

# Ultra Wideband (UWB) PCB Antenna with Balanced Transmission

**molex**<sup>®</sup>

Transmission-balanced antennas offer high radiation efficiency for better performance and easy installation without the concerns of ground-plane effects



## Features and Benefits

Balanced antenna with ground-plane-independent design	Reduces engineering resources and costs needed to mitigate PCB ground-induced radiation
High radiation efficiency antenna	Offers total efficiency values of 70% from 3.0GHz to 6.0GHz
Double-sided adhesive tape on antenna	Enables easy peel-and-stick mounting anywhere within the device casing
Coaxial cable to center-fed antenna attachment with over 18N of pull force	Ensures robust antenna reliability and connectivity to radio device
Wide selection of micro-coaxial cable lengths from 50 to 300mm	Extends connectivity for maximum design flexibility

The Series 146184 UWB-ready dual-band antennas come in cable length options of 50, 100, 150, 200, 250 and 300mm

## Applications

### Industrial applications

- Real-time location systems
- Scanners
- High-speed Data Exchanges

### Medical

- Patient-motion monitors
- Medicine storage monitors
- Medical imaging systems
- Underwater, space or sports-medicine monitors

### Automotive applications

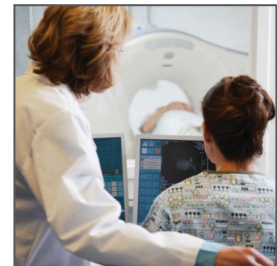
- Automatic target recognition systems

### Consumer electronics (CE) applications

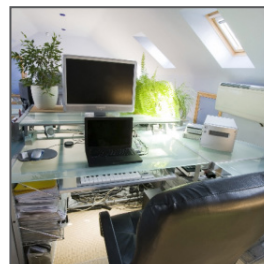
- Cameras
- Internet access and multimedia services
- Personal navigation devices
- Home networking and electronics



Scanners



Medical Imaging Systems



Home Networking and Electronics



Automatic Target Recognition Systems

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## Specifications

### REFERENCE INFORMATION

Packaging: PE film  
 Mates With: Surface-mount, micro-coaxial jack  
 (Part Number: 73412-0110)  
 Designed In: millimeters  
 RoHS: Yes  
 Halogen Free: Yes  
 Glow Wire Compliant: No

### ELECTRICAL SPECIFICATIONS (UWB) INCLUDE:

f\_start (MHz): 3000  
 f\_end (MHz): 6000  
 Return Loss S11 (dB): Refer to table  
 Total Eff. (dB): Refer to table  
 Peak Gain (dBi): Refer to table  
 Polarization: Linear  
 Input Impedance (Ohms): 50

### MECHANICAL

Pull Force: > 18 N

### PHYSICAL

Thickness: 0.31mm  
 Operating Temperature: -30 to +85°C

## Ordering Information

Order No.	Antenna Dimensions	Miniature Coaxial Cable Lengths (mm)	Operating Frequency Range (GHz)	Return Loss S11 (dB)	Peak Gain (dBi)	Total Radiation Efficiency (%)
<a href="#">146184-0050</a>	47.00 by 17.60mm	50	3 to 6	< -6	4.7	> 74
<a href="#">146184-0100</a>		100			4.5	> 70
<a href="#">146184-0150</a>		150			4.3	> 66
<a href="#">146184-0200</a>		200			4.0	> 62
<a href="#">146184-0250</a>		250			3.8	> 58
<a href="#">146184-0300</a>		300			3.5	> 55

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