AIT1000

PicoTuner™

Complete Integrated Data Tuner

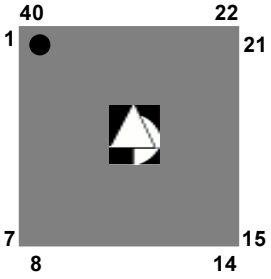
Product Brief Rev. 0

FEATURES

- Complete Integrated RF Tuner Front End
- Up Converter, Down Converter & Dual PLL Integrated in Package
- No External Components
- No Tuning Required
- -35 dB Gain
- -82 dBc Phase Noise
- Better than -50dBc Image Rejection
- 3w Serial Programming
- Small Footprint, 22mm x 22mm
- Single +5V Supply
- DOCSIS Compliant
- 40 Lead Package
- -40°C to + 85°C

APPLICATIONS

- Cable Modems
- CATV Data Tuner
- Set Top Box
- Home Gateway
- PC Add-on Card or Motherboard



AIT1000M

40 Pin 22x22mm package

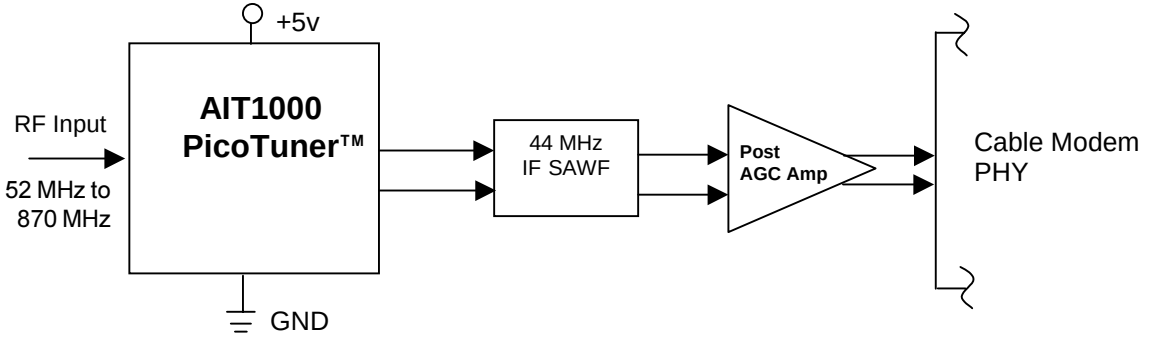
-40°C to + 85°C

Description

The AIT1000 PicoTuner™ is a complete integrated data tuner that includes all the necessary circuitry for an RF tuner front end for cable modem applications. The AIT1000 combines GaAs and Silicon CMOS technology to provide an up converter, down converter, dual synthesizer, SAW filter, DC-DC converter, input filter, tuning circuits, and all passive components to facilitate a complete Dual Conversion Tuner architecture.

The AIT1000 is supplied in a 40 lead package and requires a single +5v supply. It is well suited for applications that require a low cost, small size complete RF tuner IC without compromising performance.

Tuner Downstream Path



OPERATING CONDITIONS				
PARAMETER	**MIN**	**TYP**	**MAX**	**UNIT**
Operating Voltage Range	+4.75	+5.0	+5.25	V
Operating Temperature Range	-40		85	^{0}C
O/P Power Level (Uncombined)		-21		dBm
I/P Power Level	-15		+15	dBmV
DC ELECTRICAL CHARACTERISTICS				
PARAMETER	**MIN**	**TYP**	**MAX**	**UNIT**
Supply Current		350		mA
Power Dissipation		1.75		W
AC ELECTRICAL CHARACTERISTICS (V_{CC}=+5.0V, T_A=25^{0}C)				
PARAMETER	**MIN**	**TYP**	**MAX**	**UNIT**
Phase Noise (10kHz offset)		-85	-82	dBc/Hz
Noise Figure		8.5	9.5	dB
Conversion Gain (Uncombined)	32	35	42	dB
AGC Range	30		35	dB
Image Rejection		-54	-50	dBc
CTB		-57	-53	dBc
CSO		-57	-53	dBc
XMOD		-52	-48	dBc

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WARNING

ANADIGICS products are not intended for use in life support appliances, devices, or systems. Use of an ANADIGICS product in any such application without written consent is prohibited.