

## Applications :

RF Products for Cellular Phone, GPS Receiver, Base Station, Repeater, Wireless LAN/Mouse/Keyboard/Earphone, Remote Control, Security System and other RF Modules

## Specifications :

Operating/Storage Temperature : -40°C to +125°C

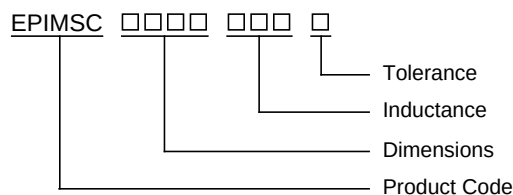
Wire : Enameled Copper

Terminal : Mo/Mn/Ni/Au

Packaging : 3000/Reel

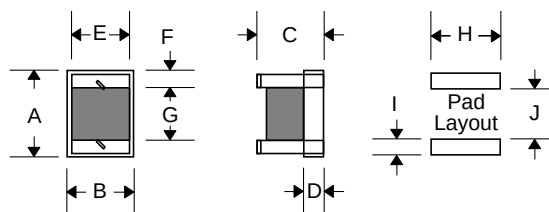
Material : Alumina

## Product Identification



□ : Tolerance (G = ± 2%, J = ± 5%, K = ± 10%)

## Shape and Dimension



## Package Dimensions

| Type        | A<br>Inches<br>(mm) | B<br>Inches<br>(mm) | C<br>Inches<br>(mm) | D<br>Inches Ref.<br>(mm Ref.) | E<br>Inches<br>(mm) | F<br>Inches<br>(mm) | G<br>Inches<br>(mm) | H<br>Inches<br>(mm) | I<br>Inches<br>(mm) | J<br>Inches<br>(mm) |
|-------------|---------------------|---------------------|---------------------|-------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| EPIMSC0402C | .047<br>(1.19)      | .027<br>(.700)      | .026<br>(.660)      | .098<br>(.250)                | .022<br>(.560)      | .009<br>(.230)      | .020<br>(.510)      | .026<br>(.660)      | .014<br>(.360)      | .018<br>(.460)      |
| EPIMSC0603C | .071<br>(1.80)      | .044<br>(1.12)      | .040<br>(1.02)      | .014<br>(.350)                | .034<br>(.860)      | .013<br>(.330)      | .030<br>(.760)      | .040<br>(1.02)      | .025<br>(.640)      | .025<br>(.640)      |
| EPIMSC0805C | .090<br>(2.29)      | .068<br>(1.73)      | .060<br>(1.52)      | .019<br>(.500)                | .040<br>(1.02)      | .017<br>(.440)      | .050<br>(1.27)      | .070<br>(1.78)      | .040<br>(1.02)      | .030<br>(.760)      |
| EPIMSC1008C | .114<br>(2.92)      | .110<br>(2.79)      | .080<br>(2.03)      | .027<br>(.700)                | .060<br>(1.52)      | .020<br>(.510)      | .080<br>(2.03)      | .100<br>(2.54)      | .040<br>(1.02)      | .050<br>(1.27)      |

## Electrical Characteristics (EPIMSC0402C Type)

| Part Number       | Inductance<br>(nH) | Test Frequency<br>(MHz) | Q<br>(Min.) | SRF<br>(MHz Min.) | DCR<br>(Ω Max.) | I <sub>rms</sub><br>(mA Max.) |
|-------------------|--------------------|-------------------------|-------------|-------------------|-----------------|-------------------------------|
| EPIMSC0402C-1N0 □ | 1.0                | 250                     | 16          | 12700             | 0.045           | 1360                          |
| EPIMSC0402C-1N9 □ | 1.9                | 250                     | 16          | 11300             | 0.070           | 1040                          |
| EPIMSC0402C-2N0 □ | 2.0                | 250                     | 16          | 11100             | 0.070           | 1040                          |
| EPIMSC0402C-2N2 □ | 2.2                | 250                     | 19          | 10800             | 0.070           | 960                           |
| EPIMSC0402C-2N4 □ | 2.4                | 250                     | 15          | 10500             | 0.068           | 790                           |
| EPIMSC0402C-2N7 □ | 2.7                | 250                     | 16          | 10400             | 0.120           | 640                           |
| EPIMSC0402C-3N3 □ | 3.3                | 250                     | 19          | 7000              | 0.066           | 840                           |
| EPIMSC0402C-3N6 □ | 3.6                | 250                     | 19          | 6800              | 0.066           | 840                           |
| EPIMSC0402C-3N9 □ | 3.9                | 250                     | 19          | 6000              | 0.066           | 840                           |
| EPIMSC0402C-4N3 □ | 4.3                | 250                     | 18          | 6000              | 0.091           | 700                           |
| EPIMSC0402C-4N7 □ | 4.7                | 250                     | 15          | 4770              | 0.130           | 640                           |
| EPIMSC0402C-5N1 □ | 5.1                | 250                     | 20          | 4800              | 0.083           | 800                           |
| EPIMSC0402C-5N6 □ | 5.6                | 250                     | 20          | 4800              | 0.083           | 760                           |
| EPIMSC0402C-6N2 □ | 6.2                | 250                     | 20          | 4800              | 0.083           | 760                           |
| EPIMSC0402C-6N8 □ | 6.8                | 250                     | 20          | 4800              | 0.083           | 680                           |
| EPIMSC0402C-7N5 □ | 7.5                | 250                     | 22          | 4800              | 0.100           | 680                           |
| EPIMSC0402C-8N2 □ | 8.2                | 250                     | 22          | 4400              | 0.100           | 680                           |
| EPIMSC0402C-8N7 □ | 8.7                | 250                     | 18          | 4100              | 0.200           | 480                           |

