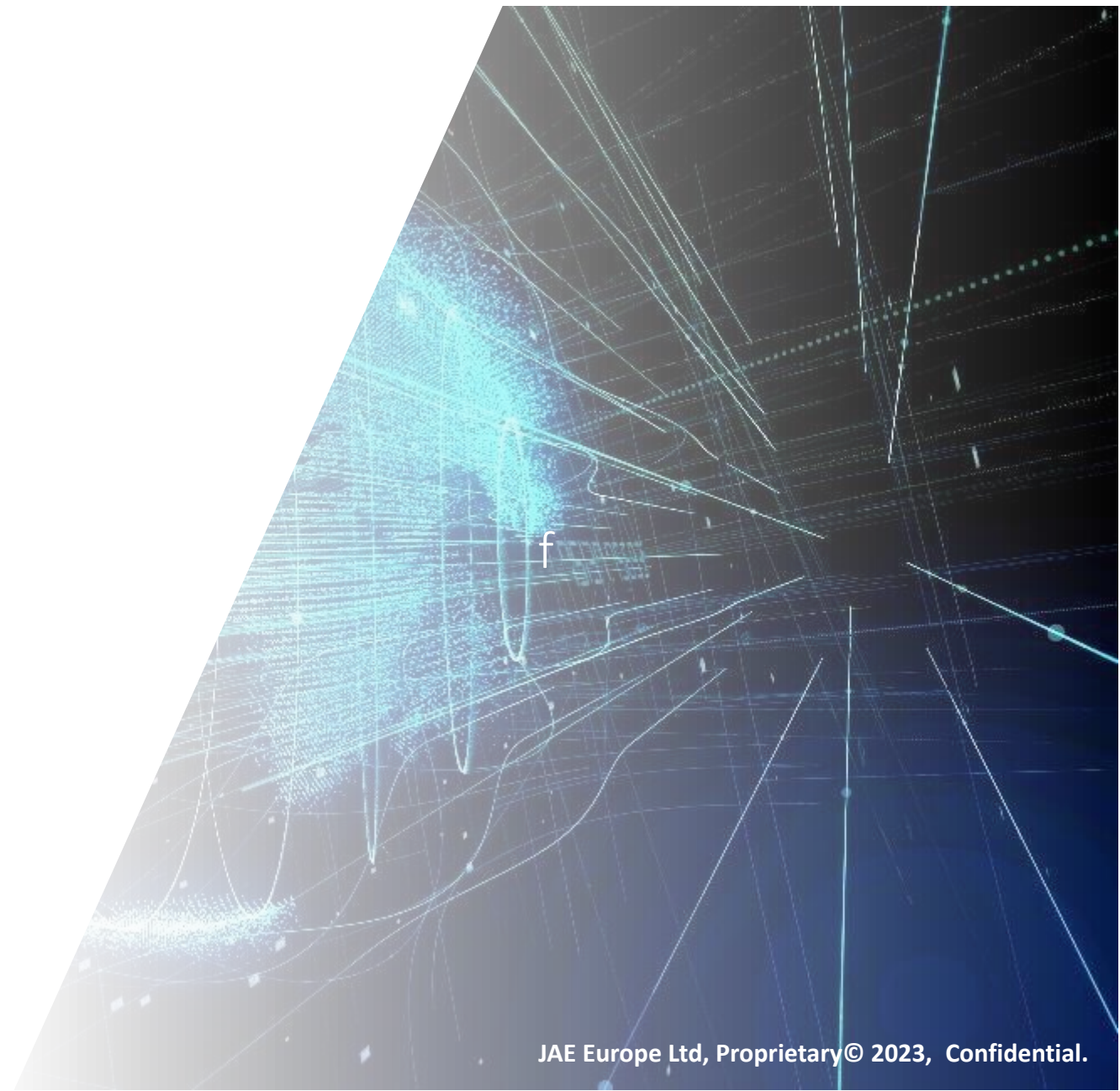


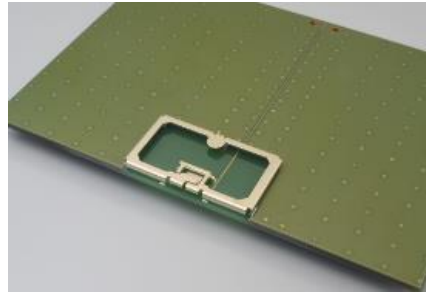
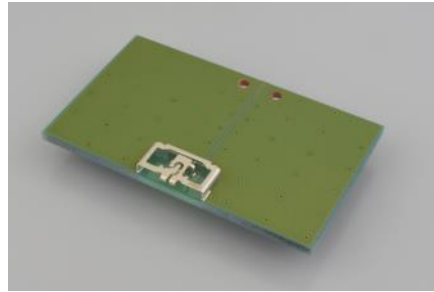
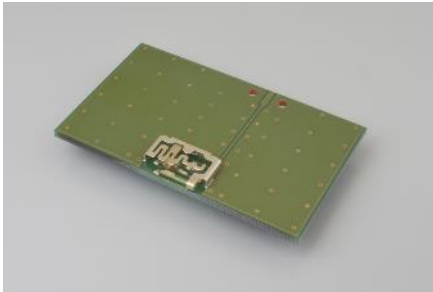
# AN01 SERIES

