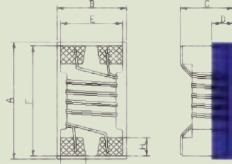




## SHAPE AND DIMENSIONS

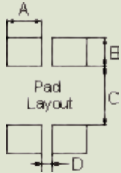
Dimensions : mm

CMM41T-122K-S/422K-S



| A                  | B                  | C                  | D    | E    | F    | G    | H    |
|--------------------|--------------------|--------------------|------|------|------|------|------|
| 4.95 <sup>+0</sup> | 3.50 <sup>+0</sup> | 2.20 <sup>+0</sup> | 1.00 | 2.45 | 4.40 | 1.02 | 0.75 |

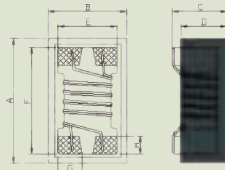
Recommended Pattern



| A    | B    | C    | D    |
|------|------|------|------|
| 1.45 | 1.22 | 2.59 | 0.46 |

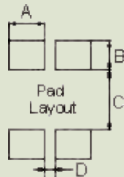
Dimensions : mm

CMM41T-203K-S



| A                  | B                  | C                  | D    | E    | F    | G    | H    |
|--------------------|--------------------|--------------------|------|------|------|------|------|
| 5.87 <sup>+0</sup> | 4.98 <sup>+0</sup> | 3.50 <sup>+0</sup> | 2.50 | 2.45 | 4.40 | 1.02 | 0.75 |

Recommended Pattern



| A    | B    | C    | D    |
|------|------|------|------|
| 1.45 | 1.22 | 2.59 | 0.46 |

## ELECTRICAL CHARACTERISTICS

| Part Number   | IMPEDANCE<br>(Ω) | Test Frequency<br>(MHz) | Tolerance<br>(±%) | IDC MAX<br>(mA) | Rated Voltage<br>(Vdc) | Rated Max<br>(Ω) | Insulation Resistance<br>(M Ohm)min. |
|---------------|------------------|-------------------------|-------------------|-----------------|------------------------|------------------|--------------------------------------|
| CMM21T-300M-S | 30               | 100                     | 20                | 450             | 50                     | 0.20             | 10                                   |
| CMM21T-670M-S | 67               | 100                     | 20                | 400             | 50                     | 0.25             | 10                                   |
| CMM21T-900M-S | 90               | 100                     | 20                | 330             | 50                     | 0.35             | 10                                   |
| CMM21T-121M-S | 120              | 100                     | 20                | 370             | 50                     | 0.30             | 10                                   |
| CMM21T-161M-S | 160              | 100                     | 20                | 350             | 50                     | 0.35             | 10                                   |
| CMM21T-181M-S | 180              | 100                     | 20                | 330             | 50                     | 0.35             | 10                                   |
| CMM21T-261M-S | 260              | 100                     | 20                | 300             | 50                     | 0.40             | 10                                   |
| CMM21T-371M-S | 370              | 100                     | 20                | 280             | 50                     | 0.45             | 10                                   |

