

## AXIAL FIXED INDUCTORS / AL TYPE

### FEATURES

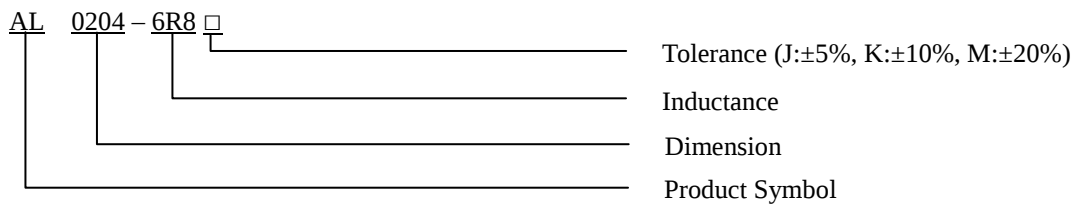
- ◆ Wide inductance range
- ◆ Ideal for auto insertion
- ◆ Conformal coated inductors
- ◆ Epoxy resin coating makes it high reliability
- ◆ Special magnetic core structure contributes to high Q and Self-Resonant Frequencies



### APPLICATIONS

- ◆ RF coils
- ◆ Choke coils
- ◆ Peaking coils

### ORDERING CODE



### SHAPES & DIMENSIONS (UNIT: mm)

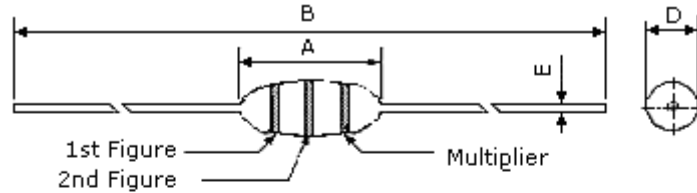


Fig. 1

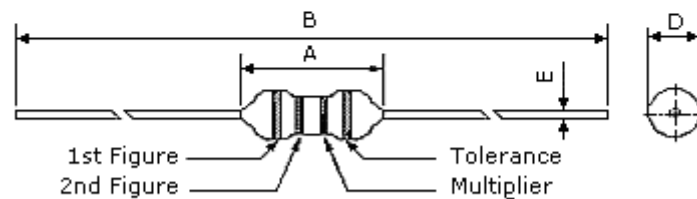


Fig. 2

| Part No. | Fig. | A (Max) | B (±2.0) | D (Max) | E (±0.05) |
|----------|------|---------|----------|---------|-----------|
| AL 0204  | 1    | 4.0     | 62       | 3.0     | 0.55      |
| AL 0307  | 2    | 8.0     | 62       | 3.0     | 0.55      |
| AL 0410  | 2    | 11.0    | 62       | 4.0     | 0.65      |
| AL 0510  | 2    | 12.0    | 62       | 5.0     | 0.65      |