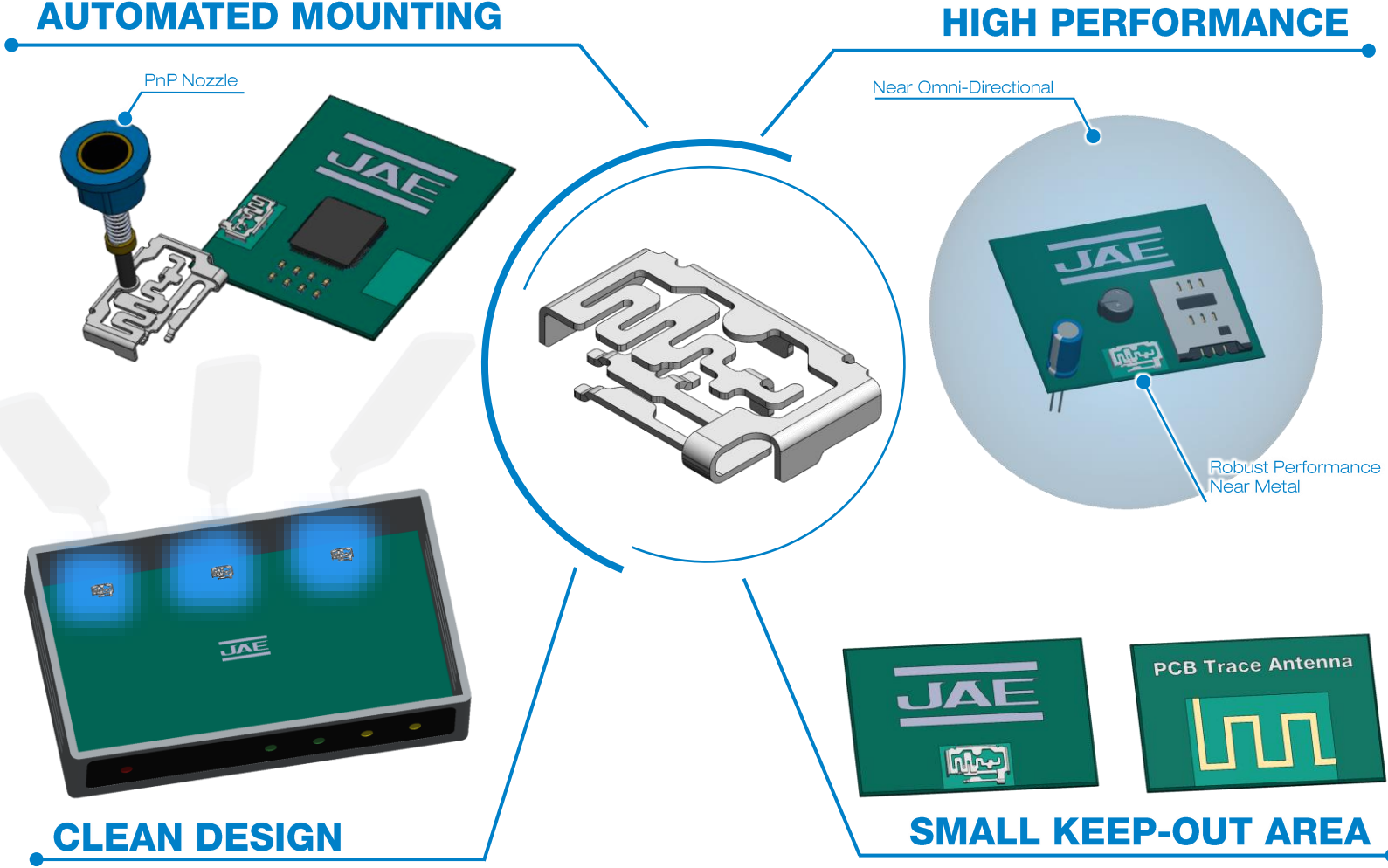
*High Performance Antenna*



# OVERVIEW

The AN01 Series is a lineup of compact, PCB mounted stamped antennas with very good performance even when placed in close proximity to other metal parts. Compared to conventional antennas, the radiation efficiency and directionality are also much improved due to the unique shape and split-ring resonator technology used. The metal antennas can be mounted to PCB's with standard pick and place equipment used for surface mount components to make assembly easier. Different antenna options are available depending on the application and frequency bands used.





# GENERAL SPECIFICATIONS



|                               |   |
|-------------------------------|---|
| Impedance                     | 50 $\Omega$   |
| Operating Temperature Range   | -40 °C to +125 °C   |
| Recommended Storage Condition | +5 to +40 °C<br>10 to 75% RH  |
| VSWR                          | 863 to 870 MHz: 2.5 max<br>902 to 928MHz: 2.5 max<br>2.4 to 2.5GHz: 2.0 max<br>5.15 to 5.85GHz: 2.5 max<br>5.925 to 7.125GHz: 2.5 max |
| Radiation Efficiency          | 863 to 870 MHz: 85% min<br>902 to 928MHz: 90% min<br>2.4 to 2.5GHz: 85% min<br>5.15 to 5.85GHz: 65% min<br>5.925 to 7.125GHz: 70% min |
| Reflow Compatible             | Yes   |

\*Antenna performance measured using JAE reference boards.  
\*Each antenna has different targeted frequency bands. Please review datasheet for detailed performance information of individual part numbers.



# AN01 VARIATIONS



| PRODUCT LINEUP   | Wi-Fi and Bluetooth<br>Antenna                     |  |   |  |   |  | Automotive Grade Wi-Fi and Bluetooth<br>Antenna (IATF16949 compliant) |  |   |  |   |  |
