

# STANDARD CRYSTALS

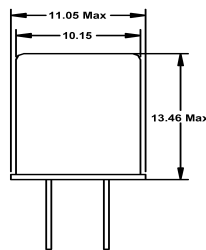
• Inventory Support **HC49U Resistance Weld**

• Standard Packages

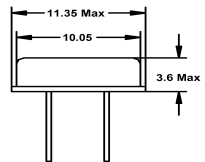
• Lowest Pricing

• Fox Quality

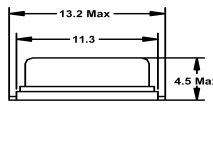
• Technical Support



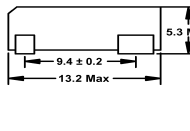
**HC49S Resistance Weld**



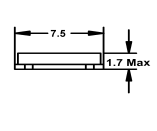
**HC49SD Surface Mount**



**FPX Surface Mount**



**FE Surface Mount**



## • FOX STANDARD SPECIFICATIONS

| PARAMETER                   | HC49U*        | HC49S/49SD    | FPX           | FE            |
|-----------------------------|---------------|---------------|---------------|---------------|
| Frequency Tolerance @ 25°C  | ±30PPM        | ±30PPM        | ±50PPM        | ±50PPM        |
| Frequency Stability         | ±50PPM        | ±50PPM        | ±100PPM       | ±50PPM        |
| Operating Temperature Range | -20°C ~ +70°C | -10°C ~ +70°C | -10°C ~ +70°C | -10°C ~ +60°C |

\* Optional third lead, vinyl sleeves (HC49U only), and mylar spacer. All specifications subject to change without notice.

\*\* Measurements are displayed in Millimeters.