Unless Otherwise Specified Dimensions are in Inches /mm ± .010 / .25

## Electrical Characteristics (EPIMSC0402C Type)

| Part Number       | Inductance (nH) | Test Frequency (MHz) | Q (Min.) | SRF (MHz Min.) | DCR (Ω Max.) | Irms (mA Max.) |
|-------------------|-----------------|----------------------|----------|----------------|--------------|----------------|
| EPIMSC0402C-9N0 □ | 9.0             | 250                  | 22       | 4160           | 0.10         | 680            |
| EPIMSC0402C-9N5 □ | 9.5             | 250                  | 18       | 4000           | 0.20         | 480            |
| EPIMSC0402C-10N □ | 10.0            | 250                  | 21       | 3900           | 0.20         | 480            |
| EPIMSC0402C-11N □ | 11.0            | 250                  | 24       | 3680           | 0.12         | 640            |
| EPIMSC0402C-12N □ | 12.0            | 250                  | 24       | 3600           | 0.12         | 640            |
| EPIMSC0402C-13N □ | 13.0            | 250                  | 24       | 3450           | 0.21         | 440            |
| EPIMSC0402C-15N □ | 15.0            | 250                  | 24       | 3280           | 0.17         | 560            |
| EPIMSC0402C-16N □ | 16.0            | 250                  | 24       | 3100           | 0.22         | 560            |
| EPIMSC0402C-18N □ | 18.0            | 250                  | 25       | 3100           | 0.23         | 420            |
| EPIMSC0402C-19N □ | 19.0            | 250                  | 24       | 3040           | 0.20         | 480            |
| EPIMSC0402C-20N □ | 20.0            | 250                  | 25       | 3000           | 0.25         | 420            |
| EPIMSC0402C-22N □ | 22.0            | 250                  | 25       | 2800           | 0.30         | 400            |
| EPIMSC0402C-23N □ | 23.0            | 250                  | 22       | 2720           | 0.30         | 400            |
| EPIMSC0402C-24N □ | 24.0            | 250                  | 25       | 2700           | 0.30         | 400            |
| EPIMSC0402C-27N □ | 27.0            | 250                  | 24       | 2480           | 0.30         | 4000           |
| EPIMSC0402C-30N □ | 30.0            | 250                  | 25       | 2350           | 0.30         | 400            |
| EPIMSC0402C-33N □ | 33.0            | 250                  | 24       | 2350           | 0.40         | 400            |
| EPIMSC0402C-36N □ | 36.0            | 250                  | 24       | 2320           | 0.44         | 320            |
| EPIMSC0402C-39N □ | 39.0            | 250                  | 25       | 2100           | 0.55         | 200            |
| EPIMSC0402C-40N □ | 40.0            | 250                  | 24       | 2240           | 0.44         | 320            |
| EPIMSC0402C-43N □ | 43.0            | 250                  | 25       | 2030           | 0.81         | 100            |
| EPIMSC0402C-47N □ | 47.0            | 250                  | 20       | 2100           | 0.83         | 150            |
| EPIMSC0402C-51N □ | 51.0            | 250                  | 25       | 1750           | 0.82         | 100            |
| EPIMSC0402C-56N □ | 56.0            | 250                  | 22       | 1760           | 0.97         | 100            |
| EPIMSC0402C-68N □ | 68.0            | 250                  | 22       | 1620           | 1.12         | 100            |
| EPIMSC0402C-82N □ | 82.0            | 250                  | 20       | 1260           | 1.55         | 50             |
| EPIMSC0402C-R10 □ | 100.0           | 250                  | 20       | 1160           | 2.00         | 30             |

