

2.4/5 and 2.4GHz SMT Molded Interconnect Device (MID) Chip Antennas



Requiring no ground-plane clearance, Wi-Fi*-ready MID chip antennas enable wireless device makers to achieve higher level of product integration with fewer components and lower costs



(Left to Right) 2.4, 5 GHz (Series 146175) and 2.4GHz (Series 47948) SMT MID Chip Antennas

Applications

Telecommunication

- Wi-Fi* and Bluetooth† devices
- Wireless LANs (WLAN)
- IEEE 802.11b/g/n devices
- Headsets, Tablet PCs
- Internet of Things (IoT) devices

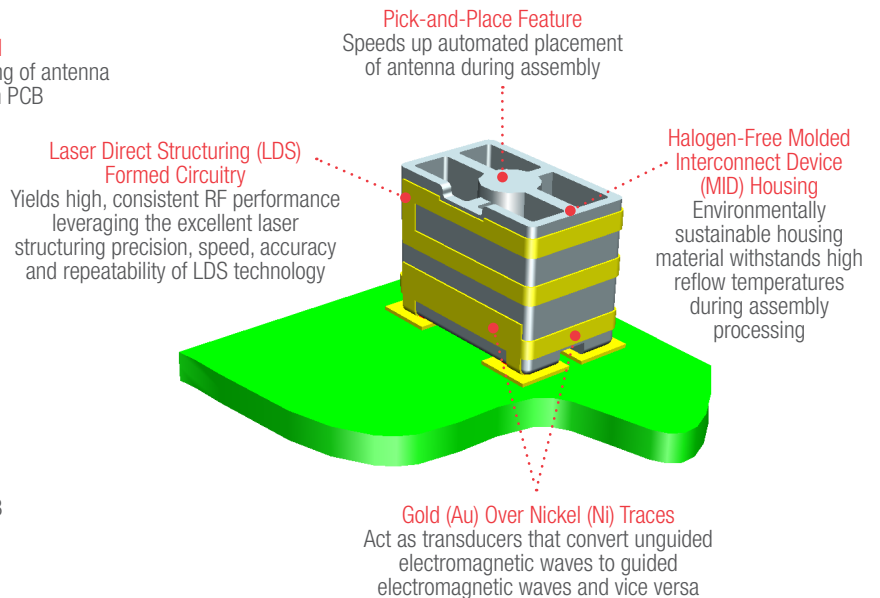
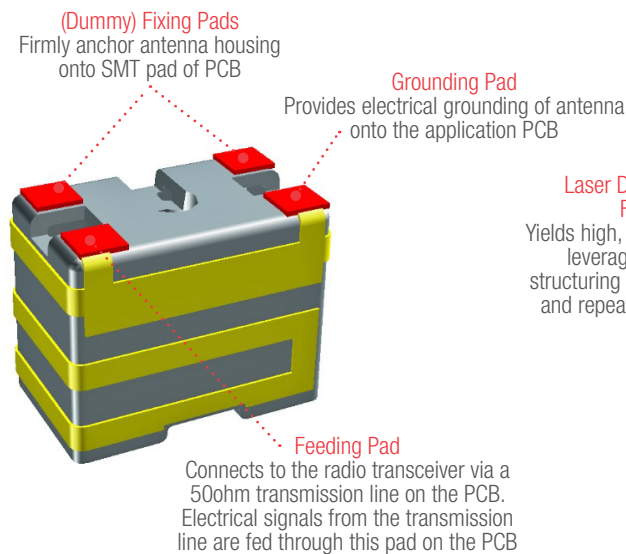
Industrial

- Machine-to-machine (M2M) communications
- Smart meters
- Lighting controls
- ZigBee‡ IEEE 802.15.4 devices

Consumer

- Small Office Home Office (SOHO) networks
- Smartphones and wearable devices

Features and Advantages (Series 146175)



