

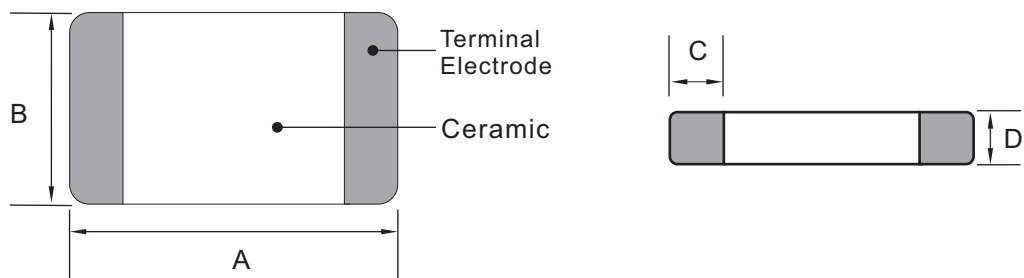
# Multilayer Chip Inductor



## Features and Applications

- Monolithic structure for high reliability.
- Compact size inductor possible.
- No cross coupling due to magnetic shield.
- Perfect shape for mounting with no directionality.
- Excellent solderability and high heat resistance for reflow soldering or wave soldering.
- Widely use in communications, Video and audio equipment, computer, remote control, etc.

## Dimensions (Unit:mm)



| Type       | A              | B        | C        | D        |
|------------|----------------|----------|----------|----------|
| EMCI0402   | 1.0±0.15       | 0.5±0.15 | 0.5±0.15 | 0.25±0.1 |
| EMCI0603   | 1.6±0.15       | 0.8±0.15 | 0.8±0.15 | 0.3±0.2  |
| EMCI080509 | 2.0(+0.3,-0.1) | 1.25±0.2 | 0.85±0.2 | 0.5±0.3  |
| EMCI080512 |                |          | 1.25±0.2 |          |
| EMCI120609 | 3.2±0.2        | 1.6±0.2  | 0.85±0.2 | 0.5±0.3  |
| EMCI120611 |                |          | 1.1±0.2  |          |
| EMCI1210   | 3.2±0.2        | 2.5±0.2  | 1.3±0.3  | 0.8±0.2  |

## Electrical Specifications-EMCI0402

| P/N           | Inductance<br>(nH) | Q<br>(Min) | Test Freq.<br>(MHz) | SRF(Min)<br>(GHz) | DCR(Max)<br>(Ω) | IDC(Max)<br>(mA) |
|---------------|--------------------|------------|---------------------|-------------------|-----------------|------------------|
| EMCI0402-47N□ | 0.047              | 10         | 50                  | 220               | 0.45            | 25               |
| EMCI0402-68N□ | 0.068              | 10         | 50                  | 210               | 0.45            | 25               |
| EMCI0402-82N□ | 0.082              | 10         | 50                  | 200               | 0.45            | 25               |
| EMCI0402-R10□ | 0.1                | 10         | 25                  | 200               | 0.8             | 25               |
| EMCI0402-R12□ | 0.12               | 10         | 25                  | 165               | 0.8             | 25               |
| EMCI0402-R15□ | 0.15               | 10         | 25                  | 140               | 0.9             | 25               |
| EMCI0402-R18□ | 0.18               | 10         | 25                  | 120               | 0.9             | 25               |
| EMCI0402-R22□ | 0.22               | 10         | 25                  | 110               | 1.2             | 25               |
| EMCI0402-R27□ | 0.27               | 15         | 25                  | 95                | 1.2             | 25               |
| EMCI0402-R33□ | 0.33               | 15         | 25                  | 85                | 1.25            | 18               |
| EMCI0402-R39□ | 0.39               | 20         | 10                  | 85                | 0.6             | 15               |
| EMCI0402-R47□ | 0.47               | 20         | 10                  | 80                | 0.7             | 15               |
| EMCI0402-R56□ | 0.56               | 20         | 10                  | 75                | 0.8             | 15               |
| EMCI0402-R68□ | 0.68               | 20         | 10                  | 70                | 0.9             | 15               |
| EMCI0402-R82□ | 0.82               | 20         | 10                  | 65                | 0.9             | 15               |
| EMCI0402-1R0□ | 1                  | 20         | 10                  | 40                | 0.9             | 15               |
| EMCI0402-1R2□ | 1.2                | 20         | 10                  | 35                | 1.2             | 15               |
| EMCI0402-1R5□ | 1.5                | 20         | 10                  | 30                | 1.2             | 15               |
| EMCI0402-1R8□ | 1.8                | 20         | 10                  | 30                | 1.45            | 15               |
| EMCI0402-2R2□ | 2.2                | 20         | 10                  | 28                | 1.7             | 10               |
| EMCI0402-2R7□ | 2.7                | 20         | 10                  | 28                | 2.4             | 10               |
| EMCI0402-3R3□ | 3.3                | 20         | 10                  | 28                | 2.7             | 10               |