\* Tolerance: M=±20%

\* Packaging: Clear tape and reel {standard}

\* Z: Agilent/HP4291A

\* RDC(single line): CH502BC, HP4338B

\* Insulation Resistance: Agilent/HP4339B

\* Operating temperature range from -25°C to +85°C



| Part No.      | Z<br>( $\Omega$ ) | RDC<br>( $\Omega$ )Max. | IDC<br>(mA)MAX | Rated Voltage<br>(Vdc) | Insulation Resistance<br>(M $\Omega$ )(min) | Tolerance<br>( $\pm\%$ ) | Test Freq<br>(MHz) |
|---------------|-------------------|-------------------------|----------------|------------------------|---------------------------------------------|--------------------------|--------------------|
| CMM21T-300□-N | 30                | 0.2                     | 450            | 50                     | 10                                          | 20                       | 100                |
| CMM21T-670□-N | 67                | 0.25                    | 400            | 50                     | 10                                          | 20                       | 100                |
| CMM21T-900□-N | 90                | 0.35                    | 330            | 50                     | 10                                          | 20                       | 100                |
| CMM21T-121□-N | 120               | 0.3                     | 370            | 50                     | 10                                          | 20                       | 100                |
| CMM21T-161□-N | 160               | 0.4                     | 300            | 50                     | 10                                          | 20                       | 100                |
| CMM21T-181□-N | 180               | 0.35                    | 330            | 50                     | 10                                          | 20                       | 100                |
| CMM21T-201□-N | 200               | 0.35                    | 330            | 50                     | 10                                          | 20                       | 100                |
| CMM21T-221□-N | 220               | 0.35                    | 310            | 50                     | 10                                          | 20                       | 100                |
| CMM21T-261□-N | 260               | 0.4                     | 300            | 50                     | 10                                          | 20                       | 100                |
| CMM21T-301□-N | 300               | 0.4                     | 290            | 50                     | 10                                          | 20                       | 100                |
| CMM21T-361□-N | 360               | 0.45                    | 280            | 50                     | 10                                          | 20                       | 100                |
| CMM21T-371□-N | 370               | 0.45                    | 280            | 50                     | 10                                          | 20                       | 100                |
| CMM21T-901□-N | 900               | 0.65                    | 70             | 50                     | 10                                          | 20                       | 100                |

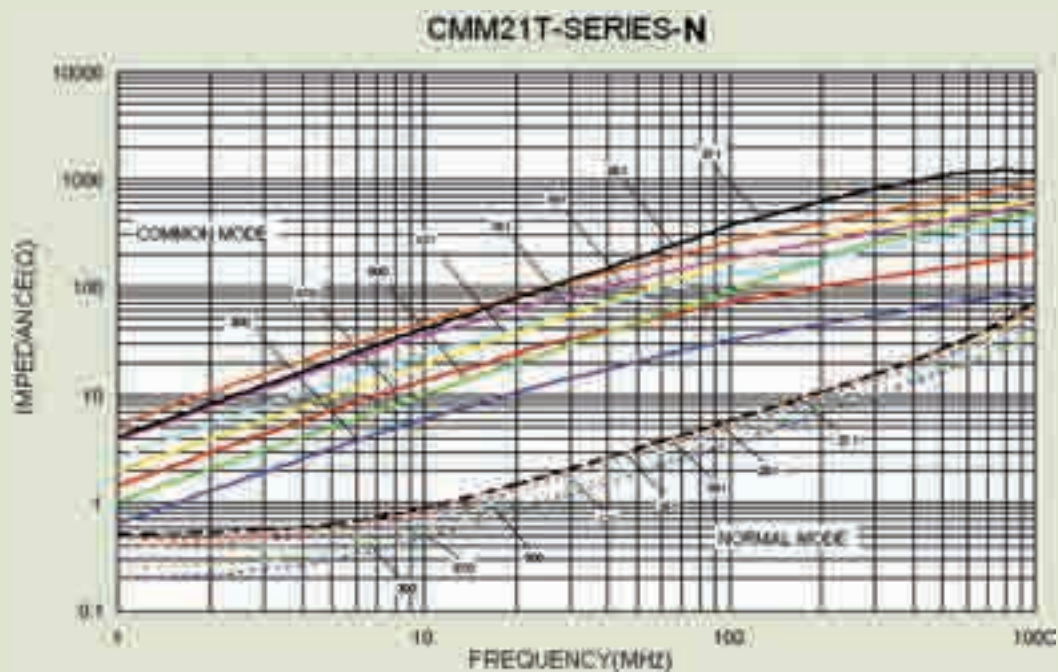
NOTE : □-tolerance M= $\pm 20\%$

1. Operating temperature range  $-25^{\circ}\text{C} \sim 85^{\circ}\text{C}$

2. RDC: SINGLE WIRE TEST VALUE

"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)