|------------------|--|--|---|--|---|--|---|--|---|--|---|--|
|                  | AN012400C00  |  | AN01DL25C00                                   |  | AN01ML27C00                                     |  | AN012400M00   |  | AN01DL25M00                                   |  | AN01ML27M00                                     |  |
| Part Number      | AN012400C00  |  | AN01DL25C00                                   |  | AN01ML27C00                                     |  | AN012400M00   |  | AN01DL25M00                                   |  | AN01ML27M00                                     |  |
| Appearance       |  |  |   |  |   |  |   |  |   |  |   |  |
| Frequency        | 2.4 GHz  |  | 2.4 GHz                                       |  | 5 GHz   |  | 2.4 GHz   |  | 2.4 GHz                                       |  | 5 GHz   |  |
| VSWR             | < 2  |  | < 2   |  | < 2.5   |  | < 2   |  | < 2   |  | < 2   |  |
| Efficiency       | > 85%  |  | > 85%   |  | > 65%   |  | > 85%   |  | > 85%   |  | > 70%   |  |
| Dimension        | Width: 12.5 mm<br>Depth: 7.25 mm<br>Height: 1.9 mm |  | Width: 13 mm<br>Depth: 8.8 mm<br>Height: 2 mm |  | Width: 13 mm<br>Depth: 10.15 mm<br>Height: 2 mm |  | Width: 12.5 mm<br>Depth: 7.25 mm<br>Height: 1.9 mm                    |  | Width: 13 mm<br>Depth: 8.8 mm<br>Height: 2 mm |  | Width: 13 mm<br>Depth: 10.15 mm<br>Height: 2 mm |  |
| Impedance        | 50Ω  |  |   |  |   |  | 50Ω   |  |   |  |   |  |
| Operating Temp.  | -40°C ~ +125°C                                     |  |   |  |   |  | -40°C ~ +125°C  |  |   |  |   |  |
| Material, Finish | Copper Alloy,<br>No Plating                        |  |   |  |   |  | Copper Alloy,<br>Silver Plating                                       |  |   |  |   |  |