## Electrical Characteristics (EPIMSC0603C Type)

| Part Number       | Inductance (nH) | Test Frequency (MHz) | Q (Min.) | SRF (MHz Min.) | DCR (Ω Max.) | Irms (mA Max.) |
|-------------------|-----------------|----------------------|----------|----------------|--------------|----------------|
| EPIMSC0603C-1N6 □ | 1.6             | 250                  | 24       | 12500          | 0.030        | 700            |
| EPIMSC0603C-1N8 □ | 1.8             | 250                  | 16       | 12500          | 0.045        | 700            |
| EPIMSC0603C-3N6 □ | 3.6             | 250                  | 22       | 5900           | 0.063        | 700            |
| EPIMSC0603C-3N9 □ | 3.9             | 250                  | 22       | 6900           | 0.080        | 700            |
| EPIMSC0603C-4N3 □ | 4.3             | 250                  | 22       | 5900           | 0.063        | 700            |
| EPIMSC0603C-4N7 □ | 4.7             | 250                  | 20       | 5800           | 0.116        | 700            |
| EPIMSC0603C-5N1 □ | 5.1             | 250                  | 20       | 5700           | 0.140        | 700            |
| EPIMSC0603C-5N6 □ | 5.6             | 250                  | 20       | 5800           | 0.170        | 700            |
| EPIMSC0603C-6N3 □ | 6.3             | 250                  | 20       | 5700           | 0.140        | 700            |
| EPIMSC0603C-6N8 □ | 6.8             | 250                  | 27       | 5800           | 0.110        | 700            |
| EPIMSC0603C-7N5 □ | 7.5             | 250                  | 28       | 4800           | 0.106        | 700            |
| EPIMSC0603C-8N2 □ | 8.2             | 250                  | 28       | 4700           | 0.109        | 700            |
| EPIMSC0603C-8N7 □ | 8.7             | 250                  | 28       | 4600           | 0.109        | 700            |
| EPIMSC0603C-9N5 □ | 9.5             | 250                  | 28       | 5400           | 0.135        | 700            |
| EPIMSC0603C-10N □ | 10              | 250                  | 31       | 4800           | 0.130        | 700            |
| EPIMSC0603C-11N □ | 11              | 250                  | 33       | 4000           | 0.086        | 700            |
| EPIMSC0603C-12N □ | 12              | 250                  | 35       | 4000           | 0.130        | 700            |
| EPIMSC0603C-15N □ | 15              | 250                  | 35       | 4000           | 0.170        | 700            |
| EPIMSC0603C-16N □ | 16              | 250                  | 34       | 3300           | 0.104        | 700            |
| EPIMSC0603C-18N □ | 18              | 250                  | 35       | 3100           | 0.170        | 700            |
| EPIMSC0603C-22N □ | 22              | 250                  | 38       | 3000           | 0.190        | 700            |
| EPIMSC0603C-24N □ | 24              | 250                  | 37       | 2650           | 0.135        | 700            |
| EPIMSC0603C-27N □ | 27              | 250                  | 40       | 2800           | 0.220        | 600            |
| EPIMSC0603C-30N □ | 30              | 250                  | 37       | 2250           | 0.144        | 600            |
| EPIMSC0603C-33N □ | 33              | 250                  | 40       | 2300           | 0.220        | 600            |
| EPIMSC0603C-36N □ | 36              | 250                  | 38       | 2080           | 0.250        | 600            |
| EPIMSC0603C-39N □ | 39              | 250                  | 40       | 2200           | 0.250        | 600            |
| EPIMSC0603C-43N □ | 43              | 250                  | 39       | 2000           | 0.280        | 600            |
| EPIMSC0603C-47N □ | 47              | 200                  | 38       | 2000           | 0.280        | 600            |
| EPIMSC0603C-56N □ | 56              | 200                  | 38       | 1900           | 0.310        | 600            |
| EPIMSC0603C-68N □ | 68              | 200                  | 37       | 1700           | 0.340        | 600            |
| EPIMSC0603C-72N □ | 72              | 150                  | 34       | 1700           | 0.490        | 600            |
| EPIMSC0402C-82N □ | 82              | 150                  | 34       | 1700           | 0.540        | 400            |
| EPIMSC0402C-R10 □ | 100             | 150                  | 34       | 1400           | 0.580        | 400            |
| EPIMSC0603C-R11 □ | 110             | 150                  | 32       | 1350           | 0.610        | 400            |
| EPIMSC0603C-R12 □ | 120             | 150                  | 32       | 1300           | 0.750        | 300            |
| EPIMSC0603C-R15 □ | 150             | 150                  | 28       | 990            | 0.920        | 300            |
| EPIMSC0603C-R18 □ | 180             | 100                  | 25       | 990            | 1.250        | 280            |
| EPIMSC0603C-R22 □ | 220             | 100                  | 25       | 900            | 2.100        | 200            |
| EPIMSC0603C-R27 □ | 270             | 100                  | 24       | 900            | 2300         | 170            |
| EPIMSC0603C-R33 □ | 330             | 100                  | 25       | 900            | 3890         | 100            |
| EPIMSC0603C-R39 □ | 390             | 100                  | 25       | 700            | 4350         | 100            |