*Wi-Fi is a registered trademark of the Wi-Fi Alliance

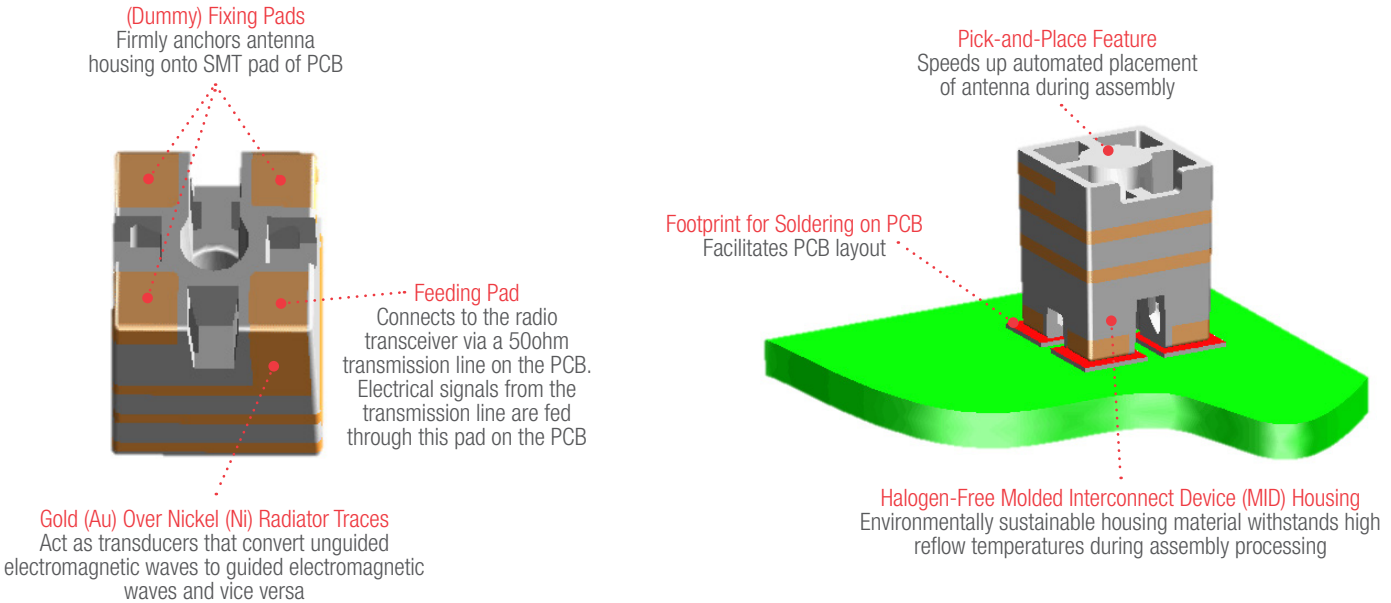
†Bluetooth is a registered trademark of Bluetooth SIG

‡ZIGBEE is a registered trademark of trademark of ZigBee Alliance

2.4/5 and 2.4GHz SMT Molded Interconnect Device (MID) Chip Antennas



Product Features and Advantages (Series 47948)



Series 146175 has a clearance zone limit of 6.0(L) by 4.0(W) while that of Series 47948 is 4.0(L) by 4.0mm (W).

Specifications

Reference Information

Packaging: Tape on reel
 Reference Platform: 100mm by 40mm by 1mm
 Designed In: mm
 RoHS: Yes
 Halogen Free: Yes
 Ground Clearance:
 6.0(L) by 4.0(W) for Series 146175;
 4.0(L) by 4.0mm (W) for Series 47948
 SMT Compatible: Yes

Electrical

RF Power (Watt): 2
 Return Loss - S11(dB): <-6
 Average Total Radiation Efficiency(%): >70
 Peak Gain (dBi): 3.0
 Polarization: Linear
 Input Impedance (Ohms): 50

Mechanical

Peeling Force (min.): 8N

Physical

Housing:
 LCP-LDS, Vectra E840ILDS, 40% mineral-filled
 LDS grade
 Flammability: UL 94V-0
 Plating:
 Hatched Area
 — 0.1µm Gold (Au) min. (47948)
 — 0.05µm Gold (Au) min. (146175)
 MID Plane — 2.0µm Nickel (Ni) min.
 Under-plating — 12µm Copper (Cu) min.
 Operating Temperature: -40 to +125°C

Ordering Information

Series No.	Frequency Band(s) (MHz)	Dimensions (mm)
146175	2400 to 2483.5 5150 to 5850	5.00(L) by 3.00(W) by 4.00 (H)
47948	2400 to 2483.5	3.00(L) by 3.00(W) by 4.00 (H)

www.molex.com/link/standard_antennas.html