● Please specify the inductance tolerance code(J=±5%; K=±10%; M=±20%; N=±30%)

## Electrical Specifications-EMCI0603

| P/N           | Inductance<br>(nH) | Q<br>(Min) | Test Freq.<br>(MHz) | SRF(Min)<br>(GHz) | DCR(Max)<br>(Ω) | IDC(Max)<br>(mA) |
|---------------|--------------------|------------|---------------------|-------------------|-----------------|------------------|
| EMCI0603-47N□ | 0.047              | 10         | 50                  | 260               | 0.3             | 50               |
| EMCI0603-68N□ | 0.068              | 10         | 50                  | 250               | 0.3             | 50               |
| EMCI0603-82N□ | 0.082              | 10         | 50                  | 245               | 0.3             | 50               |
| EMCI0603-R10□ | 0.1                | 15         | 25                  | 240               | 0.5             | 50               |
| EMCI0603-R12□ | 0.12               | 15         | 25                  | 205               | 0.5             | 50               |
| EMCI0603-R15□ | 0.15               | 15         | 25                  | 180               | 0.6             | 50               |
| EMCI0603-R18□ | 0.18               | 15         | 25                  | 165               | 0.6             | 50               |
| EMCI0603-R22□ | 0.22               | 15         | 25                  | 150               | 0.8             | 50               |
| EMCI0603-R27□ | 0.27               | 15         | 25                  | 136               | 0.8             | 50               |
| EMCI0603-R33□ | 0.33               | 15         | 25                  | 125               | 0.85            | 35               |
| EMCI0603-R39□ | 0.39               | 15         | 25                  | 110               | 1               | 35               |
| EMCI0603-R47□ | 0.47               | 15         | 25                  | 105               | 1.35            | 35               |
| EMCI0603-R56□ | 0.56               | 15         | 25                  | 95                | 1.55            | 35               |
| EMCI0603-R68□ | 0.68               | 15         | 25                  | 90                | 1.7             | 35               |
| EMCI0603-R82□ | 0.82               | 15         | 25                  | 85                | 2.1             | 35               |
| EMCI0603-1R0□ | 1                  | 35         | 10                  | 75                | 0.6             | 25               |
| EMCI0603-1R2□ | 1.2                | 35         | 10                  | 65                | 0.8             | 25               |
| EMCI0603-1R5□ | 1.5                | 35         | 10                  | 60                | 0.8             | 25               |
| EMCI0603-1R8□ | 1.8                | 35         | 10                  | 55                | 0.95            | 25               |
| EMCI0603-2R2□ | 2.2                | 35         | 10                  | 50                | 1.15            | 15               |
| EMCI0603-2R7□ | 2.7                | 35         | 10                  | 45                | 1.35            | 15               |
| EMCI0603-3R3□ | 3.3                | 35         | 10                  | 40                | 1.55            | 15               |
| EMCI0603-3R9□ | 3.9                | 35         | 10                  | 35                | 1.7             | 15               |
| EMCI0603-4R7□ | 4.7                | 35         | 10                  | 33                | 2.1             | 15               |
| EMCI0603-5R6□ | 5.6                | 35         | 4                   | 22                | 1.55            | 5                |
| EMCI0603-6R8□ | 6.8                | 35         | 4                   | 20                | 1.7             | 5                |
| EMCI0603-8R2□ | 8.2                | 35         | 4                   | 18                | 2.1             | 5                |
| EMCI0603-100□ | 10                 | 30         | 2                   | 17                | 1.85            | 3                |
| EMCI0603-120□ | 12                 | 30         | 2                   | 15                | 2.1             | 3                |
| EMCI0603-150□ | 15                 | 20         | 1                   | 14                | 1.7             | 1                |
| EMCI0603-180□ | 18                 | 20         | 1                   | 13                | 1.85            | 1                |
| EMCI0603-220□ | 22                 | 20         | 1                   | 11                | 2.1             | 1                |
| EMCI0603-270□ | 27                 | 20         | 1                   | 10                | 2.75            | 1                |
| EMCI0603-330□ | 33                 | 20         | 1                   | 9                 | 2.95            | 1                |