## Electrical Characteristics (EPIMSC0805C Type)

| Part Number       | Inductance (nH) | Test Frequency (MHz) | Q (Min.) | SRF (MHz Min.) | DCR (Ω Max.) | Irms (mA Max.) |
|-------------------|-----------------|----------------------|----------|----------------|--------------|----------------|
| EPIMSC0805C-2N8 □ | 2.8             | 250                  | 80       | 7900           | 0.06         | 800            |
| EPIMSC0805C-3N0 □ | 3.0             | 250                  | 65       | 7900           | 0.06         | 800            |
| EPIMSC0603C-3N3 □ | 3.3             | 250                  | 50       | 7900           | 0.08         | 600            |
| EPIMSC0805C-5N6 □ | 5.6             | 250                  | 65       | 5500           | 0.08         | 600            |
| EPIMSC0805C-6N8 □ | 6.8             | 250                  | 50       | 5500           | 0.11         | 600            |
| EPIMSC0805C-7N5 □ | 7.5             | 250                  | 50       | 4500           | 0.14         | 600            |
| EPIMSC0805C-8N2 □ | 8.2             | 250                  | 50       | 4700           | 0.12         | 600            |
| EPIMSC0805C-10N □ | 10              | 250                  | 60       | 4200           | 0.10         | 600            |
| EPIMSC0805C-12N □ | 12              | 250                  | 50       | 4000           | 0.15         | 600            |
| EPIMSC0805C-15N □ | 15              | 250                  | 50       | 3400           | 0.17         | 600            |
| EPIMSC0805C-18N □ | 18              | 250                  | 50       | 3300           | 0.20         | 600            |
| EPIMSC0805C-22N □ | 22              | 250                  | 55       | 2600           | 0.22         | 500            |
| EPIMSC0805C-24N □ | 24              | 250                  | 50       | 2000           | 0.22         | 500            |
| EPIMSC0805C-27N □ | 27              | 250                  | 55       | 2500           | 0.25         | 500            |
| EPIMSC0805C-33N □ | 33              | 250                  | 60       | 2050           | 0.27         | 500            |
| EPIMSC0805C-36N □ | 36              | 250                  | 55       | 1700           | 0.27         | 500            |
| EPIMSC0805C-39N □ | 39              | 250                  | 60       | 2000           | 0.29         | 500            |
| EPIMSC0805C-43N □ | 43              | 200                  | 60       | 1650           | 0.34         | 500            |
| EPIMSC0805C-47N □ | 47              | 200                  | 60       | 1650           | 0.31         | 500            |
| EPIMSC0805C-56N □ | 56              | 200                  | 60       | 1550           | 0.34         | 500            |
| EPIMSC0805C-68N □ | 68              | 200                  | 60       | 1450           | 0.38         | 500            |
| EPIMSC0805C-82N □ | 82              | 150                  | 65       | 1300           | 0.42         | 400            |
| EPIMSC0805C-91N □ | 91              | 150                  | 65       | 1200           | 0.48         | 400            |
| EPIMSC0805C-R10 □ | 100             | 150                  | 65       | 1200           | 0.46         | 400            |
| EPIMSC0805C-R11 □ | 110             | 150                  | 50       | 1000           | 0.48         | 400            |
| EPIMSC0805C-R12 □ | 120             | 150                  | 50       | 1100           | 0.51         | 400            |
| EPIMSC0805C-R15 □ | 150             | 100                  | 50       | 920            | 0.56         | 400            |
| EPIMSC0805C-R18 □ | 180             | 100                  | 50       | 870            | 0.64         | 400            |
| EPIMSC0805C-R20 □ | 200             | 100                  | 50       | 860            | 0.68         | 400            |
| EPIMSC0805C-R22 □ | 220             | 100                  | 50       | 850            | 0.70         | 400            |
| EPIMSC0805C-R24 □ | 240             | 100                  | 44       | 690            | 1.00         | 350            |
| EPIMSC0805C-R25 □ | 250             | 100                  | 45       | 660            | 1.20         | 350            |
| EPIMSC0805C-R27 □ | 270             | 100                  | 48       | 650            | 1.00         | 350            |
| EPIMSC0805C-R33 □ | 330             | 100                  | 48       | 600            | 1.40         | 310            |
| EPIMSC0805C-R39 □ | 390             | 100                  | 48       | 560            | 1.50         | 290            |
| EPIMSC0805C-R47 □ | 470             | 50                   | 33       | 375            | 1.76         | 250            |
| EPIMSC0805C-R56 □ | 560             | 25                   | 23       | 340            | 1.90         | 230            |
| EPIMSC0805C-R62 □ | 620             | 25                   | 23       | 220            | 2.20         | 210            |
| EPIMSC0805C-R68 □ | 680             | 25                   | 23       | 188            | 2.20         | 190            |
| EPIMSC0805C-R82 □ | 820             | 25                   | 23       | 215            | 2.35         | 180            |
| EPIMSC0805C-1R0 □ | 1000            | 25                   | 20       | 100            | 2.50         | 170            |

