Communications & Power Industries
Weather Radar Products

KLYSTRONS
750 kW - 1 MW S-Band
200 kW - 1 MW C-Band

MAGNETRONS
1 MW S-Band
250-500 kW C-Band
250 kW X-Band

KLYSTRON TRANSMITTERS
1 MW S-Band
1 MW C-Band
250 kW C-Band

MAGNETRON TRANSMITTERS
1 MW C-Band
350 kW C-Band
350 kW Outdoor Unit (C-Band)
350 kW Outdoor Unit (X-Band)

RECEIVER PROTECTORS & LIMITERS
S-Band
C-Band
X-Band
Weather Radar Products

Communications & Power Industries
Weather Radar Products

Klystrons
- S-Band
- Excellent frequency stability
- Mechanically tunable frequency
- Air cooled
- Peak power up to 1 MW
- C-Band
- Excellent frequency stability
- Fixed tuned to 50 MHz IB
- Air cooled
- Peak power up to 250 kW

Magnetrons
- S, C, and X-Band Magnetrons
- Excellent frequency stability
- Mechanically Tunable frequency
- Air cooled anode
- Peak power up to 1 MW
- C-Band
- Excellent frequency stability
- Fixed tuned to 50 MHz IB
- Air cooled
- Peak power up to 250 kW

Receiver Protectors and Limiters
- S, C, and X-Bands
- High peak power
- Low output leakage
- Superior broadband isolation
- Fast recovery time
- Low noise figures

Radar is critical for today’s weather forecasting especially for storms near heavily populated areas. These radars assist meteorologists by detecting changes in local weather patterns. They also offer awareness of oncoming weather patterns at a great distance that might affect the local area.

CPI is the world’s largest producer of coaxial magnetrons, klystrons and receiver protectors. With our experience and product breadth, we can support most new and existing weather radar systems.

We are unique when compared to other suppliers as we can deliver individual microwave components or a complete transmitter. Each transmitter provides a wide range of output power options along with custom user interfaces and remote networking capability.

All CPI components and transmitters are rigorously tested to ensure a long and reliable life that minimizes down time and maximizes customer satisfaction.

At Communications & Power Industries, we provide high quality microwave products supporting weather radar with either klystron or magnetron based technology.
Weather Radar Products

Check out all our weather radar products at www.cpii.com

Klystron Weather Radar Transmitters
- S, C, and X-Band transmitters
- Excellent stability & performance
- Tunable
- Up to 1 MW peak output power
- Forced air cooled
- Touch screen with local/remote control
- Ethernet connectivity for remote monitoring & control

Magnetron Weather Radar Transmitters
- S, C, and X-Band transmitters
- Sheltered or outdoor models
- Forced air cooled
- Touch screen with local/remote control
- Ethernet connectivity for remote monitoring & control
- Excellent Doppler performance
- Mechanically tunable frequency
## Typical Operating Parameters

### Klystrons

<table>
<thead>
<tr>
<th>Band</th>
<th>Frequency (GHz)</th>
<th>Peak Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-Band</td>
<td>2.7 to 2.9</td>
<td>800 kW</td>
</tr>
<tr>
<td>C-Band</td>
<td>5.45 to 5.65</td>
<td>200 kW to 1 MW</td>
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</tbody>
</table>

### Magnetrons

<table>
<thead>
<tr>
<th>Band</th>
<th>Frequency (GHz)</th>
<th>Peak Power</th>
<th>Duty Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-Band</td>
<td>2.7 to 2.9</td>
<td>800 kW</td>
<td>Various</td>
</tr>
<tr>
<td>C-Band</td>
<td>5.2 to 5.9</td>
<td>200 kW to 1 MW</td>
<td>Various</td>
</tr>
<tr>
<td>X-Band</td>
<td>8.5 to 9.6</td>
<td>250 kW</td>
<td>Various</td>
</tr>
</tbody>
</table>

### Transmitters

<table>
<thead>
<tr>
<th>Band</th>
<th>Frequency (GHz)</th>
<th>Peak Power (kW)</th>
<th>Average Power (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-Band</td>
<td>2.7 to 3.0</td>
<td>850 to 1000</td>
<td>2</td>
</tr>
<tr>
<td>C-Band</td>
<td>5.6 to 5.9</td>
<td>250 to 1000</td>
<td>0.6 to 2</td>
</tr>
<tr>
<td>X-Band</td>
<td>9.4 to 9.6</td>
<td>300</td>
<td>0.3</td>
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</table>

### Receiver Protectors and Limiters

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Peak Power</th>
<th>Average Power</th>
<th>Insertion Loss</th>
<th>Recovery Time</th>
<th>Flat Leak</th>
<th>Spike Leak</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-Band</td>
<td>Up to 1.25 MW</td>
<td>Up to 10 kW</td>
<td>&lt;0.8 dB</td>
<td>&lt;1 µs</td>
<td>&lt;50 mW</td>
<td>&lt;250 mW</td>
</tr>
<tr>
<td>C-Band</td>
<td>Up to 1.25 MW</td>
<td>Up to 900 kW</td>
<td>&lt;1.0 dB</td>
<td>&lt;1 µs</td>
<td>&lt;50 mW</td>
<td>&lt;250 mW</td>
</tr>
<tr>
<td>X-Band</td>
<td>Up to 300 kW</td>
<td>Up to 300 kW</td>
<td>&lt;1.0 dB</td>
<td>&lt;1 µs</td>
<td>&lt;50 mW</td>
<td>&lt;250 mW</td>
</tr>
</tbody>
</table>

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