## Electrical Specifications-EMCI0805

| P/N             | Inductance<br>(nH) | Q<br>(Min) | Test Freq.<br>(MHz) | SRF(Min)<br>(GHz) | DCR(Max)<br>(Ω) | IDC(Max)<br>(mA) |
|-----------------|--------------------|------------|---------------------|-------------------|-----------------|------------------|
| EMCI080509-47N□ | 0.047              | 15         | 50                  | 320               | 0.2             | 300              |
| EMCI080509-68N□ | 0.068              | 15         | 50                  | 280               | 0.2             | 300              |
| EMCI080509-82N□ | 0.082              | 15         | 50                  | 255               | 0.2             | 300              |
| EMCI080509-R10□ | 0.1                | 20         | 25                  | 235               | 0.3             | 250              |
| EMCI080509-R12□ | 0.12               | 20         | 25                  | 220               | 0.3             | 250              |
| EMCI080509-R15□ | 0.15               | 20         | 25                  | 200               | 0.4             | 250              |
| EMCI080509-R18□ | 0.18               | 20         | 25                  | 185               | 0.4             | 250              |
| EMCI080509-R22□ | 0.22               | 20         | 25                  | 170               | 0.5             | 250              |
| EMCI080509-R27□ | 0.27               | 20         | 25                  | 150               | 0.5             | 250              |
| EMCI080509-R33□ | 0.33               | 20         | 25                  | 145               | 0.55            | 250              |
| EMCI080509-R39□ | 0.39               | 25         | 25                  | 135               | 0.65            | 200              |
| EMCI080509-R47□ | 0.47               | 25         | 25                  | 125               | 0.65            | 200              |
| EMCI080509-R56□ | 0.56               | 25         | 25                  | 115               | 0.75            | 150              |
| EMCI080509-R68□ | 0.68               | 25         | 25                  | 105               | 0.8             | 150              |
| EMCI080509-R82□ | 0.82               | 25         | 25                  | 100               | 1               | 150              |
| EMCI080509-1R0□ | 1                  | 45         | 10                  | 75                | 0.4             | 50               |
| EMCI080509-1R2□ | 1.2                | 45         | 10                  | 65                | 0.5             | 50               |
| EMCI080509-1R5□ | 1.5                | 45         | 10                  | 60                | 0.5             | 50               |
| EMCI080509-1R8□ | 1.8                | 45         | 10                  | 55                | 0.6             | 50               |
| EMCI080509-2R2□ | 2.2                | 45         | 10                  | 50                | 0.65            | 30               |
| EMCI080509-2R7□ | 2.7                | 45         | 10                  | 45                | 0.75            | 30               |
| EMCI080509-3R3□ | 3.3                | 45         | 10                  | 41                | 0.8             | 30               |
| EMCI080509-3R9□ | 3.9                | 45         | 10                  | 38                | 0.9             | 30               |
| EMCI080509-4R7□ | 4.7                | 45         | 10                  | 35                | 1               | 30               |
| EMCI080509-5R6□ | 5.6                | 50         | 4                   | 32                | 0.9             | 15               |
| EMCI080509-6R8□ | 6.8                | 50         | 4                   | 29                | 1               | 15               |
| EMCI080509-8R2□ | 8.2                | 50         | 4                   | 26                | 1.1             | 15               |
| EMCI080509-100□ | 10                 | 50         | 2                   | 24                | 1.15            | 15               |
| EMCI080509-120□ | 12                 | 50         | 2                   | 22                | 1.25            | 15               |
| EMCI080509-150□ | 15                 | 30         | 1                   | 19                | 0.8             | 5                |
| EMCI080509-180□ | 18                 | 30         | 1                   | 18                | 0.9             | 5                |
| EMCI080509-220□ | 22                 | 30         | 1                   | 16                | 1.1             | 5                |
| EMCI080512-270□ | 27                 | 30         | 1                   | 14                | 1.15            | 5                |
| EMCI080512-330□ | 33                 | 30         | 0.4                 | 13                | 1.25            | 5                |
| EMCI080512-390□ | 39                 | 35         | 2                   | 8                 | 2.9             | 4                |
| EMCI080512-470□ | 47                 | 35         | 2                   | 7.5               | 3               | 4                |