| PRODUCT LINEUP   | Low-Power Wide Area<br>Antenna                   |  | Private LTE and Local 5G<br>Antenna              |  |  | Public LTE/5G<br>Antenna                           |   |  |                             |  |
|------------------|--|--|--|--|--|--|---|--|-----------------------------|--|
|                  | AN010860C00                                      |  | AN010920C00                                      |  | AN012400C00  | AN012400C00  | AN01DL25C00                                   | AN010860C00                                      |                             |  |
| Part Number      | AN010860C00                                      |  | AN010920C00                                      |  | AN012400C00  | AN012400C00  | AN01DL25C00                                   | AN010860C00                                      |                             |  |
| Appearance       |  |  |  |  |  |  |   |  |                             |  |
| Frequency        | 860 MHz  |  | 920 MHz  |  | 1.9 GHz  | 3.3 ~ 3.8 GHz                                      | 4.6 ~ 4.9 GHz                                 | 700 - 960 MHz                                    | 1710 - 2690 MHz             |  |
| VSWR             | < 2.5  |  | < 2.5  |  | < 2  | < 2.5  | < 2.5   | < 4  |                             |  |
| Efficiency       | > 85%  |  | > 90%  |  | > 80%  | > 75%  | > 65%   | > 50%  | > 70%                       |  |
| Dimension        | Width: 30 mm<br>Depth: 16.9 mm<br>Height: 1.9 mm |  | Width: 30 mm<br>Depth: 16.9 mm<br>Height: 1.9 mm |  | Width: 12.5 mm<br>Depth: 7.25 mm<br>Height: 1.9 mm | Width: 12.5 mm<br>Depth: 7.25 mm<br>Height: 1.9 mm | Width: 13 mm<br>Depth: 8.8 mm<br>Height: 2 mm | Width: 30 mm<br>Depth: 16.9 mm<br>Height: 1.9 mm |                             |  |
| Impedance        | 50Ω  |  |  |  |  |  | 50Ω   |  | 50Ω                         |  |
| Operating Temp.  | -40°C ~ +125°C                                   |  |  |  |  |  | -40°C ~ +125°C                                |  | -40°C ~ +125°C              |  |
| Material, Finish | Copper Alloy,<br>No Plating                      |  |  |  |  |  | Copper Alloy,<br>No Plating                   |  | Copper Alloy,<br>No Plating |  |

