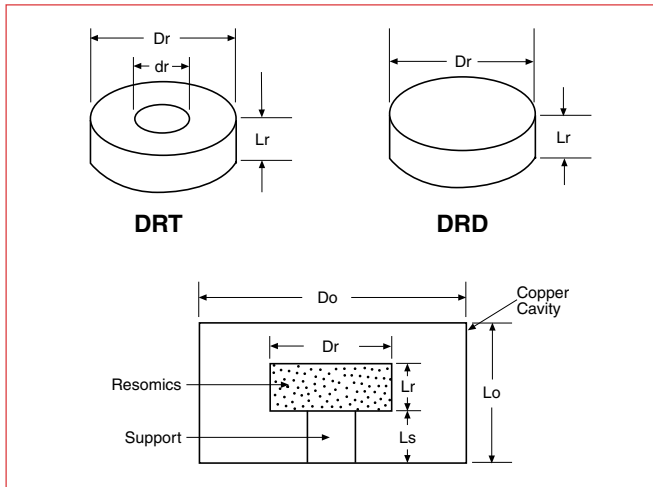


### CONFIGURATION



### GENERAL CHARACTERISTICS

- High unloaded Q – 7,000 min. at 10GHz
- High dielectric constant –  $\epsilon_r \approx 34$
- Resonant frequency temperature coefficient can be chosen from 0 to 6ppm/°C. Tolerance of frequency temperature coefficient can be chosen from  $\pm 0.5$ ,  $\pm 1$ , and  $\pm 2$ ppm/°C.

### DIMENSIONS & FREQUENCY RANGE DRD TYPE

| Part Number | Dr $\pm$ 0.05 (mm) | Lr $\pm$ 0.05 (mm) | Frequency Range (GHz) |
|-------------|--------------------|--------------------|-----------------------|
| DRD046V□021 | 4.65               | 2.06               | 12.07 ~ 13.24         |
| DRD051V□022 | 5.06               | 2.24               | 11.10 ~ 12.07         |
| DRD055V□024 | 5.50               | 2.44               | 10.20 ~ 11.10         |
| DRD060V□027 | 5.98               | 2.65               | 9.39 ~ 10.20          |
| DRD065V□029 | 6.50               | 2.88               | 8.64 ~ 9.39           |
| DRD071V□031 | 7.07               | 3.14               | 7.93 ~ 8.64           |
| DRD077V□034 | 7.69               | 3.41               | 7.30 ~ 7.93           |
| DRD084V□037 | 8.36               | 3.71               | 6.71 ~ 7.30           |
| DRD091V□040 | 9.09               | 4.03               | 6.17 ~ 6.71           |
| DRD099V□044 | 9.88               | 4.38               | 5.68 ~ 6.17           |
| DRD107V□048 | 10.75              | 4.77               | 5.22 ~ 5.68           |
| DRD117V□052 | 11.68              | 5.18               | 4.80 ~ 5.22           |
| DRD127V□056 | 12.70              | 5.63               | 4.42 ~ 4.80           |
| DRD138V□061 | 13.81              | 6.13               | 4.06 ~ 4.42           |
| DRD150V□067 | 15.02              | 6.66               | 3.74 ~ 4.06           |
| DRD163V□072 | 16.33              | 7.24               | 3.44 ~ 3.74           |
| DRD178V□079 | 17.76              | 7.88               | 3.16 ~ 3.44           |
| DRD193V□086 | 19.31              | 8.56               | 2.91 ~ 3.16           |

TABLE 1: Q &  $\tau_f$

| Characteristic Code | Frequency Temperature Coefficient ( $\tau_f$ ) | Dielectric Constant ( $\epsilon_r$ ) | Unloaded Q (at 10GHz) |
|---------------------|--|--------------------------------------|-----------------------|
| B                   | -2 (ppm/°C)                                    | 33.1 $\pm$ 0.5                       | 10,000 min.           |
| L                   | -1   | 33.3 $\pm$ 0.5                       |                       |
| C                   | 0  | 33.5 $\pm$ 0.5                       |                       |
| M                   | 1  | 33.7 $\pm$ 0.5                       |                       |
| D                   | 2  | 33.9 $\pm$ 0.5                       |                       |
| N                   | 3  | 34.1 $\pm$ 0.5                       |                       |
| E                   | 4  | 34.3 $\pm$ 0.5                       |                       |
| O                   | 5  | 34.5 $\pm$ 0.5                       |                       |
| F                   | 6  | 34.7 $\pm$ 0.5                       |                       |
| P                   | 7  | 34.9 $\pm$ 0.5                       |                       |
| G                   | 8  | 35.1 $\pm$ 0.5                       |                       |

