



## RFB SERIES

HIGH RELIABILITY FERRITE BEADS



ALL PARTS AVAILABLE WITH GROUP A, B, AND C TESTING

DSCC 03024

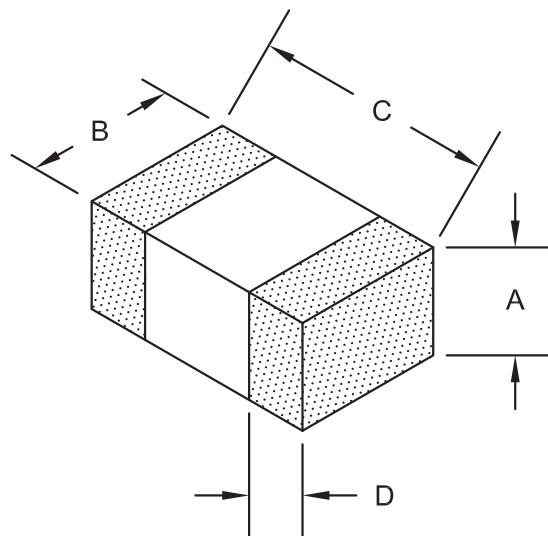
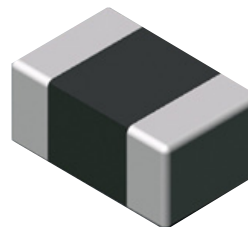
| Impedance ( $\Omega$ ) | DCR max ( $\Omega$ ) | Current Rating max (A) |
|------------------------|----------------------|------------------------|
| 30 to 1000             | 0.01 to 0.60         | 0.20 to 4              |

### ELECTRICAL SPECIFICATIONS

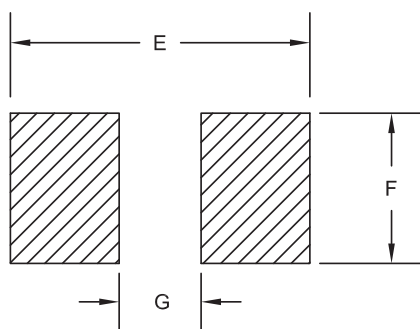
- **Operating Temperature:**  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$
- **Storage Temperature:**  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$
- **Impedance tolerances available:**  
 $\pm 25\%$ ,  $\pm 20\%$ ,  $\pm 10\%$ ,  $\pm 5\%$
- **Closed, linear magnetic path to avoid crosstalk**
- **Outgassing compliant per ASTM E595**  
(TML  $<1\%$ , CVCM  $<0.1\%$ )

### FEATURES

- **Compact**, low profile, ideal for automatic placement
- **DSCC Approved** (tested per Drawing 03024)
- **Low Thermal Expansion, Transfer Molded Package**
- **Terminations:** Tin-lead (over nickel) or Gold (over nickel)
- **Surface Mount Technology**
- **Moisture, Shock, and Immersion Resistant**
- **Resistance to Soldering Heat:**  $265^{\circ}\text{C}$  for 10 secs
- Group A/B Data supplied with every shipment
- Group C inspection is optional



RECOMMENDED PAD LAYOUT



| Package     | A                                        | B                                        | C                                        | D                                        |
|-------------|------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|
| <b>0603</b> | $0.031 \pm 0.006$<br>( $0.80 \pm 0.15$ ) | $0.031 \pm 0.006$<br>( $0.80 \pm 0.15$ ) | $0.063 \pm 0.006$<br>( $1.6 \pm 0.15$ )  | $0.014 \pm 0.006$<br>( $0.36 \pm 0.15$ ) |
| <b>0805</b> | $0.035 \pm 0.008$<br>( $0.89 \pm 0.20$ ) | $0.049 \pm 0.008$<br>( $1.24 \pm 0.20$ ) | $0.079 \pm 0.008$<br>( $2.01 \pm 0.20$ ) | $0.020 \pm 0.010$<br>( $0.51 \pm 0.25$ ) |
| <b>1206</b> | $0.043 \pm 0.008$<br>( $1.09 \pm 0.20$ ) | $0.063 \pm 0.008$<br>( $1.6 \pm 0.20$ )  | $0.126 \pm 0.008$<br>( $3.2 \pm 0.20$ )  | $0.020 \pm 0.010$<br>( $0.51 \pm 0.25$ ) |

Dimensions are in inches (mm).