Note

-

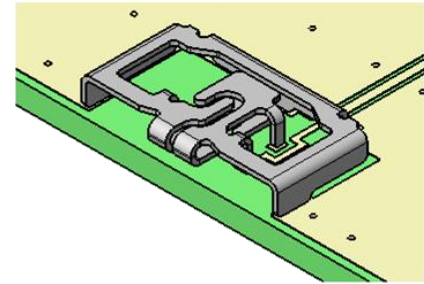
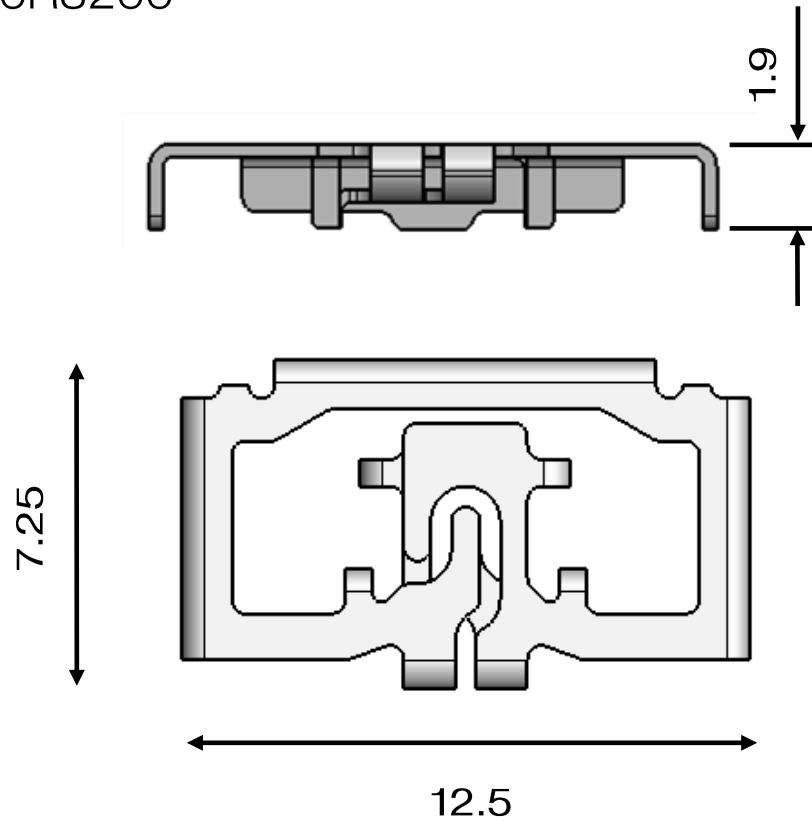
Supported by AN01 series and the frequency adjustment pattern on the board

