ARRIS RF Amplifier
MDA-100*
1 GHz Multi-Dwelling Amplifier

FEATURES

• Enables high forward bandwidth up to 1003 MHz
• Supports return bandwidth with optional 85 MHz return
• Maximize installation locations with space-saving compact housing
• Simplify installation with elimination of RF accessories for alignment
• Flexible powering in MDU installations with included 100 to 240 VAC MAINs power supply

PRODUCT OVERVIEW

The ARRIS MDA-100 Multi-Dwelling Amplifier platform meets the needs of today’s expanding broadband communication networks. Designed for HFC network installations in apartment buildings, condominiums, and other multiple-dwelling housing units, this high-gain, compact indoor distribution amplifier is available with a bandwidth of up to 1003 MHz for improved system performance. To save space, technicians can easily wall-mount the MDA-100 amplifier using the housing’s external mounting brackets.

The single-output amplifier features variable attenuator and equalizer facilities for greater flexibility when adjusting the amplifier. The unit includes standard F-type input and output connector ports, as well as an active return path for use in today’s advanced networks. The MDA-100 also features a return path, three-state attenuator to help minimize cable modem output levels. The mains-powered MDA-100 amplifier features a field-replaceable, auto-ranging switching power supply, which can accept input voltages from 100 to 240 V at frequencies of 50 or 60 Hz without adjustment.
# MDA-100 Multi-Dwelling Amplifier

## SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>Forward</th>
<th>Return</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operational Bandwidth</strong></td>
<td>54 to 1003 MHz</td>
<td>5 to 85 MHz</td>
</tr>
<tr>
<td><strong>Bandwidth Splits</strong></td>
<td>K (54 – 1003 MHz)</td>
<td>K (5 – 42 MHz)</td>
</tr>
<tr>
<td></td>
<td>N (104 – 1003 MHz)</td>
<td>N (5 – 85 MHz)</td>
</tr>
<tr>
<td><strong>Typical Full Gain</strong></td>
<td>37 dB</td>
<td>Gain: 27 dB</td>
</tr>
<tr>
<td><strong>Noise Figure</strong></td>
<td>8 dB</td>
<td>9 dB</td>
</tr>
<tr>
<td><strong>Input Attenuator</strong></td>
<td>0 ~ 18 dB</td>
<td>0 ~ 18 dB</td>
</tr>
<tr>
<td><strong>Input Equalizer</strong></td>
<td>0 ~ 18 dB</td>
<td>0 ~ 15 dB</td>
</tr>
<tr>
<td><strong>Tri-State Mid-Stage EQ</strong></td>
<td>0/7/15 dB</td>
<td>Tri-State Attenuator: 0/6/12 dB</td>
</tr>
<tr>
<td><strong>Flatness</strong></td>
<td>± 1.0</td>
<td>± 0.75</td>
</tr>
<tr>
<td><strong>RF Output Return Loss</strong></td>
<td>14 dB</td>
<td>14 dB</td>
</tr>
<tr>
<td><strong>RF Output Test Points</strong></td>
<td>20 ± 1.2 dB</td>
<td>20 ± 1.2 dB</td>
</tr>
<tr>
<td><strong>RF Output Impedence</strong></td>
<td>75 Ω</td>
<td>75 Ω</td>
</tr>
<tr>
<td><strong>Reference Output Level</strong></td>
<td>48 dBmV*</td>
<td>*Note: NTSC 79 channels with</td>
</tr>
<tr>
<td>(Composite Triple Beat (CTB))</td>
<td>≤ -66 dBc*</td>
<td>QAM to 1 GHz, output level</td>
</tr>
<tr>
<td>(Cross Slope Optimization (CSO))</td>
<td>≤ -66 dBc*</td>
<td>48 dBmV (virtual) at 1 GHz, 15 dB tilt</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>&lt;2 lb</td>
<td></td>
</tr>
<tr>
<td><strong>Mounting</strong></td>
<td>Wall</td>
<td></td>
</tr>
<tr>
<td><strong>Connector</strong></td>
<td>F-type Female</td>
<td></td>
</tr>
<tr>
<td><strong>Water/Dust Ingress Rating</strong></td>
<td>IP54</td>
<td></td>
</tr>
<tr>
<td><strong>Power Consumption</strong></td>
<td>15 W</td>
<td></td>
</tr>
<tr>
<td><strong>Surge</strong></td>
<td>(IEEE C62.41, 1.2/50us Combination Wave, ±6kV)</td>
<td></td>
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<tr>
<td><strong>Operating Temperature Range</strong></td>
<td>–20°C to +55°C</td>
<td></td>
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<tr>
<td><strong>Supply voltage, MAINS powered</strong></td>
<td>100 – 240 VAC, 50 ~ 60 Hz</td>
<td></td>
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<tr>
<td><strong>RoHS Compliant</strong></td>
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1 GHz MDA Ordering Guide

Block Diagram

<table>
<thead>
<tr>
<th>Key</th>
<th>Bandpass Split</th>
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<tbody>
<tr>
<td>100K</td>
<td>5-42 MHz/54-1003 MHz</td>
</tr>
<tr>
<td>100N</td>
<td>5-85 MHz/104-1003 MHz</td>
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Block Diagram

**RELATED PRODUCTS**

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<td>Optical Patch Cords</td>
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<tr>
<td>Power Supplies</td>
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<tr>
<td>Optical Passives</td>
</tr>
<tr>
<td>Control Module</td>
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<tr>
<td>Installation Services</td>
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</table>

**Customer Care**

Contact Customer Care for product information and sales:
- United States: 866-36-ARRIS
- International: +1-678-473-5656

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