## AXIAL FIXED INDUCTORS / AL TYPE

### ELECTRICAL CHARACTERISTICS FOR AL0204

| Part No.      | Inductance<br>(uH) | Quality<br>Factor<br>(Min) | Test<br>Freq.<br>(MHz) | SRF<br>(MHz)<br>Min | DCR<br>(Ω)<br>Max | IDC<br>(mA)<br>Max |
|---------------|--------------------|----------------------------|------------------------|---------------------|-------------------|--------------------|
| AL 0204-R10 M | 0.10               | 50                         | 25.2                   | 250                 | 0.030             | 700                |
| AL 0204-R12 M | 0.12               | 55                         | 25.2                   | 230                 | 0.035             | 660                |
| AL 0204-R15 M | 0.15               | 55                         | 25.2                   | 200                 | 0.040             | 620                |
| AL 0204-R18 M | 0.18               | 55                         | 25.2                   | 180                 | 0.045             | 600                |
| AL 0204-R22 M | 0.22               | 55                         | 25.2                   | 160                 | 0.050             | 400                |
| AL 0204-R27 M | 0.27               | 50                         | 25.2                   | 150                 | 0.065             | 380                |
| AL 0204-R33 M | 0.33               | 50                         | 25.2                   | 150                 | 0.075             | 370                |
| AL 0204-R39 M | 0.39               | 50                         | 25.2                   | 150                 | 0.080             | 350                |
| AL 0204-R47 M | 0.47               | 60                         | 25.2                   | 150                 | 0.085             | 330                |
| AL 0204-R56 M | 0.56               | 60                         | 25.2                   | 150                 | 0.090             | 320                |
| AL 0204-R68 M | 0.68               | 50                         | 25.2                   | 120                 | 0.10              | 310                |
| AL 0204-R82 M | 0.82               | 50                         | 25.2                   | 110                 | 0.15              | 290                |
| AL 0204-1R0 K | 1.00               | 50                         | 25.2                   | 110                 | 0.22              | 270                |
| AL 0204-1R2 K | 1.20               | 40                         | 7.96                   | 100                 | 0.30              | 260                |
| AL 0204-1R5 K | 1.50               | 40                         | 7.96                   | 80                  | 0.35              | 250                |
| AL 0204-1R8 K | 1.80               | 40                         | 7.96                   | 65                  | 0.45              | 240                |
| AL 0204-2R2 K | 2.20               | 40                         | 7.96                   | 55                  | 0.55              | 230                |
| AL 0204-2R7 K | 2.70               | 40                         | 7.96                   | 50                  | 0.60              | 220                |
| AL 0204-3R3 K | 3.30               | 40                         | 7.96                   | 42                  | 0.65              | 210                |
| AL 0204-3R9 K | 3.90               | 45                         | 7.96                   | 38                  | 0.85              | 200                |
| AL 0204-4R7 K | 4.70               | 45                         | 7.96                   | 34                  | 1.00              | 190                |
| AL 0204-5R6 K | 5.60               | 45                         | 7.96                   | 32                  | 1.15              | 180                |
| AL 0204-6R8 K | 6.80               | 40                         | 7.96                   | 30                  | 1.20              | 175                |
| AL 0204-8R2 K | 8.20               | 40                         | 7.96                   | 26                  | 1.25              | 165                |
| AL 0204-100 K | 10                 | 40                         | 7.96                   | 24                  | 1.5               | 160                |
| AL 0204-120 K | 12                 | 50                         | 2.52                   | 22                  | 2.2               | 150                |
| AL 0204-150 K | 15                 | 50                         | 2.52                   | 20                  | 2.5               | 145                |
| AL 0204-180 K | 18                 | 50                         | 2.52                   | 18                  | 2.8               | 140                |
| AL 0204-220 K | 22                 | 50                         | 2.52                   | 17                  | 3.0               | 130                |
| AL 0204-270 K | 27                 | 55                         | 2.52                   | 14                  | 3.5               | 80                 |
| AL 0204-330 K | 33                 | 55                         | 2.52                   | 14                  | 3.8               | 76                 |
| AL 0204-390 K | 39                 | 50                         | 2.52                   | 13                  | 4.2               | 76                 |
| AL 0204-470 K | 47                 | 50                         | 2.52                   | 12                  | 5.8               | 70                 |
| AL 0204-560 K | 56                 | 50                         | 2.52                   | 11                  | 6.4               | 68                 |
| AL 0204-680 K | 68                 | 50                         | 2.52                   | 10                  | 7.2               | 64                 |
| AL 0204-820 K | 82                 | 50                         | 2.52                   | 9.5                 | 8.5               | 46                 |
| AL 0204-101 K | 100                | 50                         | 2.52                   | 8.0                 | 11                | 44                 |
| AL 0204-121 K | 120                | 30                         | 0.796                  | 6.5                 | 19                | 42                 |
| AL 0204-151 K | 150                | 30                         | 0.796                  | 6.0                 | 22                | 39                 |
| AL 0204-181 K | 180                | 30                         | 0.796                  | 5.2                 | 24                | 37                 |
| AL 0204-221 K | 220                | 30                         | 0.796                  | 4.5                 | 28                | 35                 |
| AL 0204-271 K | 270                | 30                         | 0.796                  | 3.5                 | 29                | 28                 |
| AL 0204-331 K | 330                | 30                         | 0.796                  | 3.0                 | 30                | 26                 |
| AL 0204-391 K | 390                | 30                         | 0.796                  | 2.7                 | 32                | 25                 |
| AL 0204-471 K | 470                | 30                         | 0.796                  | 2.6                 | 35                | 24                 |
| AL 0204-561 K | 560                | 30                         | 0.796                  | 2.5                 | 40                | 23                 |
| AL 0204-681 K | 680                | 30                         | 0.796                  | 2.2                 | 42                | 22                 |
| AL 0204-821 K | 820                | 30                         | 0.796                  | 2.1                 | 46                | 21                 |
| AL 0204-102 K | 1000               | 30                         | 0.796                  | 2.0                 | 52                | 20                 |