• Please specify the inductance tolerance code(J=±5%; K=±10%; M=±20%; N=±30%)

## Electrical Specifications-EMCI1206

| P/N             | Inductance<br>(nH) | Q<br>(Min) | Test Freq.<br>(MHz) | SRF(Min)<br>(GHz) | DCR(Max)<br>(Ω) | IDC(Max)<br>(mA) |
|-----------------|--------------------|------------|---------------------|-------------------|-----------------|------------------|
| EMCI120609-47N□ | 0.047              | 20         | 50                  | 320               | 0.15            | 300              |
| EMCI120609-68N□ | 0.068              | 20         | 50                  | 280               | 0.25            | 300              |
| EMCI120609-R10□ | 0.1                | 20         | 25                  | 235               | 0.25            | 250              |
| EMCI120609-R12□ | 0.12               | 20         | 25                  | 220               | 0.3             | 250              |
| EMCI120609-R15□ | 0.15               | 20         | 25                  | 200               | 0.3             | 250              |
| EMCI120609-R18□ | 0.18               | 20         | 25                  | 185               | 0.4             | 250              |
| EMCI120609-R22□ | 0.22               | 20         | 25                  | 170               | 0.4             | 250              |
| EMCI120609-R27□ | 0.27               | 20         | 25                  | 150               | 0.5             | 250              |
| EMCI120609-R33□ | 0.33               | 20         | 25                  | 145               | 0.6             | 250              |
| EMCI120609-R39□ | 0.39               | 25         | 25                  | 135               | 0.5             | 200              |
| EMCI120609-R47□ | 0.47               | 25         | 25                  | 125               | 0.6             | 200              |
| EMCI120609-R56□ | 0.56               | 25         | 25                  | 115               | 0.7             | 150              |
| EMCI120609-R68□ | 0.68               | 25         | 25                  | 105               | 0.8             | 150              |
| EMCI120609-R82□ | 0.82               | 25         | 25                  | 100               | 0.9             | 150              |
| EMCI120609-1R0□ | 1                  | 45         | 10                  | 75                | 0.4             | 100              |
| EMCI120609-1R2□ | 1.2                | 45         | 10                  | 65                | 0.5             | 100              |
| EMCI120609-1R5□ | 1.5                | 45         | 10                  | 60                | 0.5             | 50               |
| EMCI120609-1R8□ | 1.8                | 45         | 10                  | 55                | 0.5             | 50               |
| EMCI120609-2R2□ | 2.2                | 45         | 10                  | 50                | 0.6             | 50               |
| EMCI120609-2R7□ | 2.7                | 45         | 10                  | 45                | 0.6             | 50               |
| EMCI120609-3R3□ | 3.3                | 45         | 10                  | 41                | 0.7             | 50               |
| EMCI120609-3R9□ | 3.9                | 45         | 10                  | 38                | 0.8             | 50               |
| EMCI120609-4R7□ | 4.7                | 45         | 10                  | 35                | 0.9             | 50               |
| EMCI120609-5R6□ | 5.6                | 50         | 4                   | 32                | 0.7             | 25               |
| EMCI120609-6R8□ | 6.8                | 50         | 4                   | 29                | 0.8             | 25               |
| EMCI120609-8R2□ | 8.2                | 50         | 4                   | 26                | 0.9             | 25               |
| EMCI120609-100□ | 10                 | 50         | 2                   | 24                | 1               | 25               |
| EMCI120609-120□ | 12                 | 50         | 2                   | 22                | 1.05            | 15               |
| EMCI120609-150□ | 15                 | 35         | 1                   | 19                | 0.7             | 5                |
| EMCI120609-180□ | 18                 | 35         | 1                   | 18                | 0.7             | 5                |
| EMCI120609-220□ | 22                 | 35         | 1                   | 16                | 0.9             | 5                |
| EMCI120611-270□ | 27                 | 35         | 1                   | 14                | 0.9             | 5                |
| EMCI120611-330□ | 33                 | 35         | 0.4                 | 13                | 1.05            | 5                |
| EMCI120611-390□ | 39                 | 40         | 2                   | 11                | 3               | 5                |
| EMCI120611-470□ | 47                 | 40         | 2                   | 10                | 3.4             | 5                |

● Please specify the inductance tolerance code(J=±5%; K=±10%; M=±20%; N=±30%)

