Ultra Wideband (UWB) PCB Antenna with Balanced Transmission

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

**Features and Advantages**

- **Double-sided adhesive tape on antenna**
  Enables easy peel-and-stick mounting anywhere within the device casing

- **Ground plane-independent, dipole-style antenna**
  Offers balanced transmission throughout the entire connection regardless of cable length; 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

- **UFL-type Connector**
  Located at the tip of the antenna cable, this miniature connector mates with the application’s device radio

- **Ground plane independent and balanced dual band**
  Allows independent communications of vehicle directions

- **Highly compact (16.40 by 7.60mm)**
  Offers significant space savings while supporting high performance needs

- **Coaxial cable (50, 100, 150, 200, 250, 300mm options) to center-fed antenna with over 18N pull force**
  Ensures robust antenna reliability and connectivity to radio device; extends connectivity for maximum design flexibility

**Markets and 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

- **Medical Imaging Systems**
- **Home Networking and Electronics**
- **Automatic Target Recognition Systems**
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**Specifications**

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

**ELECTRICAL SPECIFICATIONS (UWB) INCLUDE:**
- RF Power (Watt): 2
- Return Loss: < -10 dB
- Average Total Radiation Efficiency (%): Refer to Product Specifications
- Peak Gain (dBi): Refer to Product Specifications
- Input Impedance (ohms): 50

**MECHANICAL**
- Pull Force: > 18 N (146184)
- Pull Force: > 8 N (211996)

**PHYSICAL**
- Thickness: 0.31mm
- Operating Temperature: -30 to +85°C (146184)
- -40 to +85°C (211996)

### Ordering Information

<table>
<thead>
<tr>
<th>Series No.</th>
<th>Material</th>
<th>Dimension</th>
<th>Operating Frequency (GHz)</th>
<th>Cable Lengths (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>146184</td>
<td>Flexi material</td>
<td>47.00 by 17.60</td>
<td>3.0 to 6.0</td>
<td>50, 100, 150, 200, 250, 300</td>
</tr>
<tr>
<td>211996</td>
<td></td>
<td>16.40 by 7.60 by 0.16</td>
<td>5.8 to 8.5</td>
<td></td>
</tr>
</tbody>
</table>