| Package     | RECOMMENDED PAD LAYOUT |                 |                 |
|-------------|------------------------|-----------------|-----------------|
|             | E                      | F               | G               |
| <b>0603</b> | 0.102<br>(2.60)        | 0.031<br>(0.80) | 0.023<br>(0.60) |
| <b>0805</b> | 0.118<br>(3.00)        | 0.039<br>(1.00) | 0.039<br>(1.00) |
| <b>1206</b> | 0.173<br>(4.40)        | 0.055<br>(1.40) | 0.086<br>(2.20) |

Dimensions are in inches (mm).





| Vanguard P/N    | DSCC P/N (ref only) | Impedance* (Ω) | DCR max (Ω) | Current Rating max (A) | Package |
|-----------------|---------------------|----------------|-------------|------------------------|---------|
| RFB0603-300**-* | 03024-001P          | 30             | 0.15        | 0.50                   | 0603    |
| RFB0603-600**-* | 03024-002P          | 60             | 0.15        | 0.50                   | 0603    |
| RFB0603-101**-* | 03024-003P          | 100            | 0.20        | 0.40                   | 0603    |
| RFB0603-151**-* | 03024-004P          | 150            | 0.25        | 0.40                   | 0603    |
| RFB0603-181**-* | 03024-005P          | 180            | 0.25        | 0.40                   | 0603    |
| RFB0603-301**-* | 03024-006P          | 300            | 0.30        | 0.20                   | 0603    |
| RFB0603-401**-* | 03024-007P          | 400            | 0.35        | 0.20                   | 0603    |
| RFB0603-601**-* | 03024-008P          | 600            | 0.40        | 0.20                   | 0603    |
| RFB0603-102**-* | 03024-009P          | 1000           | 0.60        | 0.20                   | 0603    |
| RFB0805-300**-* | 03024-010P          | 30             | 0.02        | 4.00                   | 0805    |
| RFB0805-500**-* | 03024-011P          | 50             | 0.08        | 2.00                   | 0805    |
| RFB0805-600**-* | 03024-012P          | 60             | 0.15        | 1.50                   | 0805    |
| RFB0805-700**-* | 03024-013P          | 70             | 0.15        | 1.50                   | 0805    |
| RFB0805-101**-* | 03024-014P          | 100            | 0.20        | 1.00                   | 0805    |
| RFB0805-121**-* | 03024-015P          | 120            | 0.20        | 1.00                   | 0805    |
| RFB0805-121**-* | 03024-016P          | 150            | 0.20        | 1.00                   | 0805    |
| RFB0805-221**-* | 03024-017P          | 220            | 0.20        | 1.00                   | 0805    |
| RFB0805-331**-* | 03024-018P          | 330            | 0.25        | 1.00                   | 0805    |
| RFB0805-471**-* | 03024-019P          | 470            | 0.25        | 1.00                   | 0805    |
| RFB0805-601**-* | 03024-020P          | 600            | 0.30        | 1.00                   | 0805    |
| RFB0805-102**-* | 03024-021P          | 1000           | 0.40        | 1.00                   | 0805    |
| RFB1206-300**-* | 03024-022P          | 30             | 0.01        | 4.00                   | 1206    |
| RFB1206-500**-* | 03024-023P          | 50             | 0.03        | 3.00                   | 1206    |
| RFB1206-800**-* | 03024-024P          | 80             | 0.10        | 1.50                   | 1206    |
| RFB1206-121**-* | 03024-025P          | 120            | 0.10        | 1.50                   | 1206    |
| RFB1206-251**-* | 03024-026P          | 250            | 0.10        | 1.50                   | 1206    |
| RFB1206-501**-* | 03024-027P          | 500            | 0.20        | 1.00                   | 1206    |
| RFB1206-601**-* | 03024-028P          | 600            | 0.30        | 1.00                   | 1206    |

\*Impedance measured at 100 MHz

### VE PART NUMBER STRUCTURE KEY

EXAMPLE: RFB0603-300KS-3-T

#### IMPEDANCE (Ω)

The first two digits are significant. The last digit specifies zeros to follow:

300 = 30 Ohms

#### TOLERANCE (%)

|   |      |
|---|------|
| J | ± 5  |
| K | ± 10 |
| M | ± 20 |
| P | ± 25 |

#### TERMINATION

|   |          |
|---|----------|
| S | SnPb     |
| G | Gold     |
| R | Pure Tin |

#### RELIABILITY

|   |             |
|---|-------------|
| 1 | COTS/EM     |
| 2 | Group A     |
| 3 | Group A+B   |
| 4 | Group A+B+C |

#### PACKAGING (Default Bulk)

|   |               |
|---|---------------|
| B | Bulk          |
| T | Tape and Reel |