## Electrical Specifications-EMCI1210

| P/N             | Inductance<br>(nH) | Q<br>(Min) | Test Freq.<br>(MHz) | SRF(Min)<br>(GHz) | DCR(Max)<br>(Ω) | IDC(Max)<br>(mA) |
|-----------------|--------------------|------------|---------------------|-------------------|-----------------|------------------|
| EMCI1210-R10□   | 0.1                | 20         | 25                  | 235               | 0.25            | 250              |
| EMCI1210-R12□   | 0.12               | 20         | 25                  | 220               | 0.3             | 250              |
| EMCI1210-R15□   | 0.15               | 20         | 25                  | 200               | 0.3             | 250              |
| EMCI1210-R18□   | 0.18               | 20         | 25                  | 185               | 0.4             | 250              |
| EMCI1210-R22□   | 0.22               | 20         | 25                  | 170               | 0.4             | 250              |
| EMCI1210-R27□   | 0.27               | 20         | 25                  | 150               | 0.5             | 250              |
| EMCI1210-R33□   | 0.33               | 20         | 25                  | 145               | 0.6             | 250              |
| EMCI1210-R39□   | 0.39               | 25         | 25                  | 135               | 0.5             | 200              |
| EMCI1210-R47□   | 0.47               | 25         | 25                  | 125               | 0.6             | 200              |
| EMCI1210-R56□   | 0.56               | 25         | 25                  | 115               | 0.7             | 150              |
| EMCI1210-R68□   | 0.68               | 25         | 25                  | 105               | 0.8             | 150              |
| EMCI1210-R82□   | 0.82               | 25         | 25                  | 100               | 0.9             | 150              |
| EMCI1210-1R0□   | 1                  | 45         | 10                  | 75                | 0.4             | 100              |
| EMCI1210-1R2□   | 1.2                | 45         | 10                  | 65                | 0.5             | 100              |
| EMCI1210-1R5□   | 1.5                | 45         | 10                  | 60                | 0.5             | 50               |
| EMCI1210-1R8□   | 1.8                | 45         | 10                  | 55                | 0.5             | 50               |
| EMCI1210-2R2□   | 2.2                | 45         | 10                  | 50                | 0.6             | 50               |
| EMCI1210-2R7□   | 2.7                | 45         | 10                  | 45                | 0.6             | 50               |
| EMCI1210-3R3□   | 3.3                | 45         | 10                  | 41                | 0.7             | 50               |
| EMCI1210-3R9□   | 3.9                | 45         | 10                  | 38                | 0.8             | 50               |
| EMCI1210-4R7□   | 4.7                | 45         | 10                  | 35                | 0.9             | 50               |
| EMCI1210-5R6□   | 5.6                | 50         | 4                   | 32                | 0.7             | 25               |
| EMCI1210-6R8□   | 6.8                | 50         | 4                   | 29                | 0.8             | 25               |
| EMCI1210-8R2□   | 8.2                | 50         | 4                   | 26                | 0.9             | 25               |
| EMCI1210-100□   | 10                 | 50         | 2                   | 24                | 1               | 25               |
| EMCI1210-120□   | 12                 | 50         | 2                   | 22                | 1.05            | 15               |
| EMCI1210-150□   | 15                 | 35         | 1                   | 19                | 0.7             | 5                |
| EMCI1210-180□   | 18                 | 35         | 1                   | 18                | 0.7             | 5                |
| EMCI1210-220□   | 22                 | 35         | 1                   | 16                | 0.9             | 5                |
| EMCI1210-270□   | 27                 | 35         | 1                   | 14                | 0.9             | 5                |
| EMCI1210-330□   | 33                 | 35         | 0.4                 | 13                | 1.05            | 5                |
| EMCI1210-390□   | 39                 | 40         | 2                   | 11                | 3               | 10               |
| EMCI1210-470□   | 47                 | 40         | 2                   | 10                | 3.4             | 10               |
| EMCI1210-560□   | 56                 | 40         | 2                   | 9.5               | 3.8             | 4                |
| EMCI1210-680□   | 68                 | 40         | 1                   | 9.5               | 3               | 4                |
| EMCI1210-820□   | 82                 | 40         | 1                   | 9                 | 3.4             | 4                |
| EMCI121022-101□ | 100                | 40         | 1                   | 8                 | 3.8             | 4                |
| EMCI121022-121□ | 120                | 30         | 0.4                 | 6                 | 3               | 2                |

● Please specify the inductance tolerance code(J=±5%; K=±10%; M=±20%; N=±30%)