### TYPICAL IMPEDANCE VS. FREQUENCY





## ELECTRICAL CHARACTERISTICS

| Part Number   | IMPEDANCE<br>( $\Omega$ ) | Test Frequency<br>(MHz) | Tolerance<br>( $\pm\%$ ) | IDC MAX<br>(mA) | Rated Voltage<br>(Vdc) | Rated Max<br>( $\Omega$ ) | Insulation Resistance<br>(M Ohm)min. |
|---------------|---------------------------|-------------------------|--------------------------|-----------------|------------------------|---------------------------|--------------------------------------|
| CMM31T-900M-S | 90                        | 100                     | 20                       | 370             | 50                     | 0.3                       | 10                                   |
| CMM31T-161M-S | 160                       | 100                     | 20                       | 340             | 50                     | 0.4                       | 10                                   |
| CMM31T-261M-S | 260                       | 100                     | 20                       | 310             | 50                     | 0.5                       | 10                                   |
| CMM31T-601M-S | 600                       | 100                     | 20                       | 260             | 50                     | 0.8                       | 10                                   |
| CMM31T-102M-S | 1000                      | 100                     | 20                       | 230             | 50                     | 1.0                       | 10                                   |
| CMM31T-222M-S | 2200                      | 100                     | 20                       | 200             | 50                     | 1.2                       | 10                                   |

\* Tolerance: M= $\pm 20\%$

\* Packaging: Clear tape and reel {standard}

\* Z: Agilent/HP4291A

\* RDC(single line): CH502BC, HP4338B

\* Insulation Resistance: Agilent/HP4339B

\* Operating temperature range from  $-25^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

## ELECTRICAL CHARACTERISTICS LEAD FREE & ROHS COMPLIANCE

| Part No.      | Z<br>( $\Omega$ ) | RDC<br>( $\Omega$ )Max. | IDC<br>(mA)MAX | Rated Voltage<br>(Vdc) | Insulation Resistance<br>(M $\Omega$ )(min) | Tolerance<br>( $\pm\%$ ) | Test Freq<br>(MHz) |
|---------------|-------------------|-------------------------|----------------|------------------------|---------------------------------------------|--------------------------|--------------------|
| CMM31T-900□-N | 90                | 0.3                     | 370            | 50                     | 10                                          | 20                       | 100                |
| CMM31T-161□-N | 160               | 0.4                     | 340            | 50                     | 10                                          | 20                       | 100                |
| CMM31T-261□-N | 260               | 0.5                     | 310            | 50                     | 10                                          | 20                       | 100                |
| CMM31T-601□-N | 600               | 0.8                     | 260            | 50                     | 10                                          | 20                       | 100                |
| CMM31T-102□-N | 1000              | 1                       | 230            | 50                     | 10                                          | 20                       | 100                |
| CMM31T-222□-N | 2200              | 1.2                     | 200            | 50                     | 10                                          | 20                       | 100                |

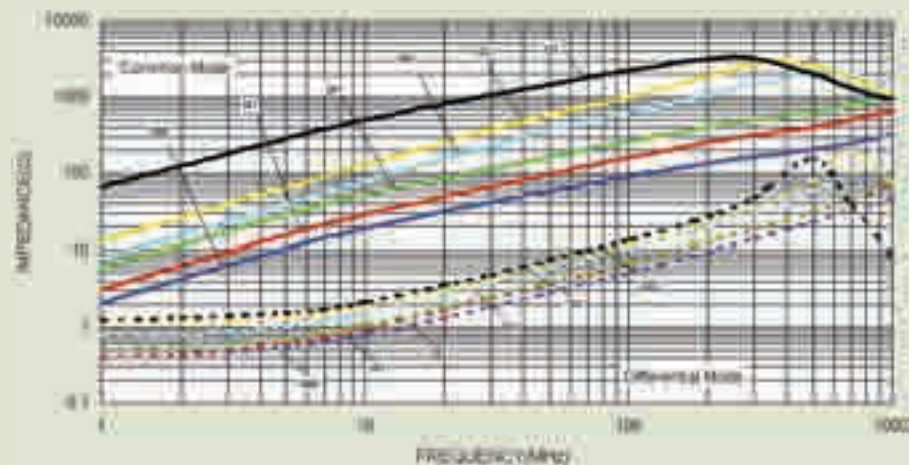
NOTE : □-tolerance M= $\pm 20\%$

1. Operating temperature range  $-25^{\circ}\text{C} \sim 85^{\circ}\text{C}$

2. RDC: SINGLE WIRE TEST VALUE

"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)