## AXIAL FIXED INDUCTORS / AL TYPE

### ELECTRICAL CHARACTERISTICS FOR AL0307

| Part No.      | Inductance<br>(uH) | Quality<br>Factor<br>(Min) | Test<br>Freq.<br>(MHz) | SRF<br>(MHz)<br>Min | DCR<br>(Ω)<br>Max | IDC<br>(mA)<br>Max |
|---------------|--------------------|----------------------------|------------------------|---------------------|-------------------|--------------------|
| AL 0307-R10 K | 0.10               | 40                         | 25.2                   | 470                 | 0.08              | 700                |
| AL 0307-R12 K | 0.12               | 40                         | 25.2                   | 450                 | 0.08              | 700                |
| AL 0307-R15 K | 0.15               | 40                         | 25.2                   | 430                 | 0.09              | 700                |
| AL 0307-R18 K | 0.18               | 40                         | 25.2                   | 410                 | 0.10              | 700                |
| AL 0307-R22 K | 0.22               | 40                         | 25.2                   | 380                 | 0.12              | 700                |
| AL 0307-R27 K | 0.27               | 40                         | 25.2                   | 360                 | 0.15              | 680                |
| AL 0307-R33 K | 0.33               | 40                         | 25.2                   | 350                 | 0.16              | 680                |
| AL 0307-R39 K | 0.39               | 40                         | 25.2                   | 320                 | 0.18              | 680                |
| AL 0307-R47 K | 0.47               | 40                         | 25.2                   | 300                 | 0.26              | 650                |
| AL 0307-R56 K | 0.56               | 40                         | 25.2                   | 280                 | 0.38              | 500                |
| AL 0307-R68 K | 0.68               | 40                         | 25.2                   | 250                 | 0.42              | 500                |
| AL 0307-R82 K | 0.82               | 40                         | 25.2                   | 200                 | 0.55              | 450                |
| AL 0307-1R0 K | 1.00               | 65                         | 25.2                   | 180                 | 0.12              | 700                |
| AL 0307-1R2 K | 1.20               | 50                         | 7.96                   | 165                 | 0.18              | 740                |
| AL 0307-1R5 K | 1.50               | 50                         | 7.96                   | 150                 | 0.20              | 700                |
| AL 0307-1R8 K | 1.80               | 70                         | 7.96                   | 125                 | 0.23              | 655                |
| AL 0307-2R2 K | 2.20               | 50                         | 7.96                   | 85                  | 0.25              | 630                |
| AL 0307-2R7 K | 2.70               | 60                         | 7.96                   | 95                  | 0.28              | 595                |
| AL 0307-3R3 K | 3.30               | 60                         | 7.96                   | 75                  | 0.30              | 575                |
| AL 0307-3R9 K | 3.90               | 60                         | 7.96                   | 65                  | 0.32              | 555                |
| AL 0307-4R7 K | 4.70               | 50                         | 7.96                   | 50                  | 0.35              | 530                |
| AL 0307-5R6 K | 5.60               | 50                         | 7.96                   | 40                  | 0.40              | 500                |
| AL 0307-6R8 K | 6.80               | 50                         | 7.96                   | 30                  | 0.45              | 470                |
