

CA1024

FORWARD AND RETURN PATH RF AMPLIFIER FOR 2G6

Application

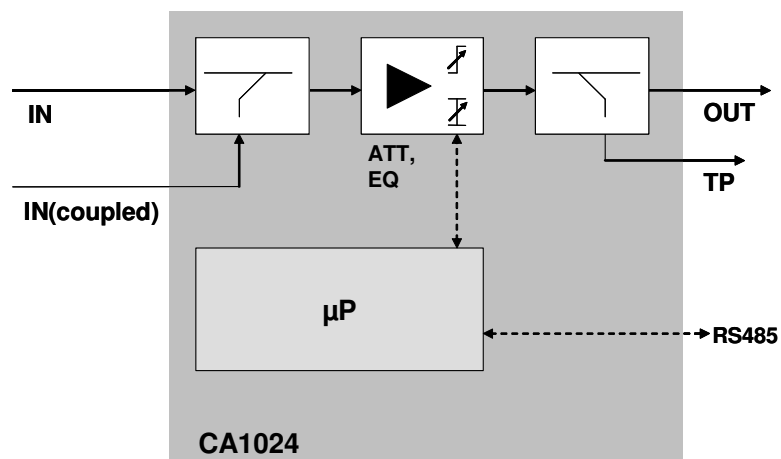
- ▶ Flexible forward/return RF amplifier with high linearity for headend and hub locations
- ▶ Amplification of RF signals in the range 5 to 1000 MHz

Features

- ▶ Extremely wide frequency range (5 ... 1000 MHz)
- ▶ Main (broadcast) and coupled (narrowcast) input port
- ▶ RF gain, slope and AGC mode software configurable
- ▶ RF power detection
- ▶ Output test port
- ▶ Standby mode with reduced power consumption



Block Diagram



Specifications subject to change without notice - DBE_2G6CA1024_1_260307.doc

Technical Data

Frequency range	5 ... 1000 MHz
Frequency response	
5 ... 7 MHz	-1.5 ... +0.8 dB
7 ... 47 MHz	±0.8 dB
47 ... 606 MHz	±0.5 dB
606 ... 870 MHz	±0.8 dB
870 ... 1000 MHz	±1.5 dB
Input level of coupled input	+14 dB referred to main input port
Gain range	0 ... 24 dB (adjustable via software)
Slope range	0 ... 16 dB (adjustable via software)
AGC mode	AGC on / AGC off (adjustable via software)
Impedance	75 Ω
Return loss	
5 ... 65 MHz	≥18 dB
47 ... 1000 MHz	≥18 dB (@47MHz) – 1 dB/oct. (minimum 14 dB)
Noise figure (max. gain, slope 0 dB)	
5 ... 870 MHz	≤ 8 dB (typical 6.5 dB)
870 ... 1000 MHz	≤ 9 dB
Output level for Cenelec 42 channel allocation (CSO ≥ 60 dB, CTB ≥ 60 dB)	106 dBμV, flat (no slope)
Nonlinearity for BK450 channel allocation at 93 dBμV, flat (34x PAL at 93dBμV, 14x 256QAM at -6dB, 36x FM at -4dB)	CSO ≥ 74 dB CTB ≥ 78 dB
CXM for Cenelec 42 channel allocation at 106 dBμV (24dB gain, low-noise mode)	≥ 62 dB (according C method of German Telecom) ≥ 56 dB (according Cenelec)
Test port attenuation	20 dB ±1 dB referred to output port
Power consumption	
Operation	≤ 9 W
Standby	≤ 1 W
Dimensions	Module width 1 slot for 2G6 chassis
Weight	~1.2 kg