## TYPICAL IMPEDANCE VS. FREQUENCY





## ELECTRICAL CHARACTERISTICS

| Part Number   | IMPEDANCE<br>( $\Omega$ ) | Test Frequency<br>(MHz) | Tolerance<br>( $\pm\%$ ) | IDC MAX<br>(mA) | Rated Voltage<br>(Vdc) | Rated Max<br>( $\Omega$ ) | Insulation Resistance<br>(M Ohm)min. |
|---------------|---------------------------|-------------------------|--------------------------|-----------------|------------------------|---------------------------|--------------------------------------|
| CMM41T-122M-S | 1.25                      | 50                      | 10                       | 800             | 50                     | 0.5                       | 10                                   |
| CMM41T-422M-S | 4.2                       | 10                      | 10                       | 800             | 50                     | 0.8                       | 10                                   |
| CMM41T-113M-S | 11.5                      | 10                      | 10                       | 500             | 85                     | 0.8                       | 10                                   |
| CMM41T-203M-S | 20.0                      | 10                      | 10                       | 400             | 85                     | 0.8                       | 10                                   |

\* When ordering, please specify tolerance and packaging codes. Ex: CMM41T-422K-S

Tolerance : K $\pm$ 10%

Packaging : Clear tape and reel(standard).

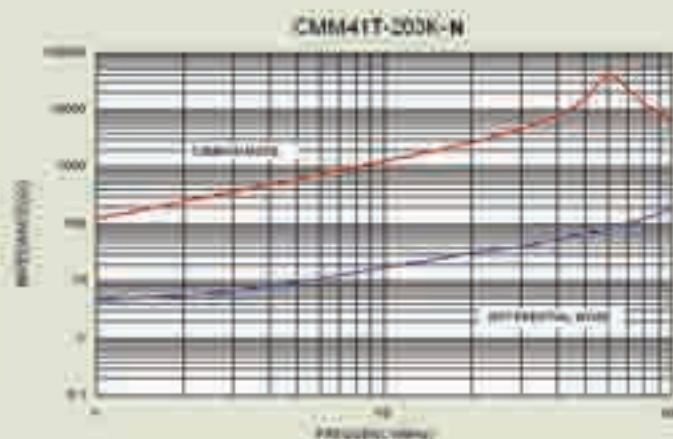
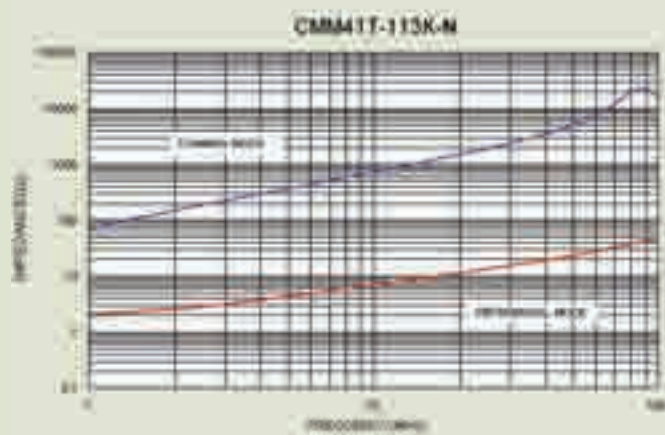
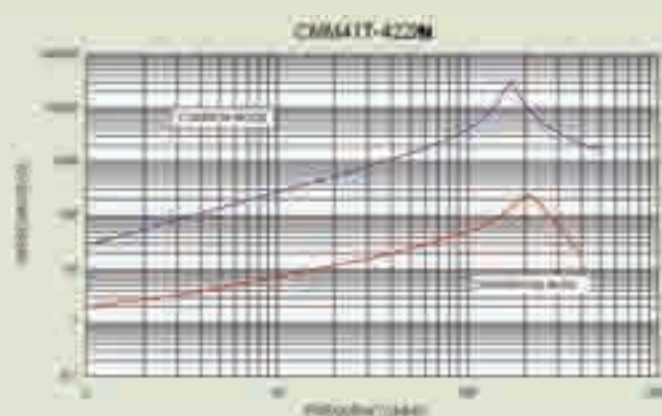
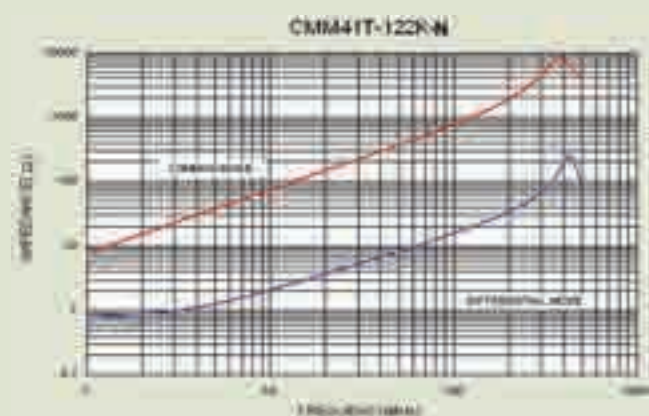
\* Z :Agilent/HP4291A

