

## MDA1036x COMPACT DISTRIBUTION AMPLIFIER



- Downstream frequency range up to 1006 MHz
- Upstream frequency range up to 204 MHz
- Cost-effective solution

### GENERAL DESCRIPTION

A member of our popular MDA compact product family suited to the DOCSIS 3.0 frequency band. Beyond its extended bandwidth the device provides all the advantages of the predecessor type, like the low power consumption, the high output RF level and the very easy alignment. Further the return path chain of the amplifier contains a universal expansion socket, which can take in e.g. an auxiliary filter.

### TECHNICAL SPECIFICATIONS

#### Forward path RF parameters

|   |                            |
|---|----------------------------|
| Amplifier type  | GaAs-PD MMIC               |
| Gain [dB]   | 36±1                       |
| Frequency range [MHz]   | 47...1006 <sup>(1)</sup>   |
| Equaliser breakpoint frequency [MHz]                                | 862, 1006 <sup>(2)</sup>   |
| RF attenuator range [dB]  | 0...22 <sup>(3)</sup>      |
| RF equaliser range [dB]   | 0...16 <sup>(3)</sup>      |
| Flatness [dB]   | ±0.75                      |
| Return loss (40MHz -1.5dB/octave) [dB]                              | >18                        |
| RF testpoint attenuation [dB]                                       | 30±1                       |
| CTB [dB]  | -69 <sup>(4)</sup>         |
| CSO [dB]  | -68 <sup>(4)</sup>         |
| Noise-to-power ratio (NPR) maximum / Dynamic range of NPR > 42 [dB] | 54 / 36 <sup>(5) (6)</sup> |
| Noise figure [dB]   | 5                          |

*Specifications are subject to change without notice!*

**Reverse path RF parameters**

|  |                       |
|--|-----------------------|
| Gain [dB]                                    | 20±1                  |
| Frequency range [MHz]                        | 5...204               |
| Diplex filter [MHz]                          | 65/85, 204/258        |
| RF attenuator range [dB]                     | 0...22 <sup>(3)</sup> |
| RF equaliser range [dB]                      | 0...12 <sup>(3)</sup> |
| Flatness [dB]                                | ±0.75                 |
| Input return loss (40MHz -1.5dB/octave) [dB] | >18                   |
| RF testpoint attenuation [dB]                | 30±1                  |

**General parameters**

**MDA1036R-xxx MDA1036L-xxx**

|                                    |                      |                 |
|------------------------------------|----------------------|-----------------|
| RF connector                       | PG11, (5/8", F)      |                 |
| Power supply voltage [VAC]         | ~ 30...65, □ 35...90 | ~ 230±20% 50 Hz |
| Maximum power consumption [W]      | 10                   | 11              |
| Maximum current feed-through [A]   | 10                   | -               |
| Hum modulation [dB]                | 70                   | -               |
| Screening factor [dB]              | 80                   |                 |
| Degree of protection               | IP65                 |                 |
| Operational temperature range [°C] | -40...+60            |                 |
| Dimensions [mm]                    | 202x146x80           |                 |
| Weight [kg]                        | 1.5                  |                 |

(1) Lower frequency limit is defined by the diplexer

(2) Breakpoint is defined by the mounted equaliser modules (only in case of MDA1036x-B type!)

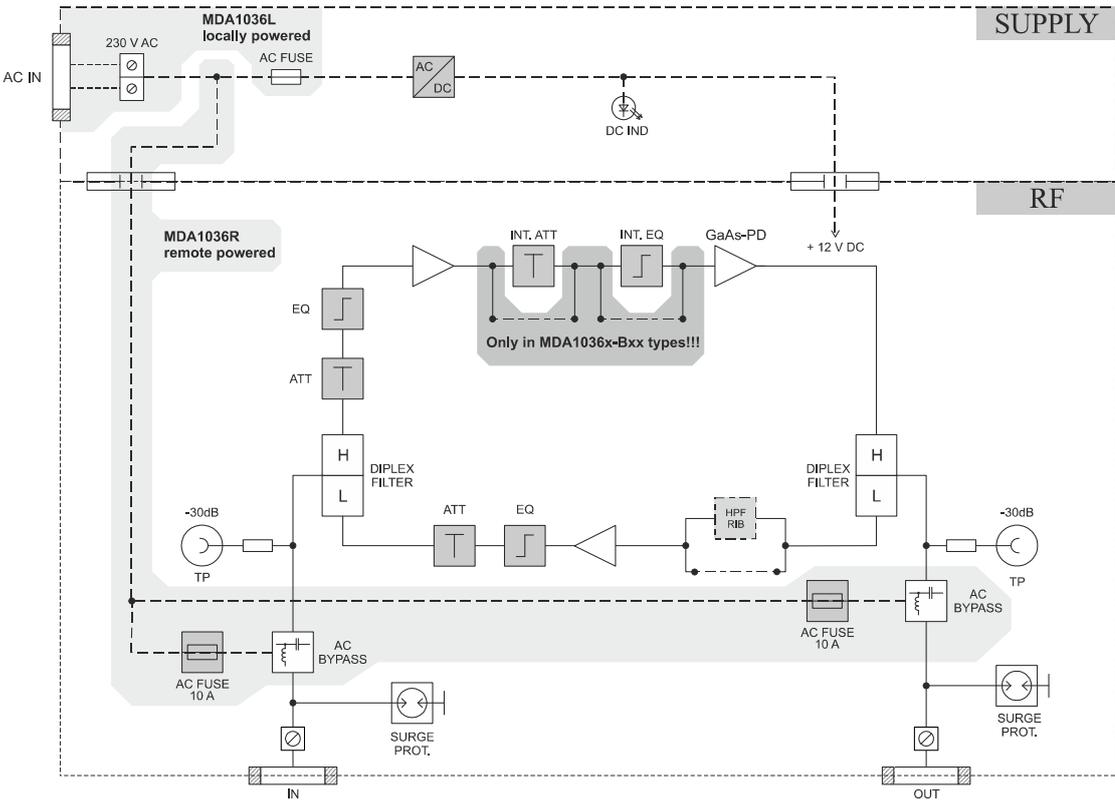
(3) Type A: 1 dB steps; Type B: 2 dB steps (in case of attenuators 1 dB steps are possible between 0 dB and 5 dB)

(4) 44 dBmV, flat tilt, 77 channels

(5) Measured with flat full spectrum load between 85 and 862 MHz

(6) NPR<sub>max</sub> at TCP = 51 dBmV

BLOCK DIAGRAM



Specifications are subject to change without notice!

ORDERING INFORMATION \_\_\_\_\_

**M D A 1 0 3 6 X - X X X**

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| Power supply type |                 |
|-------------------|-----------------|
| L                 | Local powering  |
| R                 | Remote powering |

↓

| Type of the alignment modules |                 |
|-------------------------------|-----------------|
| A                             | JXP modules     |
| B                             | COMTECH modules |

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| Type of the diplex filter |  |
|---------------------------|--|
| 65                        | Built-in 65/85MHz diplex filter (type A)   |
| 204                       | Built-in 204/258MHz diplex filter (type B) |

| Option                                 | Required modules  | Ordering codes |
|--|-------------------|----------------|
| Coax connecting option                 | PG11-5/8" adaptor | PG11-5/8       |
| Coax connecting option                 | PG11-F adaptor    | PG11-F         |
| Return path module option (HPF filter) | 1pc HPF20         | HPF20          |

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