

# CATV Resonators

## RO One Port SAW Resonators

| Part Number | Resonant Freq. at 25°C       |                                 | Insertion Loss (dB) |      | Quality Factor |               | Test Fixture Shunt Ind. | Ratings                       | Temperature Stability              |      |      |   |
|-------------|------------------------------|---------------------------------|---------------------|------|----------------|---------------|-------------------------|-------------------------------|------------------------------------|------|------|---|
|             | Nominal F <sub>c</sub> (MHz) | Tolerance ΔF <sub>c</sub> (kHz) | Typ.                | Max  | Unloaded Q     | 50 Ω Loaded Q | L <sub>TEST</sub> (nH)  | CW RF Power Dissipation (dBm) | Turnover Temp. T <sub>O</sub> (°C) |      |      | Turnover Frequency F <sub>O</sub> (KHz) |
|             |                              |                                 |                     |      |                |               | Typ.                    |                               | Value                              | Min. | Typ. | Max.                                    |
| Notes       | 2, 3, 4, 5                   |                                 | 2, 5, 6             |      | 5, 6, 7        |               | 2, 7                    | Value                         | 6, 7, 8                            |      |      | Typ.                                    |
| RO2001      | 567.15                       | ±100                            | 6.0                 | 7.0  | 9,600          | 4,800         | 72                      | 5                             | 56                                 | 71   | 86   | f <sub>c</sub> +44                      |
| RO2153      | 574.00                       | ±100                            | 4.3                 | 7.0  | 9,500          | 3,700         | 70                      | 10                            | 54                                 | 69   | 84   | f <sub>c</sub> +35                      |
| RO2002      | 668.15                       | ±100                            | 6.0                 | 7.0  | 9,380          | 4,800         | 60                      | 5                             | 44                                 | 59   | 74   | f <sub>c</sub> +29                      |
| RO2129A     | 670.65                       | ±100                            | 4.7                 | 7.0  | 11,500         | 4,800         | 81                      | 10                            | 26                                 | 41   | 56   | f <sub>c</sub>                          |
| RO2003      | 674.15                       | ±100                            | 4.7                 | 7.0  | 9,330          | 3,920         | 50                      | 5                             | 50                                 | 65   | 80   | f <sub>c</sub> +40                      |
| RO2003A     | 674.15                       | ±100                            | 4.0                 | 7.0  | 10,200         | 3,700         | 64                      | 5                             | 26                                 | 41   | 56   | f <sub>c</sub> +5.5                     |
| RO2185A     | 910.15                       | ±100                            | 10.0                | 12.5 | TBD            | TBD           | TBD                     | 5                             | TBD                                | TBD  | TBD  | TBD                                     |

