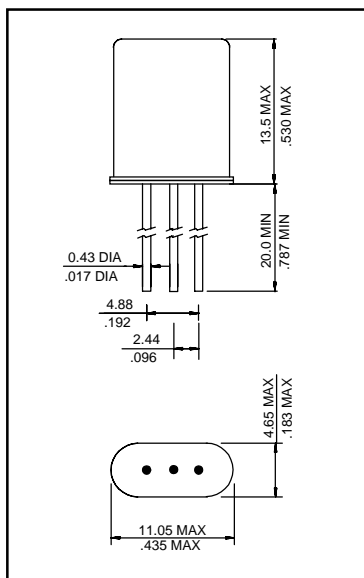
### ● PACKAGE OPTIONS



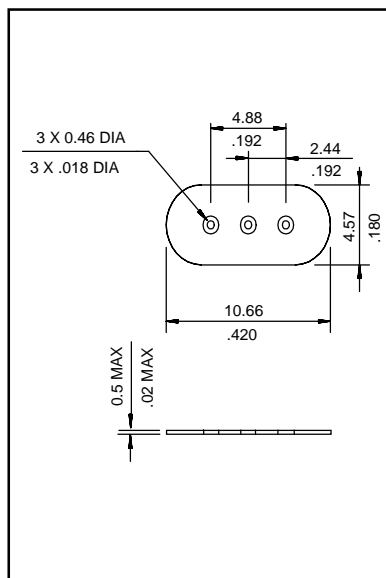
THIRD LEAD OPTION: 3RD



PLASTIC SLEEVE OPTION: SL



3 LEAD BASE OPTION: 3PIN



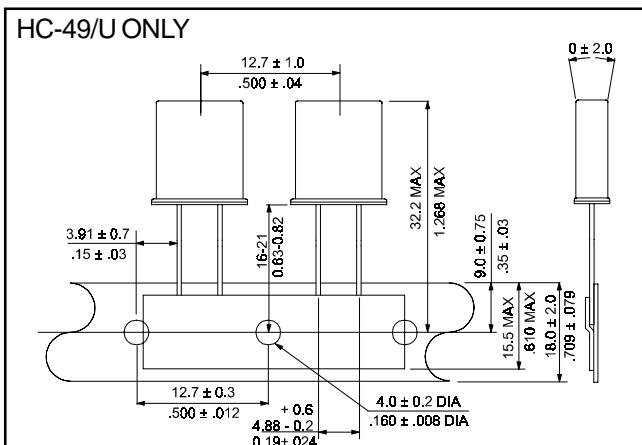
PLASTIC SPACER OPTION: SP

## EQUIVALENT SERIES RESISTANCE VERSUS FREQUENCY AND PACKAGE

| FREQUENCY<br>MHz | HOLDER TYPE |             |          | ESR |     |     |
|------------------|-------------|-------------|----------|-----|-----|-----|
|                  | HC-51/U "B" | HC-49/U "A" | UM-1 "C" | "B" | "A" | "C" |
| 1.000            | B           | A           |          | 700 | 700 |     |
| 1.843            | B           | A           |          | 600 | 700 |     |
| 2.000            | B           | A           |          | 500 | 500 |     |
| 2.097152         | B           | A           |          | 500 | 500 |     |
| 2.4576           | B           | A           |          | 400 | 400 |     |
| 3.000            | B           | A           |          | 150 | 200 |     |
| 3.2768           | B           | A           |          | 150 | 180 |     |
| 3.579545         | B           | A           |          | 120 | 180 |     |
| 3.600            | B           | A           |          | 100 | 160 |     |
| 3.6864           | B           | A           |          | 100 | 140 |     |
| 4.000            | B           | A           |          | 50  | 80  |     |
| 4.096            |             | A           |          |     | 80  |     |
| 4.194304         |             | A           |          |     | 80  |     |
| 4.433619         |             | A           |          |     | 80  |     |
| 4.9152           |             | A           |          |     | 60  |     |
| 5.000            |             | A           |          |     | 60  |     |
| 5.0688           |             | A           |          |     | 60  |     |
| 5.185            |             | A           |          |     | 60  |     |
| 5.7143           |             | A           |          |     | 50  |     |
| 5.9904           |             | A           |          |     | 50  |     |
| 6.000            |             | A           |          |     | 50  |     |
| 6.144            |             | A           |          |     | 40  |     |
| 6.400            |             | A           |          |     | 40  |     |
| 6.5536           |             | A           |          |     | 40  |     |
| 7.000            |             | A           |          |     | 30  |     |
| 7.15909          |             | A           |          |     | 30  |     |
| 7.3728           |             | A           |          |     | 30  |     |
| 8.000            |             | A           |          |     | 30  |     |
| 9.216            |             | A           |          |     | 30  |     |
| 9.8304           |             | A           |          |     | 30  |     |
| 10.000           |             | A           | C        |     | 25  | 50  |
| 10.738635        |             | A           | C        |     | 25  | 50  |
| 11.000           |             | A           | C        |     | 25  | 50  |
| 11.050           |             | A           | C        |     | 25  | 50  |