\* Rdc(single line) : DIGITAL MULTIMETER SC-7401

\* Insulation Resistance :Agilent/HP4339B

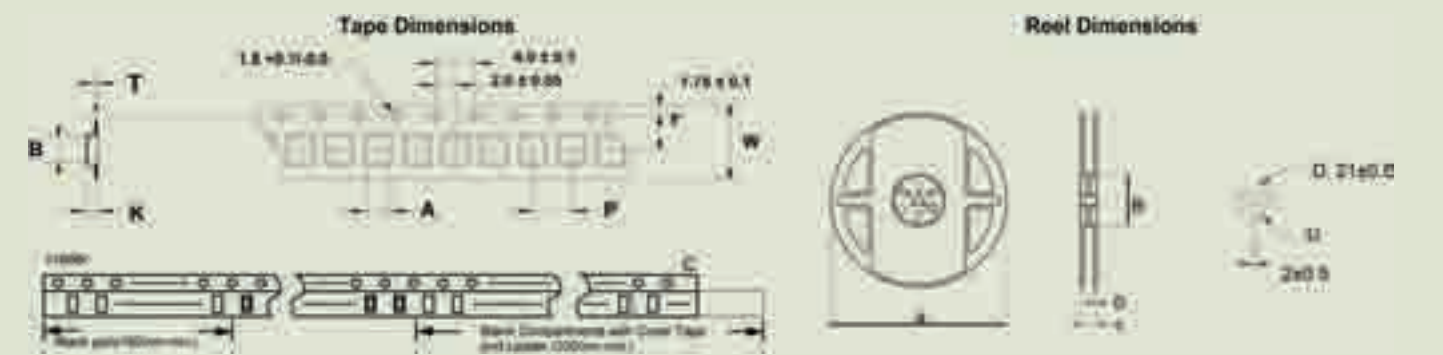
\* Operating temperature range from -40°C to 85°C

## TYPICAL IMPEDANCE VS. FREQUENCY





ELECTRICAL CHARACTERISTICS



| SERIES            | TAPE DIMENSIONS |      |      |    |   |     |      | REEL DIMENSIONS |    |    |     | Q'ty/REEL |
|-------------------|-----------------|------|------|----|---|-----|------|-----------------|----|----|-----|-----------|
|                   |                 |      |      |    |   |     |      | A               | B  | C  | D   |           |
| CMM21             | 1.50            | 2.25 | 0.23 | 8  | 4 | 3.5 | 1.70 | 178             | 60 | 12 | 1.5 | 2000      |
| CMM31             | 1.76            | 3.40 | 0.23 | 8  | 4 | 3.5 | 2.20 | 178             | 60 | 12 | 1.5 | 2000      |
| CMM41 (122 & 422) | 2.85            | 4.85 | 0.23 | 12 | 4 | 5.5 | 2.40 | 178             | 60 | 16 | 1.5 | 2000      |
| CMM41 (113 & 203) | 4.45            | 6.10 | 0.25 | 12 | 8 | 5.5 | 3.00 | 178             | 60 | 16 | 1.5 | 500       |