## RP and RS Two-Port Resonators

| Part Number | Nom. Phase | Resonant Freq. at 25°C       |                                 | Insertion Loss (dB) |      | Quality Factor |               | Ratings                       | Temperature Stability              |      |      |   |
|-------------|------------|------------------------------|---------------------------------|---------------------|------|----------------|---------------|-------------------------------|------------------------------------|------|------|---|
|             |            | Nominal F <sub>c</sub> (MHz) | Tolerance ΔF <sub>c</sub> (kHz) | Typ.                | Max  | Unloaded Q     | 50 Ω Loaded Q | CW RF Power Dissipation (dBm) | Turnover Temp. T <sub>O</sub> (°C) |      |      | Turnover Frequency F <sub>O</sub> (KHz) |
|             |            |                              |                                 |                     |      |                |               |                               | Value                              | Min. | Typ. | Max.                                    |
| Notes       |            | 2, 3, 4, 5                   |                                 | 2, 5, 6             |      | 5, 6, 7        |               | Value                         | 6, 7, 8                            |      |      | Typ.                                    |
| RP1236      | 180°       | 312.0                        | ±250                            | 8.1                 | 13.0 | 14,000         | 8,500         | 0                             | 24                                 | 39   | 54   | f <sub>c</sub> +2.3                     |
| RP1316      | 180°       | 479.5                        | ±150                            | 6.1                 | 8.0  | 11,900         | 6,000         | 5                             | 40                                 | 55   | 70   | f <sub>c</sub> +16                      |
| RP1046      | 180°       | 567.03                       | ±100                            | 9.7                 | 12.5 | 8,500          | 5,700         | 5                             | 67                                 | 82   | 97   | f <sub>c</sub> +68                      |
| RP1105      | 180°       | 640.0                        | ±100                            | 9.1                 | 12.5 | 9,600          | 5,600         | 5                             | 64                                 | 79   | 94   | f <sub>c</sub> +69                      |
| RP1310      | 180°       | 662.53                       | ±100                            | 5.6                 | 12.0 | 8,800          | 4,200         | 5                             | 26                                 | 41   | 56   | f <sub>c</sub> +6.3                     |
| RP1033      | 180°       | 668.03                       | ±100                            | 10.9                | 12.5 | 8,600          | 6,100         | 5                             | 62                                 | 77   | 92   | f <sub>c</sub> +67                      |
| RS1033-1    | 0°         | 668.03                       | ±100                            | 10.4                | 12.5 | 9,100          | 6,400         | 5                             | 66                                 | 81   | 96   | f <sub>c</sub> +78                      |
| RP1032      | 180°       | 674.03                       | ±100                            | 8.9                 | 12.5 | 8,400          | 5,400         | 5                             | 58                                 | 73   | 88   | f <sub>c</sub> +58                      |
| RS1032-1    | 0°         | 674.03                       | ±100                            | 8.3                 | 12.5 | 9,500          | 5,900         | 5                             | 55                                 | 70   | 85   | f <sub>c</sub> +50                      |
| RP1035-4    | 180°       | 680.03                       | ±100                            | 8.5                 | 12.5 | 8,800          | 5,500         | 10                            | 56                                 | 71   | 86   | f <sub>c</sub> +53                      |
| RS1033-5    | 0°         | 680.1                        | ±100                            | 9.1                 | 12.5 | 9,300          | 5,800         | 5                             | 50                                 | 65   | 80   | f <sub>c</sub> +41                      |
| RS1035-5    | 0°         | 680.1                        | ±100                            | 9.1                 | 12.5 | 8,600          | 5,500         | 5                             | 48                                 | 63   | 78   | f <sub>c</sub> +36                      |
| RP1104      | 180°       | 824.25                       | ±150                            | 9.0                 | 9.5  | 7,100          | 4,500         | 5                             | 66                                 | 81   | 96   | f <sub>c</sub> +96                      |
| RP1312      | 180°       | 854.0                        | ±100                            | 9.5                 | 12.5 | 6,600          | 4,500         | 5                             | 15                                 | 30   | 45   | f <sub>c</sub> +0.8                     |

# CATV Resonators

## RO One Port SAW Resonators

| Part Number | Motional Res. $R_m$ ( $\Omega$ ) |     | Motional Cap. $C_m$ (fF) | Motional Ind. $L_m$ ( $\mu$ H) | Shunt Static Cap. $C_o$ (pF) |      |      | Packaging  |            | Application - For Reference Only |                        |
|-------------|----------------------------------|-----|--------------------------|--------------------------------|------------------------------|------|------|------------|------------|----------------------------------|------------------------|
|             | Typ.                             | Max | Typ.                     | Typ.                           | Min.                         | Typ. | Max. | Case Style | Lid Symbol | Typ. 2nd LO Freq. (MHz)          | Typical IF Freq. (MHz) |
| Notes       | 5, 6, 7, 9                       |     |                          |                                |                              |      |      |            |            |                                  |                        |
| RO2001      | 100                              | 124 | 0.292315                 | 269.397                        | 0.8                          | 1.1  | 1.4  | TO39       | RO2001     | 567.0                            | 45                     |
| RO2153      | 64                               | 124 | 0.466803                 | 168.771                        | 0.8                          | 1.1  | 1.4  | TO39       | RO2153     | 574.05                           | 574.00                 |
| RO2002      | 100                              | 124 | 0.253947                 | 223.434                        | 0.7                          | 1.0  | 1.3  | TO39       | RO2002     | 668.0                            | 57                     |
| RO2129A     | 71                               | 124 | 0.290209                 | 194.027535                     | 0.3                          | 0.6  | 0.9  | SM-2       | 126        | 670.5                            | 670.65                 |
| RO2003      | 72                               | 124 | 0.351440                 | 158.590                        | 0.8                          | 1.1  | 1.3  | TO39       | RO2003     | 674.0                            | 63                     |
| RO2003A     | 58                               | 124 | 0.399058                 | 139.666                        | 0.6                          | 0.9  | 1.2  | SM-2       | 122        | 674.0                            | 63                     |
| RO2185A     | TBD                              | TBD | TBD                      | TBD                            | TBD                          | TBD  | TBD  | SM-2       | TBD        | 910.1                            | 910.15                 |

