ATC 1206 LPF Series
High Performance LGA
Thin Film Low Pass Filter

Features:

• Sharp Cut-off Response
• Excellent Stopband rejection
• Characteristic Impedance: 50Ω
• No External Matching
• Low Insertion Loss
• Power Rating: 12 W
• Low Profile LGA EIA Package
• Pb Free / RoHS Compliant

ATC’s 1206 HP LPF Series High Performance Thin Film LGA Low Pass Filters offer superb high frequency performance in a low profile EIA style package. The 1206 HP LPF Series offers sharp cut-off response, excellent stopband rejection, low passband insertion loss with 50 ohm input and output impedance characteristics. Their superb performance makes them well suited for the most demanding wireless frequency applications.

The LPF 1206 filter Series is fully tested to meet or exceed electrical, environmental and mechanical specifications. They are supplied in tape and reel making them fully compatible with high speed automated pick-and-place manufacturing.

Applications:

• Wireless Communications (Cellular and PCS)
• Wireless LAN’s
• Public Safety Radio (P25)
• LTE
• ISM
• Global Navigation Satellite Systems (GNSS)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Passband (MHz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPF1206HP0512</td>
<td>0 to 512</td>
</tr>
<tr>
<td>LPF1206HP0700</td>
<td>0 to 700</td>
</tr>
<tr>
<td>LPF1206HP6000</td>
<td>0 to 6000</td>
</tr>
</tbody>
</table>
ATC 1206 HIGH PERFORMANCE LOW PASS FILTER

**Dimensions**

**LPF1206HP0512 & LPF1206HP0700**

<table>
<thead>
<tr>
<th>Size (EIA)</th>
<th>Length (L)</th>
<th>Width (W)</th>
<th>Thickness (T)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1206</td>
<td>0.122 ± 0.004 (3.10 ± 0.10)</td>
<td>0.063 ± 0.004 (1.60 ± 0.10)</td>
<td>0.024 ± 0.012 (0.60 ± 0.30)</td>
</tr>
</tbody>
</table>

**Recommended Pad Layout Dimensions**

- A1: 0.075 ± 0.004 (1.9 ± 0.1)
- A2: 0.02 ± 0.004 (0.5 ± 0.1)
- B1, B2: 0.010 ± 0.004 (0.25 ± 0.1)

**Terminals and Orientation in Tape (Top View)**

IN | OUT | GND | GND | GND | GND

**Mechanical Configurations**

**LPF1206HP6000**

<table>
<thead>
<tr>
<th>Size (EIA)</th>
<th>Length (L)</th>
<th>Width (W)</th>
<th>Thickness (T)</th>
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<td>0.063 ± 0.004 (1.60 ± 0.10)</td>
<td>0.024 ± 0.012 (0.60 ± 0.30)</td>
</tr>
</tbody>
</table>

**Recommended Pad Layout Dimensions**

- H1: 0.002 ± 0.002 (0.06 ± 0.06)
- H2: 0.022 ± 0.004 (0.56 ± 0.10)
- S1: 0.024 ± 0.004 (0.61 ± 0.10)
- S2: 0.002 ± 0.002 (0.06 ± 0.06)

**Terminals and Orientation in Tape (Top View)**

IN | OUT | GND | GND | GND | GND

**Mechanical Configurations**

**LPF1206HP6000**

- A1: 0.075 ± 0.004 (1.9 ± 0.1)
- A2: 0.02 ± 0.004 (0.5 ± 0.1)
- B1, B2: 0.010 ± 0.004 (0.25 ± 0.1)
### Electrical Characteristics

<table>
<thead>
<tr>
<th>LPF1206HP0512</th>
<th>LPF1206HP0700</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cutoff Frequency</strong></td>
<td>512 MHz</td>
</tr>
<tr>
<td><strong>Rejection @ 720 MHz</strong></td>
<td>-35 dB</td>
</tr>
<tr>
<td><strong>Insertion Loss</strong></td>
<td>0.8 dB</td>
</tr>
<tr>
<td><strong>Return Loss</strong></td>
<td>20 dB</td>
</tr>
<tr>
<td><strong>Power Handling</strong></td>
<td>12 W, CW</td>
</tr>
<tr>
<td><strong>Impedance</strong></td>
<td>50 ohms</td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>-40 to + 85 ºC</td>
</tr>
</tbody>
</table>

<table>
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<tbody>
<tr>
<td><strong>Cutoff Frequency</strong></td>
</tr>
<tr>
<td><strong>Rejection @ 8400 MHz</strong></td>
</tr>
<tr>
<td><strong>Insertion Loss</strong></td>
</tr>
<tr>
<td><strong>Return Loss</strong></td>
</tr>
<tr>
<td><strong>Power Handling</strong></td>
</tr>
<tr>
<td><strong>Impedance</strong></td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
</tr>
</tbody>
</table>

### ATC Part Number Code

- **LPF** | Low Pass Filter
- **1206** | Case Size: 4 digits
- **HP** | High Performance
- **0700** | Passband (MHz)
- **L** | Packaging
- **T** | Termination
- **T** | Style:

- **Packaging**: T = Tape and Reel, 7” Reel std. Quantity: 100, 500 and 3000 pc. std.
- **Termination**: T = RoHS Compliant Tin over Nickel Barrier termination
- **Style**: L = LGA

The above part number refers to a Low Pass Filter, (EIA case size 1206), High Performance, Passband DC to 700 MHz, LGA (L) Style, Tin Termination

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ATC accepts orders for our parts using designations with or without the “ATC” prefix. Both methods of defining the part number are equivalent, i.e., part numbers referenced with the “ATC” prefix are interchangeable to parts referenced without the “ATC” prefix. Customers are free to use either in specifying or procuring parts from American Technical Ceramics.

For additional information and catalogs contact your ATC representative or call direct at +1-631-622-4700.

Consult factory for additional performance data.
ATC LPF1206HP0512
Passband 0 to 512 MHz

Magnitude (dB)

Frequency (MHz)

ATC LPF1206HP0700
Passband 0 to 700 MHz

Magnitude (dB)

Frequency (MHz)