## Electrical Characteristics (EPIMSC1008C Type)

| Part Number       | Inductance (nH) | Test Frequency (MHz) | Q (Min.) | SRF (MHz Min.) | DCR (Ω Max.) | Irms (mA Max.) |
|-------------------|-----------------|----------------------|----------|----------------|--------------|----------------|
| EPIMSC1008C-10N □ | 10              | 50                   | 50       | 4100           | 0.08         | 1000           |
| EPIMSC1008C-12N □ | 12              | 50                   | 50       | 3300           | 0.09         | 1000           |
| EPIMSC1008C-15N □ | 15              | 50                   | 50       | 2500           | 0.10         | 1000           |
| EPIMSC1008C-18N □ | 18              | 50                   | 50       | 2500           | 0.11         | 1000           |
| EPIMSC1008C-22N □ | 22              | 50                   | 55       | 2400           | 0.12         | 1000           |
| EPIMSC1008C-27N □ | 27              | 50                   | 55       | 1600           | 0.13         | 1000           |
| EPIMSC1008C-33N □ | 33              | 50                   | 60       | 1600           | 0.14         | 1000           |
| EPIMSC1008C-39N □ | 39              | 50                   | 60       | 1500           | 0.15         | 1000           |
| EPIMSC1008C-47N □ | 47              | 50                   | 65       | 1500           | 0.16         | 1000           |
| EPIMSC1008C-56N □ | 56              | 50                   | 65       | 1300           | 0.18         | 1000           |
| EPIMSC1008C-68N □ | 68              | 50                   | 65       | 1300           | 0.20         | 1000           |
| EPIMSC1008C-82N □ | 82              | 50                   | 60       | 1000           | 0.22         | 1000           |
| EPIMSC1008C-R10 □ | 100             | 25                   | 60       | 1000           | 0.56         | 650            |
| EPIMSC1008C-R12 □ | 120             | 25                   | 60       | 950            | 0.63         | 650            |
| EPIMSC1008C-R15 □ | 150             | 25                   | 45       | 850            | 0.70         | 580            |
| EPIMSC1008C-R18 □ | 180             | 25                   | 45       | 750            | 0.77         | 620            |
| EPIMSC1008C-R22 □ | 220             | 25                   | 45       | 700            | 0.84         | 500            |
| EPIMSC1008C-R27 □ | 270             | 25                   | 45       | 600            | 0.91         | 500            |
| EPIMSC1008C-R33 □ | 330             | 25                   | 45       | 570            | 1.05         | 450            |
| EPIMSC1008C-R39 □ | 390             | 25                   | 45       | 500            | 1.12         | 470            |
| EPIMSC1008C-R47 □ | 470             | 25                   | 45       | 450            | 1.19         | 470            |