## RP and RS Two-Port Resonators

| Part Number | Motional Res. $R_m$ ( $\Omega$ ) |     | RF Equivalent            |                                | RLC Model                    |      |      | Packaging  | Lid Symbol | Application - For Reference Only |                        |
|-------------|----------------------------------|-----|--------------------------|--------------------------------|------------------------------|------|------|------------|------------|----------------------------------|------------------------|
|             |                                  |     | Motional Cap. $C_m$ (fF) | Motional Ind. $L_m$ ( $\mu$ H) | Shunt Static Cap. $C_o$ (pF) |      |      | Case Style |            | Typ. 2nd LO Freq. (MHz)          | Typical IF Freq. (MHz) |
|             | Typ.                             | Max | Typ.                     | Typ.                           | Min.                         | Typ. | Max. |            |            |                                  |                        |
| Notes       | 5, 6, 7, 9                       |     |                          |                                |                              |      |      |            |            |                                  |                        |
| RP1236      | 154                              | 347 | 0.236938                 | 1.09824                        | 1.3                          | 1.6  | 1.9  | TO39       | P1236      | 312.75                           | 312.00                 |
| RP1316      | 102                              | 152 | 0.274036                 | 402.027                        | 1.2                          | 2.0  | 2.8  | TO39       | P1316      | 479.5                            | "Special" See Note 5   |
| RP1046      | 205                              | 322 | 0.159076                 | 495.249                        | 1.4                          | 1.7  | 2.0  | TO39       | RF1046     | 567.0                            | 45                     |
| RP1105      | 185                              | 322 | 0.156356                 | 395.520                        | 1.4                          | 1.7  | 2.0  | TO39       | P1105      | 639.9                            | "Special" See Note 5   |
| RP1310      | 90                               | 299 | 0.302198                 | 190.958                        | 2.3                          | 2.6  | 2.9  | TO39       | P1310      | 662.5                            | "Special" See Note 5   |
| RP1033      | 251                              | 322 | 0.109805                 | 516.921                        | 1.1                          | 1.4  | 1.7  | TO39       | 1033-2     | 668.0                            | 57                     |
| RS1033-1    | 230                              | 322 | 0.113829                 | 498.647                        | 1.1                          | 1.4  | 1.7  | TO39       | 1033-1     | 668.0                            | 57                     |
| RP1032      | 180                              | 322 | 0.155461                 | 358.641                        | 1.3                          | 1.6  | 1.9  | TO39       | 1032-3     | 674.0                            | 63                     |
| RS1032-1    | 160                              | 322 | 0.154613                 | 360.609                        | 1.3                          | 1.6  | 1.9  | TO39       | 1032-1     | 674.0                            | 63                     |
| RP1035-4    | 166                              | 322 | 0.159128                 | 344.222                        | 1.4                          | 1.7  | 2.0  | TO39       | 1035-4     | 680.0                            | 69                     |
| RS1033-5    | 165                              | 322 | 0.153984                 | 368.537                        | 1.3                          | 1.6  | 1.9  | TO39       | 1033-5     | 680.0                            | 69                     |
| RS1035-5    | 186                              | 322 | 0.146297                 | 374.334                        | 1.3                          | 1.6  | 1.9  | TO39       | 1035-5     | 680.0                            | 69                     |
| RP1104      | 182                              | 199 | 0.150284                 | 248.091                        | 1.2                          | 1.5  | 1.8  | TO39       | P1104      | 824.05                           | See note 4             |
| RP1312      | 199                              | 322 | 0.136997                 | 253.520                        | 1.3                          | 1.6  | 1.9  | TO39       | P1312      | 854.0                            | "Special" See Note 5   |