| AL 0307-8R2 K | 8.20               | 50                         | 7.96                   | 28                  | 0.55              | 425                |
| AL 0307-100 K | 10                 | 50                         | 7.96                   | 22                  | 0.72              | 370                |
| AL 0307-120 K | 12                 | 50                         | 2.52                   | 20                  | 0.80              | 350                |
| AL 0307-150 K | 15                 | 50                         | 2.52                   | 16                  | 0.88              | 335                |
| AL 0307-180 K | 18                 | 50                         | 2.52                   | 15                  | 1.00              | 315                |
| AL 0307-220 K | 22                 | 60                         | 2.52                   | 13                  | 1.20              | 285                |
| AL 0307-270 K | 27                 | 60                         | 2.52                   | 11                  | 1.35              | 270                |
| AL 0307-330 K | 33                 | 50                         | 2.52                   | 10                  | 1.50              | 255                |
| AL 0307-390 K | 39                 | 50                         | 2.52                   | 9.50                | 1.70              | 240                |
| AL 0307-470 K | 47                 | 60                         | 2.52                   | 8.50                | 2.30              | 205                |
| AL 0307-560 K | 56                 | 60                         | 2.52                   | 7.50                | 2.60              | 195                |
| AL 0307-680 K | 68                 | 60                         | 2.52                   | 6.50                | 3.20              | 185                |
| AL 0307-820 K | 82                 | 55                         | 2.52                   | 6.00                | 3.50              | 175                |
| AL 0307-101 K | 100                | 60                         | 2.52                   | 5.50                | 3.80              | 165                |
| AL 0307-121 K | 120                | 75                         | 0.796                  | 5.40                | 3.80              | 160                |
| AL 0307-151 K | 150                | 75                         | 0.796                  | 4.75                | 4.40              | 150                |
| AL 0307-181 K | 180                | 75                         | 0.796                  | 4.35                | 5.00              | 140                |
| AL 0307-221 K | 220                | 75                         | 0.796                  | 4.00                | 5.70              | 130                |
| AL 0307-271 K | 270                | 70                         | 0.796                  | 3.70                | 6.50              | 120                |
| AL 0307-331 K | 330                | 70                         | 0.796                  | 3.40                | 9.50              | 100                |
| AL 0307-391 K | 390                | 70                         | 0.796                  | 2.80                | 10.5              | 95                 |
| AL 0307-471 K | 470                | 70                         | 0.796                  | 2.60                | 12.5              | 90                 |
| AL 0307-561 K | 560                | 70                         | 0.796                  | 2.40                | 14.5              | 85                 |
| AL 0307-681 K | 680                | 70                         | 0.796                  | 2.00                | 18.0              | 75                 |
| AL 0307-821 K | 820                | 60                         | 0.796                  | 1.60                | 23.7              | 65                 |
| AL 0307-102 K | 1000               | 60                         | 0.796                  | 1.15                | 30.0              | 60                 |