# DIMENSIONS

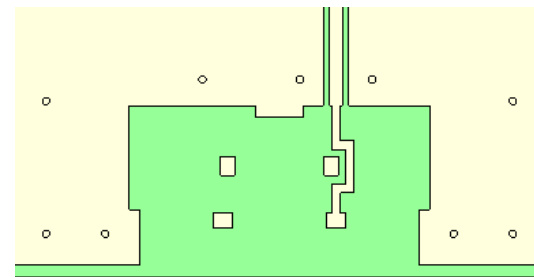


2.4-2.5GHz

AN012400M00R3200 /  
AN012400C00R3200



PCB Footprint



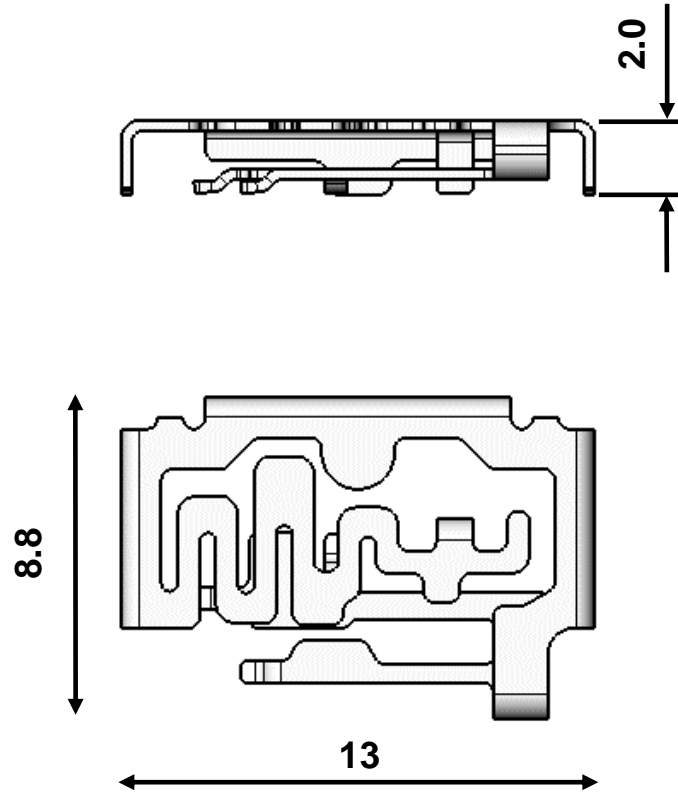
\*All units in mm

# DIMENSIONS

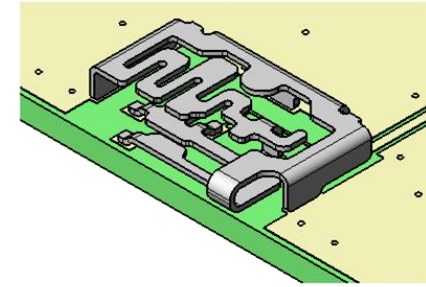
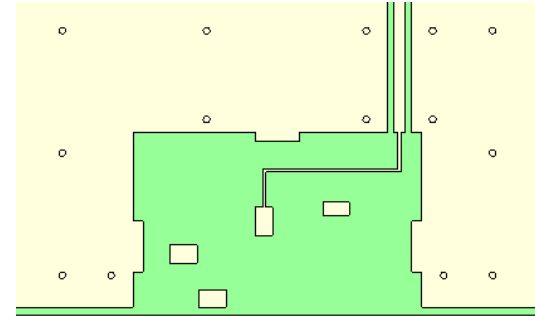


2.4-2.5GHz / 5.15-5.85GHz

AN01DL25M00R3200  
/ AN01DL25C00R3200



PCB Footprint

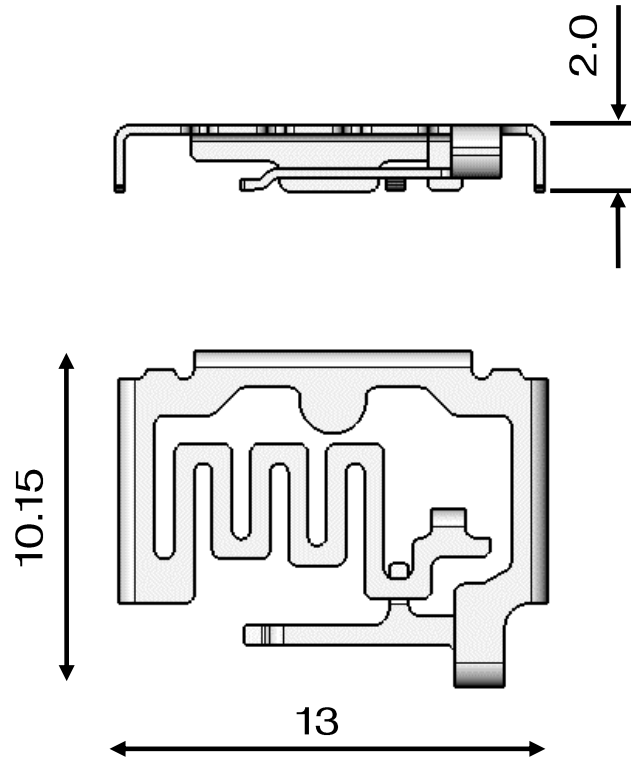


\*All units in mm

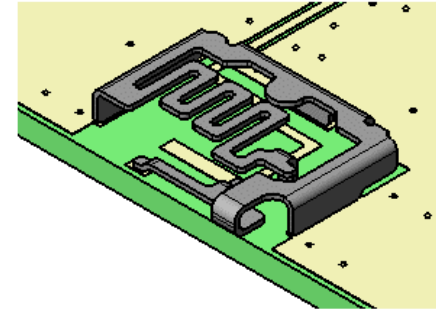
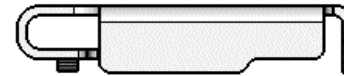
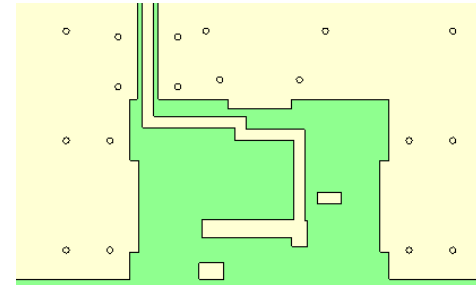
# DIMENSIONS

