## Dielectric Resonators (RESO MICS ${ }^{\circledR}$ )

## minnta

## Dielectric Resonator M Series (DRD Type)

## Features

1. High $Q$ of 7,000 at 7 GHz
2. High dielectric constant : $\mathrm{Er}=38$
3. Resonant frequency temperature coefficient can be chosen from 0 to $6 \mathrm{ppm} /($ degree C$)$. Tolerance of frequency temperature coefficient can be chosen from +-0.5, +-1 and +-2ppm/(degree C).
4. Resonant frequency can be chosen from 1.5 to 12.5 GHz .


| Part Number | Outer Dia. (mm) | Thickness (mm) | Frequency Range |
| :---: | :---: | :---: | :---: |
| DRD0460206M $\square \square \square$ 00T | $4.65 \pm 0.05 \mathrm{~mm}$ | $2.06 \pm 0.05 \mathrm{~mm}$ | $11.46 \sim 12.45 \mathrm{GHz}$ |
| DRD0510224M $\square \square \square 00 \mathrm{~T}$ | $5.06 \pm 0.05 \mathrm{~mm}$ | $2.24 \pm 0.05 \mathrm{~mm}$ | $10.54 \sim 11.46 \mathrm{GHz}$ |
| DRD0550244M $\square \square \square 00 T$ | $5.50 \pm 0.05 \mathrm{~mm}$ | $2.44 \pm 0.05 \mathrm{~mm}$ | $9.69 \sim 10.54$ GHz |
| DRD0600265M $\square \square \square 00 T$ | $5.98 \pm 0.05 \mathrm{~mm}$ | $2.65 \pm 0.05 \mathrm{~mm}$ | $8.91 \sim 9.69$ GHz |
| DRD0650288M $\square \square \square 00 T$ | $6.50 \pm 0.05 \mathrm{~mm}$ | $2.88 \pm 0.05 \mathrm{~mm}$ | $8.20 \sim 8.91$ GHz |
| DRD0710314M $\square \square \square 00$ T | $7.07 \pm 0.05 \mathrm{~mm}$ | $3.14 \pm 0.05 \mathrm{~mm}$ | $7.54 \sim 8.20 \mathrm{GHz}$ |
| DRD0770341M $\square \square \square 00$ T | $7.69 \pm 0.05 \mathrm{~mm}$ | $3.41 \pm 0.05 \mathrm{~mm}$ | $6.93 \sim 7.54 \mathrm{GHz}$ |
| DRD0840371M $\square \square \square 00 \mathrm{~T}$ | $8.36 \pm 0.05 \mathrm{~mm}$ | $3.71 \pm 0.05 \mathrm{~mm}$ | $6.38 \sim 6.93 \mathrm{GHz}$ |
| DRD0910403M $\square \square \square 00 T$ | $9.09 \pm 0.05 \mathrm{~mm}$ | $4.03 \pm 0.05 \mathrm{~mm}$ | $5.87 \sim 6.38 \mathrm{GHz}$ |
| DRD0990438M $\square \square \square 00 T$ | $9.88 \pm 0.05 \mathrm{~mm}$ | $4.38 \pm 0.05 \mathrm{~mm}$ | $5.40 \sim 5.87 \mathrm{GHz}$ |
| DRD1070477M $\square \square \square 00 T$ | $10.75 \pm 0.05 \mathrm{~mm}$ | $4.77 \pm 0.05 \mathrm{~mm}$ | $4.96 \sim 5.40 \mathrm{GHz}$ |
| DRD1170518M $\square \square \square 00 T$ | $11.68 \pm 0.05 \mathrm{~mm}$ | $5.18 \pm 0.05 \mathrm{~mm}$ | $4.56 \sim 4.96 \mathrm{GHz}$ |
| DRD1270563M $\square \square \square 00$ T | $12.70 \pm 0.05 \mathrm{~mm}$ | $5.63 \pm 0.05 \mathrm{~mm}$ | $4.20 \sim 4.56$ GHz |
| DRD1380613M $\square \square \square 00 \mathrm{~T}$ | $13.81 \pm 0.05 \mathrm{~mm}$ | $6.13 \pm 0.05 \mathrm{~mm}$ | $3.86 \sim 4.20 \mathrm{GHz}$ |