## AXIAL FIXED INDUCTORS / AL TYPE

### ELECTRICAL CHARACTERISTICS FOR AL0410

| Part No.      | Inductance<br>(uH) | Quality<br>Factor<br>(Min) | Test<br>Freq.<br>(MHz) | SRF<br>(MHz)<br>Min | DCR<br>(Ω)<br>Max | IDC<br>(mA)<br>Max |
|---------------|--------------------|----------------------------|------------------------|---------------------|-------------------|--------------------|
| AL 0410-R10 M | 0.10               | 50                         | 25.2                   | 470                 | 0.04              | 900                |
| AL 0410-R12 M | 0.12               | 50                         | 25.2                   | 450                 | 0.06              | 900                |
| AL 0410-R15 M | 0.15               | 50                         | 25.2                   | 430                 | 0.07              | 890                |
| AL 0410-R18 M | 0.18               | 50                         | 25.2                   | 410                 | 0.07              | 890                |
| AL 0410-R22 M | 0.22               | 50                         | 25.2                   | 380                 | 0.08              | 880                |
| AL 0410-R27 M | 0.27               | 50                         | 25.2                   | 340                 | 0.09              | 800                |
| AL 0410-R33 M | 0.33               | 50                         | 25.2                   | 300                 | 0.10              | 750                |
| AL 0410-R39 M | 0.39               | 50                         | 25.2                   | 280                 | 0.12              | 680                |
| AL 0410-R47 M | 0.47               | 50                         | 25.2                   | 250                 | 0.16              | 650                |
| AL 0410-R56 M | 0.56               | 50                         | 25.2                   | 230                 | 0.18              | 600                |
| AL 0410-R68 M | 0.68               | 50                         | 25.2                   | 210                 | 0.22              | 550                |
| AL 0410-R82 M | 0.82               | 50                         | 25.2                   | 172                 | 0.24              | 980                |
| AL 0410-1R0 K | 1.00               | 50                         | 25.2                   | 157                 | 0.09              | 920                |
| AL 0410-1R2 K | 1.20               | 50                         | 7.96                   | 144                 | 0.10              | 880                |
| AL 0410-1R5 K | 1.50               | 55                         | 7.96                   | 131                 | 0.23              | 830                |
| AL 0410-1R8 K | 1.80               | 60                         | 7.96                   | 121                 | 0.25              | 790                |
| AL 0410-2R2 K | 2.20               | 80                         | 7.96                   | 110                 | 0.28              | 750                |
| AL 0410-2R7 K | 2.70               | 85                         | 7.96                   | 100                 | 0.30              | 720                |
| AL 0410-3R3 K | 3.30               | 90                         | 7.96                   | 94                  | 0.34              | 670                |
| AL 0410-3R9 K | 3.90               | 90                         | 7.96                   | 86                  | 0.37              | 640                |
| AL 0410-4R7 K | 4.70               | 90                         | 7.96                   | 80                  | 0.39              | 620                |
| AL 0410-5R6 K | 5.60               | 80                         | 7.96                   | 74                  | 0.43              | 590                |
| AL 0410-6R8 K | 6.80               | 80                         | 7.96                   | 58                  | 0.48              | 550                |
| AL 0410-8R2 K | 8.20               | 85                         | 7.96                   | 53                  | 0.52              | 530                |
| AL 0410-100 K | 10                 | 85                         | 7.96                   | 45                  | 0.58              | 500                |
| AL 0410-120 K | 12                 | 75                         | 2.52                   | 30                  | 0.63              | 480                |
| AL 0410-150 K | 15                 | 75                         | 2.52                   | 20                  | 0.72              | 460                |
| AL 0410-180 K | 18                 | 70                         | 2.52                   | 14                  | 0.77              | 430                |
| AL 0410-220 K | 22                 | 65                         | 2.52                   | 9.90                | 0.84              | 410                |
| AL 0410-270 K | 27                 | 65                         | 2.52                   | 7.60                | 0.94              | 390                |
| AL 0410-330 K | 33                 | 55                         | 2.52                   | 6.30                | 1.03              | 370                |
| AL 0410-390 K | 39                 | 55                         | 2.52                   | 6.30                | 1.12              | 350                |
| AL 0410-470 K | 47                 | 45                         | 2.52                   | 6.30                | 1.22              | 340                |
| AL 0410-560 K | 56                 | 45                         | 2.52                   | 6.20                | 1.34              | 320                |
| AL 0410-680 K | 68                 | 40                         | 2.52                   | 5.70                | 1.47              | 305                |
| AL 0410-820 K | 82                 | 35                         | 2.52                   | 5.30                | 1.62              | 290                |
| AL 0410-101 K | 100                | 30                         | 2.52                   | 4.80                | 1.80              | 275                |
| AL 0410-121 K | 120                | 70                         | 0.796                  | 3.80                | 3.70              | 185                |
| AL 0410-151 K | 150                | 80                         | 0.796                  | 3.50                | 4.20              | 175                |
| AL 0410-181 K | 180                | 80                         | 0.796                  | 3.30                | 4.60              | 165                |
| AL 0410-221 K | 220                | 70                         | 0.796                  | 3.00                | 5.10              | 155                |
| AL 0410-271 K | 270                | 70                         | 0.796                  | 2.80                | 5.80              | 145                |
| AL 0410-331 K | 330                | 65                         | 0.796                  | 2.60                | 6.40              | 137                |
| AL 0410-391 K | 390                | 65                         | 0.796                  | 2.40                | 7.00              | 133                |
| AL 0410-471 K | 470                | 60                         | 0.796                  | 2.25                | 7.70              | 126                |
| AL 0410-561 K | 560                | 60                         | 0.796                  | 2.10                | 8.50              | 120                |
| AL 0410-681 K | 680                | 55                         | 0.796                  | 1.95                | 9.40              | 113                |
| AL 0410-821 K | 820                | 55                         | 0.796                  | 1.85                | 12.0              | 100                |
| AL 0410-102 K | 1000               | 50                         | 0.796                  | 1.40                | 17.0              | 100                |