Q can be approximated by:  $Q \geq \frac{100,000}{f_0}$   $f_0$ : (GHz)

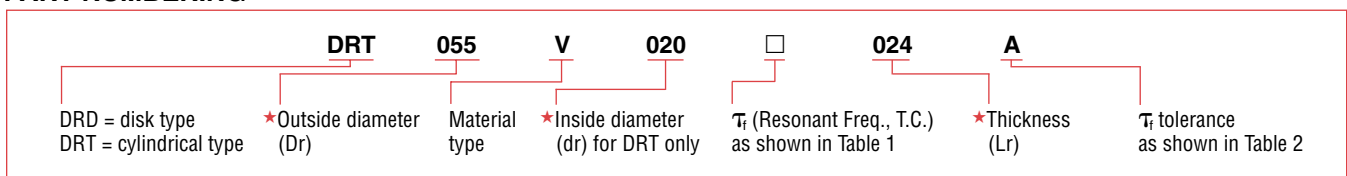
TABLE 2:  $\tau_f$  TOLERANCE

| Special Code | Tolerance of Frequency Temperature Coefficient (ppm/°C) |
|--------------|---|
| No Code      | $\pm 2$   |
| A            | $\pm 1$   |
| B            | $\pm 0.5$   |

### DRT TYPE

| Part Number    | Dr $\pm$ 0.05 (mm) | dr $\pm$ 0.1 (mm) | Lr $\pm$ 0.05 (mm) | Frequency Range (GHz) |
|----------------|--------------------|-------------------|--------------------|-----------------------|
| DRT051V020□022 | 5.06               | 2.0               | 2.24               | 11.41 ~ 12.52         |
| DRT055V020□024 | 5.50               | 2.0               | 2.44               | 10.42 ~ 11.42         |
| DRT060V020□027 | 5.98               | 2.0               | 2.65               | 9.54 ~ 10.42          |
| DRT065V020□029 | 6.50               | 2.0               | 2.88               | 8.74 ~ 9.54           |
| DRT071V020□031 | 7.07               | 2.0               | 3.14               | 8.00 ~ 8.74           |
| DRT077V020□034 | 7.69               | 2.0               | 3.41               | 7.34 ~ 8.00           |
| DRT084V030□037 | 8.36               | 3.0               | 3.71               | 6.85 ~ 7.34           |
| DRT091V030□040 | 9.09               | 3.0               | 4.03               | 6.27 ~ 6.85           |
| DRT099V030□044 | 9.88               | 3.0               | 4.38               | 5.74 ~ 6.27           |
| DRT107V040□048 | 10.75              | 4.0               | 4.77               | 5.34 ~ 5.74           |
| DRT117V040□052 | 11.68              | 4.0               | 5.18               | 4.89 ~ 5.34           |
| DRT127V040□056 | 12.70              | 4.0               | 5.63               | 4.48 ~ 4.89           |
| DRT138V040□061 | 13.81              | 4.0               | 6.13               | 4.10 ~ 4.48           |
| DRT150V040□067 | 15.02              | 4.0               | 6.66               | 3.76 ~ 4.10           |
| DRT163V040□072 | 16.33              | 4.0               | 7.24               | 3.45 ~ 3.76           |
| DRT178V040□079 | 17.76              | 4.0               | 7.88               | 3.17 ~ 3.45           |
| DRT193V040□086 | 19.31              | 4.0               | 8.56               | 2.91 ~ 3.17           |

### PART NUMBERING



\*Note: For actual dimension in mm, divide number by 10.