2.4-2.5GHz / 5.15-5.85GHz / 5.925-7.125GHz

AN01ML27M00R2400  
/ AN01ML27C00R2400



PCB Footprint

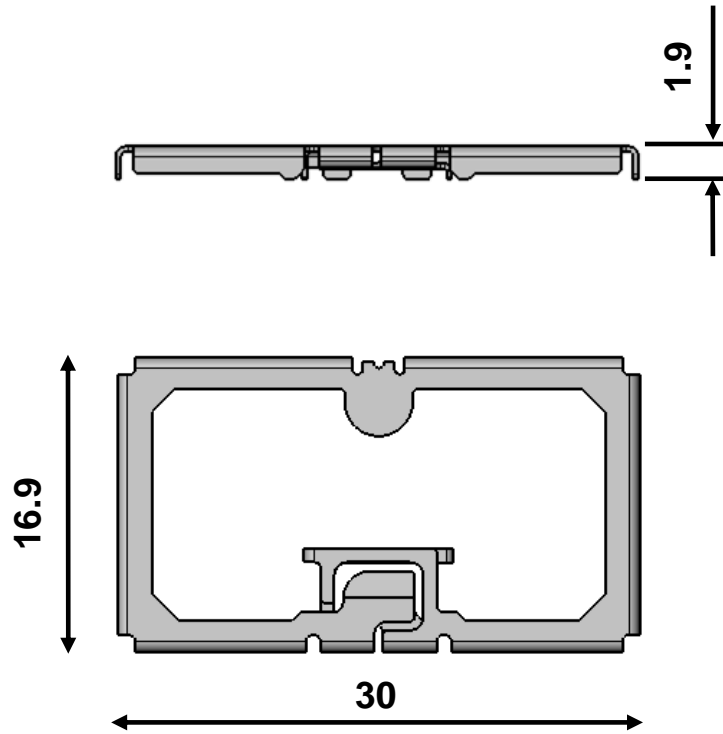


\*All units in mm

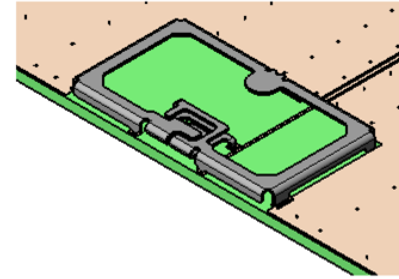
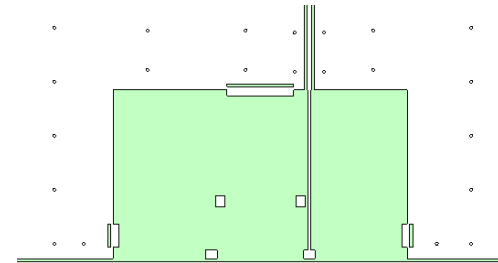
# DIMENSIONS

902-928MHz

AN010920C00R1700



PCB Footprint

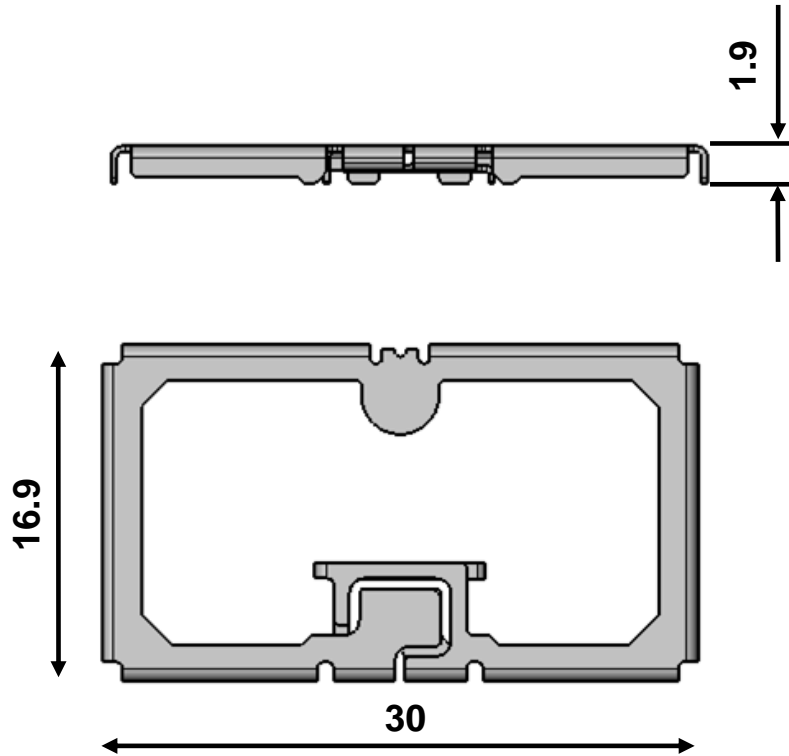
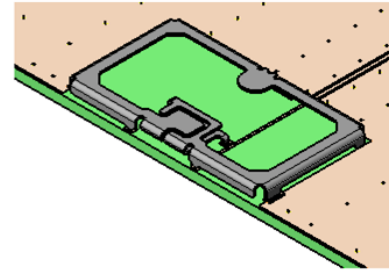