| DRD1500666M $\square \square \square 00$ T | $15.02 \pm 0.05 \mathrm{~mm}$ | $6.66 \pm 0.05 \mathrm{~mm}$ | $3.55 \sim 3.86 \mathrm{GHz}$ |
| DRD1630724M $\square \square \square 00$ T | $16.33 \pm 0.05 \mathrm{~mm}$ | $7.24 \pm 0.05 \mathrm{~mm}$ | $3.27 \sim 3.55$ GHz |
| DRD1780788M $\square \square \square 00$ T | $17.76 \pm 0.05 \mathrm{~mm}$ | $7.88 \pm 0.05 \mathrm{~mm}$ | $3.00 \sim 3.27$ GHz |
| DRD1930856M $\square \square \square 00$ T | $19.31 \pm 0.05 \mathrm{~mm}$ | $8.56 \pm 0.05 \mathrm{~mm}$ | $2.76 \sim 3.00 \mathrm{GHz}$ |
| DRD2100931M $\square \square \square 00$ T | $21.00 \pm 0.05 \mathrm{~mm}$ | $9.31 \pm 0.05 \mathrm{~mm}$ | $2.54 \sim 2.76$ GHz |
| DRD2281013M $\square \square \square 00 \mathrm{~T}$ | $22.83 \pm 0.05 \mathrm{~mm}$ | $10.13 \pm 0.05 \mathrm{~mm}$ | $2.34 \sim 2.54 \mathrm{GHz}$ |
| DRD2481101M $\square \square \square 00$ T | $24.82 \pm 0.05 \mathrm{~mm}$ | $11.01 \pm 0.05 \mathrm{~mm}$ | $2.15 \sim 2.34 \mathrm{GHz}$ |
| DRD2701197M $\square \square \square 00$ T | $26.99 \pm 0.05 \mathrm{~mm}$ | $11.97 \pm 0.05 \mathrm{~mm}$ | $1.98 \sim 2.15 \mathrm{GHz}$ |
| DRD2931302M $\square \square \square$ 00T | $29.35 \pm 0.05 \mathrm{~mm}$ | $13.02 \pm 0.05 \mathrm{~mm}$ | $1.82 \sim 1.98 \mathrm{GHz}$ |
| DRD3191415M $\square \square \square 00$ T | $31.91 \pm 0.05 \mathrm{~mm}$ | $14.15 \pm 0.05 \mathrm{~mm}$ | $1.67 \sim 1.82 \mathrm{GHz}$ |
| DRD3471539M $\square \square \square$ 00T | $34.70 \pm 0.05 \mathrm{~mm}$ | $15.39 \pm 0.05 \mathrm{~mm}$ | $1.54 \sim 1.67 \mathrm{GHz}$ |

Codes for temperature coefficient of resonant frequency and the tolerance should be put into the three blank boxes of the above Part Numbers.
Please see "Part Numbering" (ex.) $2.0 \pm 1.0 \mathrm{ppm} /{ }^{\circ} \mathrm{C}: 20 \mathrm{~A}$.

## ■ Freq. Temp. Coefficient, Dielectric Constant and Q

| Characteristic Code | Frequency Temperature Coefficient ( ff ) $\left(\mathrm{ppm} /{ }^{\circ} \mathrm{C}\right)$ | Dielectric Constant ( Er ) |  | $\begin{gathered} \mathbf{Q} \\ \text { (at 7GHz) } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
|  |  | (1) | (2) |  |
| 00 | 0 | $38.5 \pm 1.0$ | $37.7 \pm 1.0$ | 7,400 min. |
| 20 | 2 | $38.7 \pm 1.0$ | $37.9 \pm 1.0$ | 7,200 min. |
| 40 | 4 | $38.9 \pm 1.0$ | $38.2 \pm 1.0$ | 7,100 min. |
| 60 | 6 | $39.2 \pm 1.0$ | $38.4 \pm 1.0$ | 7,000 min. |

(1): DRD046-DRD107 Type
(2) : DRD117-DRD347 Type

