Communications & Power Industries
Electronic Warfare (EW)
Radar Products

HIGH POWER HELIX TWTs
COUPLED CAVITY TWTs
KLYSTRONS
GYROTRONS
POWER GRID DEVICES
TRANSMITTERS
POWER SUPPLIES
INTEGRATED MICROWAVE ASSEMBLIES
Communications & Power Industries EW Radar Products

High Power TWTs
- Available in 1 GHz to 40 GHz
- Available in pulsed and CW modes
- Wideband
- Moderate power up to 2.5 kW CW and 2.5 kW peak power

Coupled Cavity TWTs
- Up to 15% IBW
- Up to 150 kW
- Up to 35% duty
- Military environment qualified
- Efficient and compact
- Air and liquid cooled

Klystrons & Gyrotrons
- UHF to W band
- Up to 5 MW peak power
- Mobile, ground, and shipborne radar applications
- Directed energy

Power Grid Devices
- Over 600 power grid devices
  - Diodes
  - Triodes
  - Tetrodes
  - Pentodes
  - Planar Triodes (Power levels to 3 GHz)
- Sockets & hardware

For more electronic warfare products go to www.cpii.com
Electronic Warfare (EW) Radar Products

Designed to meet and exceed the most stringent military environments...

**Transmitters**
- Available in 1 GHz to 18 GHz
- Low noise figures
- Available in pulsed and CW modes

**Typical Operating Parameters**

<table>
<thead>
<tr>
<th>Band</th>
<th>Frequency (GHz)</th>
<th>Output Power</th>
<th>Duty Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low band</td>
<td>2 – 8 GHz</td>
<td>Up to 4 kW</td>
<td>Various</td>
</tr>
<tr>
<td>High band</td>
<td>8 – 18 GHz</td>
<td>Up to 8 kW</td>
<td>Various</td>
</tr>
<tr>
<td>I/J band</td>
<td>6 – 18 GHz</td>
<td>Up to 200 W</td>
<td>CW</td>
</tr>
</tbody>
</table>

**Power supplies**
- Available in:
  - Low band
  - High band
  - I/J band
- Military Environment Qualified
- Efficient

**Integrated Microwave Assemblies**
- Available in .5 - 50 GHz
- Fast switching time
- Fast recovery time
- Military environment qualified
- Available with or without coax interfaces
- Efficient
- Compact
- Long pulse
- High duty

Integral to the protection of warfighters worldwide by providing consistent reliable components for airborne, shipboard, ground, and decoy applications.

**APPLICATIONS:**
- Missile seekers
- Airborne radar and EW
- Unmanned aerial vehicles (UAV)
- Ground based systems
CPI EW Radar Product Platforms customized for your application.

### TWTs

**Typical Operating Parameters**

<table>
<thead>
<tr>
<th>Band</th>
<th>Frequency</th>
<th>Output Power</th>
<th>Duty Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>S/C Band</td>
<td>2–8 GHz</td>
<td>Up to 200 W</td>
<td>CW/Pulse</td>
</tr>
<tr>
<td>I/J Band</td>
<td>8–18 GHz</td>
<td>Up to 200 W</td>
<td>CW/Pulse</td>
</tr>
<tr>
<td>I/J Band</td>
<td>6–18 GHz</td>
<td>Up to 200 W</td>
<td>CW/Pulse</td>
</tr>
<tr>
<td>K-Band</td>
<td>18.5–26.5 GHz</td>
<td>Up to 50 W</td>
<td>CW/Pulse</td>
</tr>
<tr>
<td>Ka-Band</td>
<td>26.5–40.0 GHz</td>
<td>Up to 50 W</td>
<td>CW/Pulse</td>
</tr>
</tbody>
</table>

### Coupled Cavity TWTs

**Typical Operating Parameters**

<table>
<thead>
<tr>
<th>Band</th>
<th>Frequency</th>
<th>Output Power</th>
<th>Duty Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-Band</td>
<td>2.1-3.1 GHz</td>
<td>150 kW Pk</td>
<td>Various</td>
</tr>
<tr>
<td>C-Band</td>
<td>5.25–5.90 GHz</td>
<td>Up to 200 kW Pk</td>
<td>Various</td>
</tr>
<tr>
<td>X-Band</td>
<td>8.4–11.8 GHz</td>
<td>Up to 120 kW Pk</td>
<td>Various</td>
</tr>
<tr>
<td>Ku-Band</td>
<td>15.7–17.7 GHz</td>
<td>Up to 60 kW</td>
<td>Various</td>
</tr>
<tr>
<td>Ka-Band</td>
<td>34.5–36.0 GHz</td>
<td>Up to 1.1 kW</td>
<td>Various</td>
</tr>
</tbody>
</table>

### Klystrons & Gyrotrons

**Typical Operating Parameters**

<table>
<thead>
<tr>
<th>Band</th>
<th>Freq. (GHz)</th>
<th>Output Power</th>
<th>Duty Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>UHF band</td>
<td>Various</td>
<td>Up to 3.0 MW</td>
<td>Various</td>
</tr>
<tr>
<td>S-band</td>
<td>Various</td>
<td>Up to 5.0 MW</td>
<td>Various</td>
</tr>
<tr>
<td>C-band</td>
<td>Various</td>
<td>Up to 3.0 MW</td>
<td>Various</td>
</tr>
<tr>
<td>X-band</td>
<td>Various</td>
<td>Up to 5.0 MW</td>
<td>Various</td>
</tr>
<tr>
<td>Ku-band</td>
<td>Various</td>
<td>Up to 30 kW</td>
<td>Various</td>
</tr>
<tr>
<td>W-band</td>
<td>Various</td>
<td>Up to 2.5 MW</td>
<td>Various</td>
</tr>
</tbody>
</table>

### Power Supplies

**Typical Operating Parameters**

<table>
<thead>
<tr>
<th>Frequency (GHz)</th>
<th>Peak Power</th>
<th>Operating Voltage</th>
<th>Operating Temperatures</th>
<th>Altitude</th>
<th>VED Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-Band</td>
<td>800 Watts</td>
<td>2750 V</td>
<td>-45 to +88°C</td>
<td>70,000 ft</td>
<td>Magnetron</td>
</tr>
<tr>
<td>I/J-Band</td>
<td>50-100 Watts</td>
<td>4400 V (cathode)</td>
<td>-30 to +60°C</td>
<td>10,000 ft</td>
<td>Helix TWT</td>
</tr>
<tr>
<td>Ku-Band</td>
<td>400 Watts (pulsed)</td>
<td>28 VDC</td>
<td>-40 to +70°C</td>
<td>36,000 ft</td>
<td>Booster Helix TWT</td>
</tr>
<tr>
<td>Low band</td>
<td>400-1000 Watts</td>
<td>4.4 kV</td>
<td>-30 to +80°C</td>
<td>50,000 ft</td>
<td>Helix TWT</td>
</tr>
</tbody>
</table>

Power levels and frequencies are dependent on the TWT selected.

With a history of producing high power, high quality products, we can help you with your EW radar. Contact us at ElectronDevices@cpii.com or at call us at +1 978-922-6000.