## AXIAL FIXED INDUCTORS / AL TYPE

### ELECTRICAL CHARACTERISTICS FOR AL0510

| Part No.      | Inductance<br>(uH) | Quality<br>Factor<br>(Min) | Test<br>Freq.<br>(KHz) | Q<br>Test<br>Freq.<br>(KHz) | DCR<br>(Ω)<br>Max | IDC<br>(mA)<br>Max |
|---------------|--------------------|----------------------------|------------------------|-----------------------------|-------------------|--------------------|
| AL 0510-102 K | 1000               | 80                         | 1                      | 252                         | 8                 | 360                |
| AL 0510-122 K | 1200               | 80                         | 1                      | 252                         | 8                 | 340                |
| AL 0510-152 K | 1500               | 80                         | 1                      | 252                         | 9                 | 320                |
| AL 0510-182 K | 1800               | 80                         | 1                      | 252                         | 10                | 300                |
| AL 0510-222 K | 2200               | 80                         | 1                      | 252                         | 11                | 280                |
| AL 0510-272 K | 2700               | 80                         | 1                      | 252                         | 14                | 250                |
| AL 0510-332 K | 3300               | 80                         | 1                      | 252                         | 18                | 230                |
| AL 0510-392 K | 3900               | 80                         | 1                      | 252                         | 22                | 200                |
| AL 0510-472 K | 4700               | 80                         | 1                      | 252                         | 26                | 190                |
| AL 0510-562 K | 5600               | 60                         | 1                      | 252                         | 30                | 175                |
| AL 0510-682 K | 6800               | 60                         | 1                      | 252                         | 34                | 150                |
| AL 0510-822 K | 8200               | 60                         | 1                      | 252                         | 48                | 130                |
| AL 0510-103 K | 10000              | 60                         | 1                      | 252                         | 62                | 120                |
| AL 0510-123 K | 12000              | 60                         | 1                      | 252                         | 74                | 108                |
| AL 0510-153 K | 15000              | 60                         | 1                      | 252                         | 88                | 100                |
| AL 0510-183 K | 18000              | 40                         | 1                      | 79.6                        | 102               | 85                 |
| AL 0510-223 K | 22000              | 40                         | 1                      | 79.6                        | 150               | 75                 |
| AL 0510-273 K | 27000              | 40                         | 1                      | 79.6                        | 210               | 70                 |
| AL 0510-303 K | 30000              | 40                         | 1                      | 79.6                        | 240               | 65                 |
| AL 0510-333 K | 33000              | 40                         | 1                      | 79.6                        | 250               | 63                 |
| AL 0510-393 K | 39000              | 40                         | 1                      | 79.6                        | 270               | 60                 |