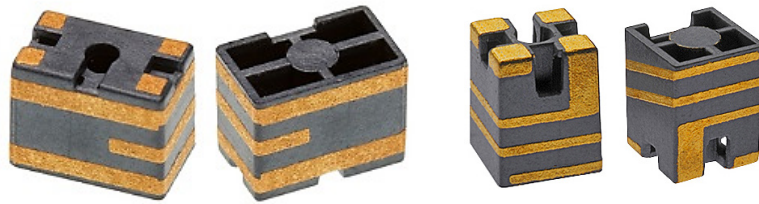


# 2.4/5 and 2.4GHz SMT Molded Interconnect Device (MID) Chip Antennas

**molex**<sup>®</sup>

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<sup>†</sup> devices
- Wireless LANs (WLAN)
- IEEE 802.11b/g/n devices
- Headsets, Tablet PCs
- Internet of Things (IoT) devices

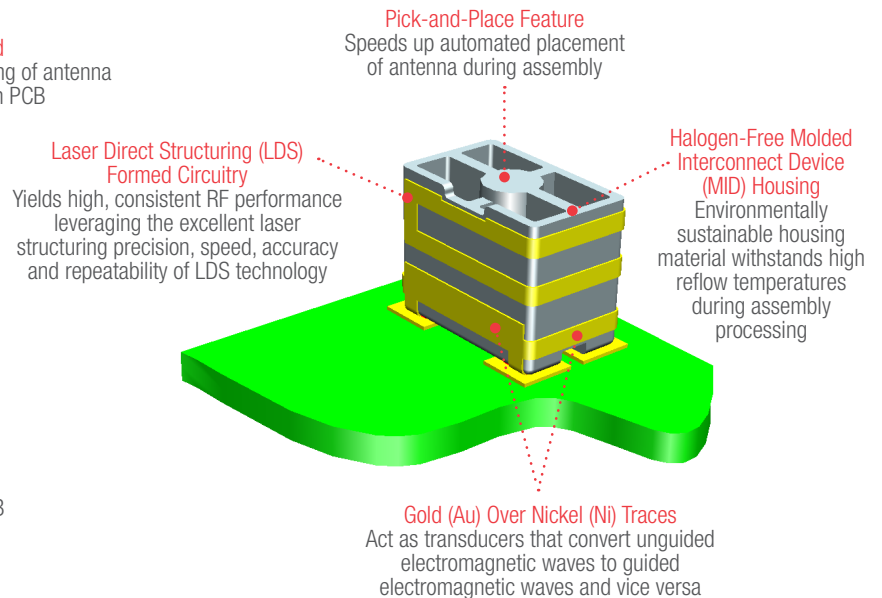
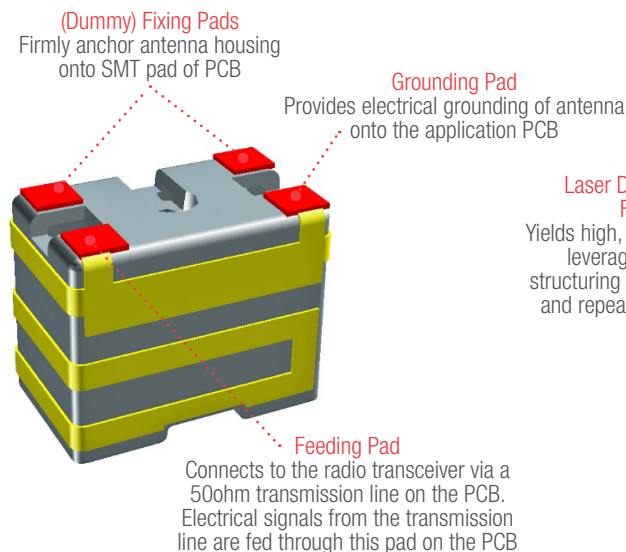
### Industrial

- Machine-to-machine (M2M) communications
- Smart meters
- Lighting controls
- ZigBee<sup>§</sup> 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

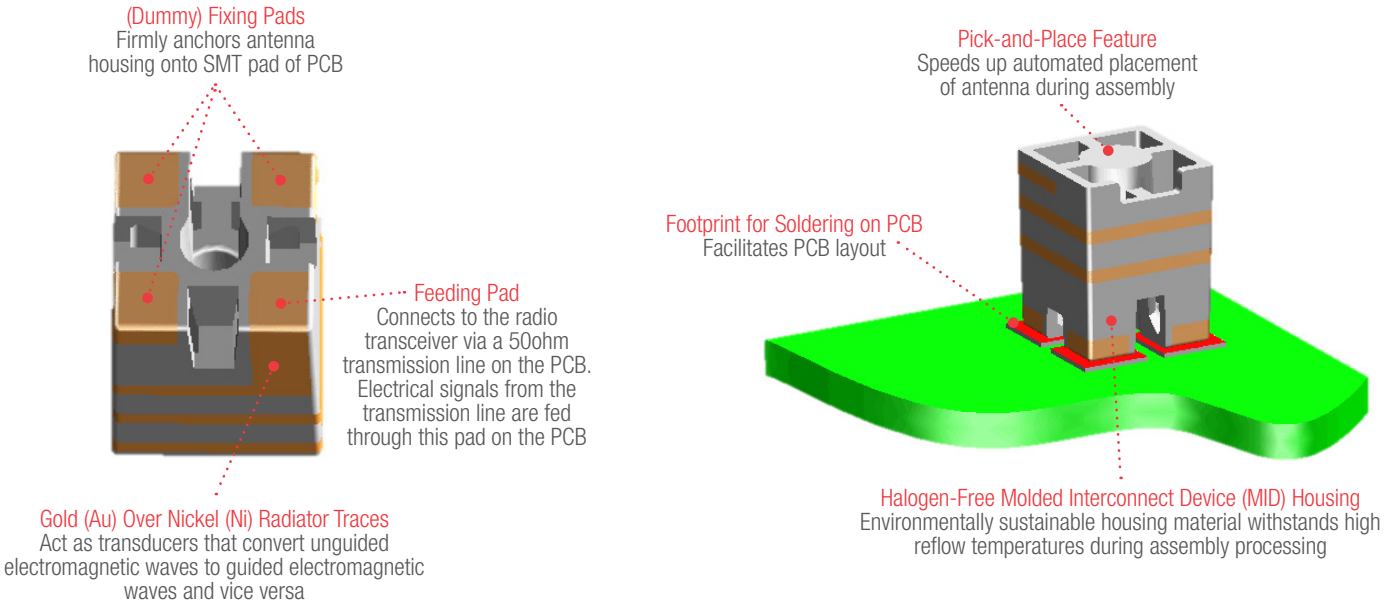
<sup>†</sup>Bluetooth is a registered trademark of Bluetooth SIG

<sup>§</sup>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)
<a href="#">146175</a>	2400 to 2483.5 5150 to 5850	5.00(L) by 3.00(W) by 4.00 (H)
<a href="#">47948</a>	2400 to 2483.5	3.00(L) by 3.00(W) by 4.00 (H)

[www.molex.com/link/standard\\_antennas.html](http://www.molex.com/link/standard_antennas.html)