| FREQUENCY<br>MHz | HOLDER TYPE |             |          | ESR |     |     |
|------------------|-------------|-------------|----------|-----|-----|-----|
|                  | HC-51/U "B" | HC-49/U "A" | UM-1 "C" | "B" | "A" | "C" |
| 11.059           |             | A           | C        |     | 25  | 50  |
| 12.000           |             | A           | C        |     | 25  | 40  |
| 12.288           |             | A           | C        |     | 25  | 40  |
| 13.5168          |             | A           | C        |     | 25  | 40  |
| 14.31818         |             | A           | C        |     | 25  | 35  |
| 14.7456          |             | A           | C        |     | 25  | 35  |
| 15.000           |             | A           | C        |     | 25  | 35  |
| 16.000           |             | A           | C        |     | 25  | 30  |
| 16.384           |             | A           | C        |     | 25  | 35  |
| 17.360           |             | A           | C        |     | 25  | 30  |
| 18.000           |             | A           | C        |     | 20  | 25  |
| 18.432           |             | A           | C        |     | 20  | 30  |
| 19.354           |             | A           | C        |     | 20  | 30  |
| 19.6608          |             | A           | C        |     | 20  | 30  |
| 20.000           |             | A           | C        |     | 20  | 30  |
| 22.1184          |             | A           | C        |     | 20  | 25  |
| 23.400           |             | A           | C        |     | 20  | 25  |
| 24.000           |             | A           | C        |     | 20  | 25  |
| 24.576           |             | A           | C        |     | 30  | 25  |
| 25.000           |             | A           | C        |     | 30  | 20  |
| 27.000           |             | A           | C        |     | 30  | 20  |
| 30.000           |             | A           | C        |     | 30  | 20  |
| 32.000           |             | A           | C        |     | 30  | 60  |
| 36.000           |             | A           | C        |     | 30  | 60  |
| 40.000           |             | A           | C        |     | 30  | 50  |
| 48.000           |             | A           | C        |     | 30  | 50  |
| 60.000           |             | A           | C        |     | 30  | 40  |
| 70.000           |             | A           | C        |     | 30  | 40  |
| 80.000           |             | A           | C        |     | 30  | 40  |
| 90.000           |             | A           | C        |     | 40  | 40  |
| 100.000          |             | A           | C        |     | 40  | 100 |
| 150.000          |             | A           | C        |     | 50  | 70  |
| 200.000          |             | A           | C        |     | 100 | 120 |
| 300.000          |             | A           | C        |     | 150 | 180 |

## CARRIER TAPE DIMENSIONS



## PACKAGING

370 mm REEL DIAMETER, 18 mm TAPE WIDTH, 12.7 mm PITCH, QUANTITY 1000 PIECES PER REEL