\*All units in mm

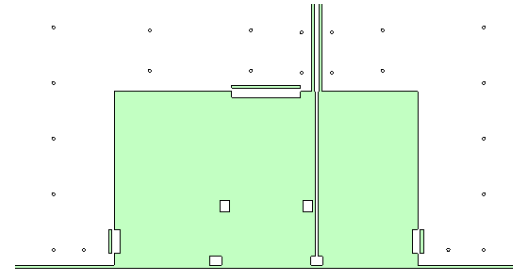
# DIMENSIONS

863-870MHz

AN010860C00R1700



PCB Footprint

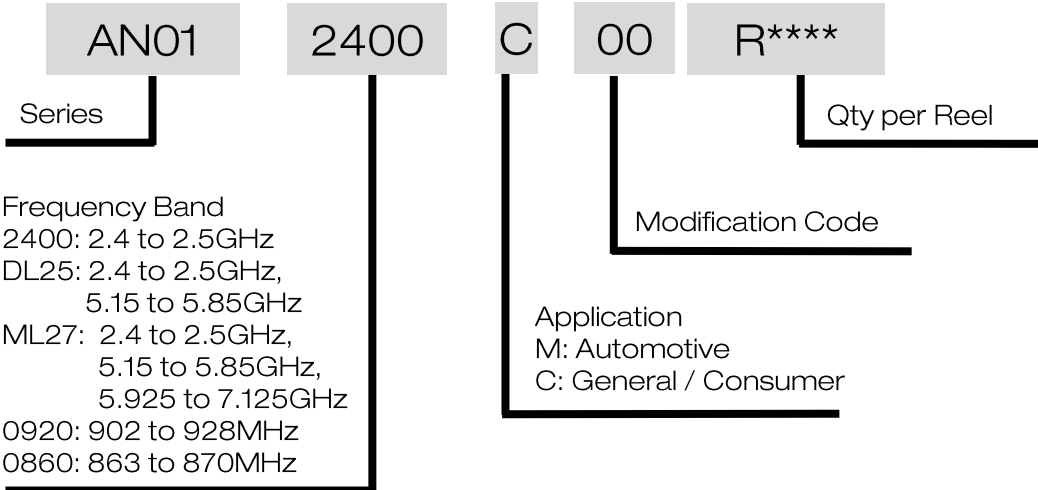


\*All units in mm

# ORDERING INFORMATION



| Part Number      | Description  | Application Notes |
|------------------|--|-------------------|
| AN012400M00R3200 | 2.4 to 2.5 GHz, Automotive                                       | GHT21-1311        |
| AN012400C00R3200 | 2.4 to 2.5 GHz   | GHT21-1311        |
| AN01DL25M00R3200 | 2.4 to 2.5 GHz, 5.15 to 5.85 GHz, Automotive                     | GHT21-1312        |
| AN01DL25C00R3200 | 2.4 to 2.5 GHz, 5.15 to 5.85 GHz                                 | GHT21-1312        |
| AN01ML27M00R2400 | 2.4 to 2.5 GHz, 5.15 to 5.85 GHz, 5.925 to 7.125 GHz, Automotive | GHT21-1258        |
| AN01ML27C00R2400 | 2.4 to 2.5 GHz, 5.15 to 5.85 GHz, 5.925 to 7.125 GHz             | GHT21-1258        |
| AN010920C00R1700 | 902 to 928 MHz   | GHT21-1313        |
| AN010860C00R1700 | 863 to 870 MHz   | GHT21-1259        |





***Thank you!***