Passive VoIP MoCA Amplifier, unity forward/reverse, 85 MHz return, nine ports, with power inserter

Product Classification

Product Type
RF amplifier

Product Brand
HomeConnect®

General Specifications

Device Type
All ports down amplifier | Two-way subscriber amplifier | VoIP subscriber amplifier

Application
Indoor | Outdoor

Patent Number
7912431 (expires 8/2/2025)

Video Ports, quantity
8

Video Standard
NTSC

VoIP Passive Ports, quantity
1

Electrical Specifications

Distortion Performance (CCN), minimum
60 -dBc

Distortion Performance (CSO), minimum
65 -dBc

Distortion Performance (CTB), minimum
73 -dBc

Distortion Performance (DSO), minimum
55 -dBc

Distortion Performance (DTO), minimum
60 -dBc

Distortion Performance (X-Mod), minimum
73 -dB

Group Delay, 2nd channel, maximum
30 ns

Group Delay, channel 3, maximum
15 ns

Group Delay, channel 4–6, maximum
5 ns

Group Delay, reverse, maximum
25 ns

Hum Modulation, minimum
-75 dB
Impedance
Operating Current at Voltage
Shielding Effectiveness, minimum
Surge Capability Test Method
Surge Capability Waveform

Electrical Specifications, Isolation

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isolation at Frequency Band, output to output, minimum</td>
<td>25 dB @ 5–1002 MHz</td>
</tr>
<tr>
<td>Isolation at Frequency Band, output to VoIP, minimum</td>
<td>25 dB @ 5–1002 MHz</td>
</tr>
<tr>
<td>Isolation at Frequency Band, power port to RF output, minimum</td>
<td>60 dB @ 5–1002 MHz</td>
</tr>
<tr>
<td>Isolation at Frequency Band, VoIP to output, minimum</td>
<td>25 dB @ 5–1002 MHz</td>
</tr>
</tbody>
</table>

Electrical Specifications, MoCA

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Band Rejection, output to input, minimum</td>
<td>40 dB</td>
</tr>
<tr>
<td>Band Rejection, VOIP to input, minimum</td>
<td>35 dB</td>
</tr>
<tr>
<td>Insertion Loss, output to output, maximum</td>
<td>35 dB</td>
</tr>
<tr>
<td>Insertion Loss, output to VOIP, maximum</td>
<td>35 dB</td>
</tr>
<tr>
<td>Insertion Loss, VOIP to output, maximum</td>
<td>35 dB</td>
</tr>
</tbody>
</table>

Operating Frequency Band
1125 – 1675 MHz

Electrical Specifications, Rx (Uplink)

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flatness</td>
<td>±1.0 dB</td>
</tr>
<tr>
<td>Insertion Loss, video ports</td>
<td>0 dB</td>
</tr>
<tr>
<td>Return Loss, minimum</td>
<td>20 dB</td>
</tr>
<tr>
<td>Noise Figure, maximum</td>
<td>18 dB</td>
</tr>
</tbody>
</table>

Operating Frequency Band
5 – 85 MHz

Electrical Specifications, Tx (Downlink)

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flatness</td>
<td>±1.0 dB</td>
</tr>
<tr>
<td>Gain, video ports</td>
<td>0 dB</td>
</tr>
<tr>
<td>Noise Figure, maximum</td>
<td>10.5 dB</td>
</tr>
</tbody>
</table>

Operating Frequency Band
102 – 1002 MHz

Return Loss, minimum
20 dB
Electrical Specifications, VoIP

Insertion Loss Rx at Frequency Band, VoIP ports, maximum
4.3 dB @ 5–42 MHz

Insertion Loss Tx at Frequency Band, VoIP ports, maximum
4.5 dB @ 54–550 MHz | 6.0 dB @ 550-1002 MHz

Return Loss at Frequency Band, VoIP ports, minimum
20 dB @ 5–1002 MHz

Environmental Specifications

Operating Temperature
-40 °C to +60 °C (-40 °F to +140 °F)

Safety Standard
SCTE

Packaging and Weights

Height, packed
190.5 mm | 7.5 in

Width, packed
247.65 mm | 9.75 in

Length, packed
508 mm | 20 in

Carton Quantity
20

Included
Power adapter | Power inserter

Weight, gross
9.072 kg | 20 lb

Regulatory Compliance/Certifications

Agency Classification
CHINA-ROHS Below maximum concentration value
ISO 9001:2015 Designed, manufactured and/or distributed under this quality management system
REACH-SVHC Compliant as per SVHC revision on www.commscope.com/ProductCompliance
ROHS Compliant

Included Products

CSAPAE612V500 — Power Adapter for Subscriber Amplifiers, ac/dc, 12 V, 500 mA, EISA VI
CSAPAE615V500 — Power Adapter for Subscriber Amplifiers, ac/dc, 15 V, 500 mA, EISA VI
CSHMPI — HomeConnect® Power Inserter for Subscriber Amplifiers with High Isolation
CSHMPIE — HomeConnect® Power Inserter for Subscriber Amplifiers with High Isolation

* Footnotes
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
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<tr>
<td>Distortion Performance (CCN), minimum</td>
<td>CCN—w Composite Carrier to Noise; 77 analog, 110 digital—256 QAM channel loading</td>
</tr>
<tr>
<td>Distortion Performance (CSO), minimum</td>
<td>CSO—w Composite Second Order; 77 analog, 110 digital—256 QAM channel loading</td>
</tr>
<tr>
<td>Distortion Performance (CTB), minimum</td>
<td>CTB—w Composite Triple Beat; 77 analog, 110 digital—256 QAM channel loading</td>
</tr>
<tr>
<td>Distortion Performance (DSO), minimum</td>
<td>DSO—w Discrete Second Order; 13 MHz and 19 MHz, 55 dBmV per carrier loading</td>
</tr>
<tr>
<td>Distortion Performance (DTO), minimum</td>
<td>DTO—w Discrete Third Order; 13 MHz and 19 MHz, 55 dBmV per carrier loading</td>
</tr>
<tr>
<td>Distortion Performance (X-Mod), minimum</td>
<td>X-Mod—i Cross Modulation; 77 analog, 110 digital—256 QAM channel loading</td>
</tr>
<tr>
<td>Group Delay, 2nd channel, maximum</td>
<td>Channel (3.58 MHz Span)</td>
</tr>
<tr>
<td>Group Delay, channel 3, maximum</td>
<td>Channel (3.58 MHz Span)</td>
</tr>
<tr>
<td>Group Delay, channel 4–6, maximum</td>
<td>Channel 2 (3.58 MHz Span)</td>
</tr>
<tr>
<td>Noise Figure, maximum</td>
<td>Total amplifier contribution</td>
</tr>
</tbody>
</table>