Please Refer To Specification Sheets For Details

| FREQ (MHz) | CL     | HC49U       | ESR Ω MAX | HC49S         | ESR Ω MAX | HC49SD         | ESR Ω MAX | FPX         | ESR Ω MAX | FE        | ESR Ω MAX |
|------------|--------|-------------|-----------|---------------|-----------|----------------|-----------|-------------|-----------|-----------|-----------|
| 1.843200   | 13PF   | FOX018S     | 800       | ---           | ---       | ---            | ---       | ---         | ---       | ---       | ---       |
| 2.000000   | 20PF   | FOX020S     | 500       | ---           | ---       | ---            | ---       | ---         | ---       | ---       | ---       |
| 2.097152   | 20PF   | FOX021S     | 500       | ---           | ---       | ---            | ---       | ---         | ---       | ---       | ---       |
| 2.457600   | 32PF   | FOX024S     | 300       | ---           | ---       | ---            | ---       | ---         | ---       | ---       | ---       |
| 3.579545   | 18PF   | FOX036S     | 120       | FOXS/036S     | 200       | FOXSD/036S     | 200       | FPX036S     | 200       | ---       | ---       |
| 3.686400   | SERIES | FOX0368S    | 120       | FOXS/0368S    | 200       | ---            | ---       | FPX0368S    | 200       | ---       | ---       |
| 3.686400   | 20PF   | FOX0368-20  | 120       | FOXS/0368-20  | 200       | FOXSD/0368-20  | 200       | FPX0368-20  | 200       | ---       | ---       |
| 4.000000   | SERIES | FOX040A     | 100       | FOXS/040A     | 150       | ---            | ---       | FPX040A     | 150       | ---       | ---       |
| 4.000000   | 20PF   | FOX040      | 100       | FOXS/040      | 150       | FOXSD/040      | 150       | FPX040      | 150       | ---       | ---       |
| 4.096000   | 20PF   | FOX0496-20  | 100       | FOXS/0496-20  | 150       | ---            | ---       | ---         | ---       | ---       | ---       |
| 4.194304   | 12PF   | FOX041      | 100       | FOXS/041      | 150       | FOXSD/041      | 150       | ---         | ---       | ---       | ---       |
| 4.433619   | 20PF   | FOX0443     | 70        | FOXS/0443     | 150       | FOXSD/0443     | 150       | ---         | ---       | ---       | ---       |
| 4.915200   | SERIES | FOX049      | 55        | FOXS/049      | 150       | ---            | ---       | FPX049      | 150       | ---       | ---       |
| 4.915200   | 20PF   | FOX049-20   | 55        | FOXS/049-20   | 150       | FOXSD/049-20   | 150       | FPX049-20   | 150       | ---       | ---       |
| 5.000000   | 20PF   | FOX05A      | 50        | ---           | ---       | FOXSD/05A      | 120       | ---         | ---       | ---       | ---       |
| 6.000000   | SERIES | FOX060      | 40        | ---           | ---       | ---            | ---       | ---         | ---       | ---       | ---       |
| 6.000000   | 20PF   | FOX060-20   | 40        | ---           | ---       | FOXSD/060-20   | 120       | ---         | ---       | ---       | ---       |
| 6.144000   | 30PF   | FOX061      | 40        | ---           | ---       | ---            | ---       | ---         | ---       | ---       | ---       |
| 6.144000   | 20PF   | FOX061-20   | 40        | ---           | ---       | ---            | ---       | ---         | ---       | ---       | ---       |
| 7.372800   | SERIES | FOX073      | 40        | FOXS/073      | 80        | ---            | ---       | FPX073      | 80        | ---       | ---       |
| 7.372800   | 20PF   | FOX073-20   | 40        | FOXS/073-20   | 80        | FOXSD/073-20   | 80        | FPX073-20   | 80        | ---       | ---       |
| 8.000000   | SERIES | FOX080      | 35        | FOXS/080      | 80        | ---            | ---       | FPX080      | 80        | ---       | ---       |
| 8.000000   | 20PF   | FOX080-20   | 35        | FOXS/080-20   | 80        | FOXSD/080-20   | 80        | FPX080-20   | 80        | ---       | ---       |
| 8.192000   | SERIES | FOX081      | 35        | ---           | ---       | ---            | ---       | ---         | ---       | ---       | ---       |
| 8.192000   | 20PF   | FOX081-20   | 35        | FOXS/081-20   | 80        | FOXSD/081-20   | 80        | FPX081-20   | 80        | ---       | ---       |
| 9.216000   | SERIES | FOX092      | 35        | ---           | ---       | ---            | ---       | ---         | ---       | ---       | ---       |
| 9.830400   | SERIES | FOX098      | 35        | FOXS/098      | 60        | ---            | ---       | ---         | ---       | ---       | ---       |
| 9.830400   | 20PF   | FOX098-20   | 35        | FOXS/098-20   | 60        | FOXSD/098-20   | 60        | FPX098-20   | 60        | FE098-20  | 60        |
| 10.000000  | SERIES | FOX100      | 30        | FOXS/100      | 60        | ---            | ---       | FPX100      | 60        | ---       | ---       |
| 10.000000  | 20PF   | FOX100-20   | 30        | FOXS/100-20   | 60        | FOXSD/100-20   | 60        | FPX100-20   | 60        | FE100-20  | 60        |
| 11.000000  | SERIES | FOX111      | 30        | ---           | ---       | ---            | ---       | ---         | ---       | ---       | ---       |
| 11.000000  | 20PF   | FOX111-20   | 30        | FOXS/111-20   | 60        | FOXSD/111-20   | 60        | FPX111-20   | 60        | ---       | ---       |
| 11.059200  | SERIES | FOX115      | 30        | FOXS/115      | 60        | ---            | ---       | FPX115      | 60        | ---       | ---       |
| 11.059200  | 20PF   | FOX115-20   | 30        | FOXS/115-20   | 60        | FOXSD/115-20   | 60        | FPX115-20   | 60        | FE115-20  | 60        |
| 12.000000  | SERIES | FOX120      | 30        | FOXS/120      | 60        | ---            | ---       | FPX120      | 60        | ---       | ---       |
| 12.000000  | 20PF   | FOX120-20   | 30        | FOXS/120-20   | 60        | FOXSD/120-20   | 60        | FPX120-20   | 60        | ---       | ---       |
| 12.288000  | SERIES | FOX128      | 30        | FOXS/128      | 60        | ---            | ---       | FPX128      | 60        | ---       | ---       |
| 12.288000  | 20PF   | FOX128-20   | 30        | FOXS/128-20   | 60        | FOXSD/128-20   | 60        | FPX128-20   | 60        | ---       | ---       |
| 14.318180  | SERIES | FOX143      | 25        | FOXS/143      | 40        | ---            | ---       | FPX143      | 40        | ---       | ---       |
| 14.318180  | 20PF   | FOX143-20   | 25        | FOXS/143-20   | 40        | FOXSD/143-20   | 40        | FPX143-20   | 40        | FE143-20  | 60        |
| 14.745600  | SERIES | FOX147      | 25        | FOXS/147      | 40        | ---            | ---       | FPX147      | 40        | ---       | ---       |
| 14.745600  | 20PF   | FOX147-20   | 25        | FOXS/147-20   | 40        | FOXSD/147-20   | 40        | FPX147-20   | 40        | FE147-20  | 60        |
| 15.000000  | 20PF   | ---         | ---       | ---           | ---       | ---            | ---       | ---         | ---       | FE150-20  | 60        |
| 16.000000  | SERIES | FOX160      | 25        | FOXS/160      | 40        | ---            | ---       | FPX160      | 40        | ---       | ---       |
| 16.000000  | 20PF   | FOX160-20   | 25        | FOXS/160-20   | 40        | FOXSD/160-20   | 40        | FPX160-20   | 40        | FE160-20  | 60        |
| 18.432000  | SERIES | FOX184      | 20        | ---           | ---       | ---            | ---       | ---         | ---       | ---       | ---       |
| 18.432000  | 20PF   | FOX184-20   | 20        | FOXS/184-20   | 40        | FOXSD/184-20   | 40        | FPX184-20   | 40        | ---       | ---       |
| 19.660800  | SERIES | FOX196      | 20        | ---           | ---       | ---            | ---       | ---         | ---       | ---       | ---       |
| 19.660800  | 20PF   | FOX196-20   | 20        | FOXS/196-20   | 40        | FOXSD/196-20   | 40        | FPX196-20   | 40        | ---       | ---       |
| 20.000000  | SERIES | FOX200      | 20        | FOXS/200      | 30        | ---            | ---       | FPX200      | 30        | ---       | ---       |
| 20.000000  | 20PF   | FOX200-20   | 20        | FOXS/200-20   | 30        | FOXSD/200-20   | 30        | FPX200-20   | 30        | FE200-20  | 40        |
| 22.118400  | SERIES | FOX221      | 20        | ---           | ---       | ---            | ---       | FPX221      | 30        | ---       | ---       |
| 22.118400  | 20PF   | FOX221-20   | 20        | FOXS/221-20   | 30        | FOXSD/221-20   | 30        | FPX221-20   | 30        | FE221-20  | 40        |
| 24.000000  | SERIES | FOX240F     | 20        | FOXS/240F     | 30        | ---            | ---       | ---         | ---       | ---       | ---       |
| 24.000000  | 20PF   | FOX240F-20  | 20        | FOXS/240F-20  | 30        | FOXSD/240F-20  | 30        | FPX240F-20  | 30        | FE240F-20 | 40        |
| 24.576000  | 20PF   | FOX245F-20  | 20        | FOXS/245F-20  | 30        | FOXSD/245F-20  | 30        | FPX245F-20  | 30        | FE245F-20 | 40        |
| 25.000000  | 20PF   | FOX250F-20  | 20        | FOXS/250F-20  | 30        | FOXSD/250F-20  | 30        | FPX250F-20  | 30        | FE250F-20 | 40        |
| 27.000000  | 20PF   | ---         | ---       | ---           | ---       | FOXSD/270F-20  | 30        | ---         | ---       | ---       | ---       |
| 32.000000  | 20PF   | FOX320-20 * | 40        | FOXS/320-20 * | 100       | FOXSD/320-20 * | 100       | FPX320-20 * | 100       | ---       | ---       |
| 48.000000  | 20PF   | FOX480-20 * | 40        | FOXS/480-20 * | 100       | FOXSD/480-20 * | 100       | FPX480-20 * | 100       | ---       | ---       |
| 50.000000  | 20PF   | FOX500-20 * | 40        | FOXS/500-20 * | 100       | FOXSD/500-20 * | 100       | FPX500-20 * | 100       | ---       | ---       |
| 56.448000  | 18PF   | ---         | ---       | ---           | ---       | FOXSD/564-18 * | 100       | ---         | ---       | ---       | ---       |
| 60.000000  | 20PF   | FOX600-20 * | 40        | FOXS/600-20 * | 100       | FOXSD/600-20 * | 100       | FPX600-20 * | 100       | ---       | ---       |
| 64.000000  | 20PF   | FOX640-20 * | 40        | FOXS/640-20 * | 100       | FOXSD/640-20 * | 100       | FPX640-20 * | 100       | ---       | ---       |

\* 3rd Overtone. "F" suffix denotes fundamental Rev: 05/02/00