



M I C R O T U N E ®

RF SILICON AND SUBSYSTEMS SOLUTIONS
FOR BROADBAND COMMUNICATIONS AND AUTOMOTIVE ELECTRONICS

MT2266 SINGLE-CHIP DUAL-BAND LOW-POWER DVB-T / DVB-H TUNER

PRODUCT BRIEF

The MT2266 is a direct conversion low-power single-chip broadband tuner for VHF Band III and UHF applications.



MT2266 Single Chip Dual-Band Tuner

PRELIMINARY

The MicroTuner™ MT2266 is a direct conversion, low-power, single-chip broadband tuner optimized for UHF and VHF Band III DVB-T and DVB-H applications. It includes all active circuitry required to implement the complete RF-to-Baseband tuner function.

The MT2266 has been developed to give manufacturers design flexibility and low operating power, at low cost, without compromising high performance.

The MT2266 is capable of receiving UHF band and VHF Band III frequencies, enabling manufacturers to target low-power portable and low-power PCTV devices.

The combination of power management, choice of architecture, and Microtune's patents-pending ClearTune filtering technology enables the MT2266 to operate at 325 mW.

High-volume consumer markets demand low-cost products. The MT2266 was designed for low cost. The single-ended direct conversion architecture eliminates the need for baluns at the RF inputs and costly IF SAW filters. To further reduce cost and power, the UHF and VHF Band III variable gain low noise amplifiers (VLNA) and the voltage controlled oscillators (VCO) are fully integrated.

The transmission environment for mobile TV is extremely hostile. Microtune's unique patents-pending ClearTune filtering technology and the excellent performance of MT2266 will help to ensure that end users will have a superior mobile TV experience without picture interruption in the middle of tall buildings or hostile radio environments.

APPLICATIONS

- Portable DVB-T receivers
- PC-TV
- Notebook computer
- Dual-standard (DVB-T/DVB-H) media platforms
- Personal multimedia consoles
- PDA TV
- General DVB-T TV applications

FEATURES

- Fully compliant with NorDig Unified V1.0.2 and MBRAI specifications
- Integrated variable gain low noise amplifier (VLNA)
- Integrated voltage controlled oscillator (VCO)
- No RF input balun required
- No IF SAW filters required
- Low cost BOM
- 470 MHz to 862 MHz UHF frequency range
- 174 MHz to 230 MHz VHF band III frequency range
- 2.7V power supply
- Multiple power-down options
- Direct demodulator interface
- Minimal external components
- No tunable parts required
- Low phase noise for excellent COFDM performance
- One general purpose output controllable via serial control interface
- Operation with a crystal range of 8-38.4 MHz
- Crystal Oscillator LVDS or CMOS output for driving a DVB-T demodulator
- Small 6mm x 6mm 40-pin QFN package

M I C R O T U N E

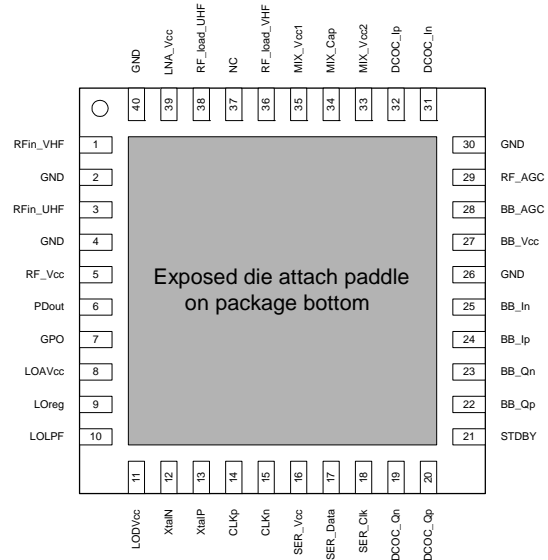
RECOMMENDED OPERATING CONDITIONS

PARAMETER	MIN	TYP	MAX	UNIT
UHF input frequency range	470		862	MHz
VHF III input frequency range ¹	174		230	MHz
Supply voltage	2.6	2.7	3.0	V
Supply voltage ripple			15	mV
Operating junction temperature	0		100	°C

1. Will also support operation at other VHF III frequency ranges with external components change.

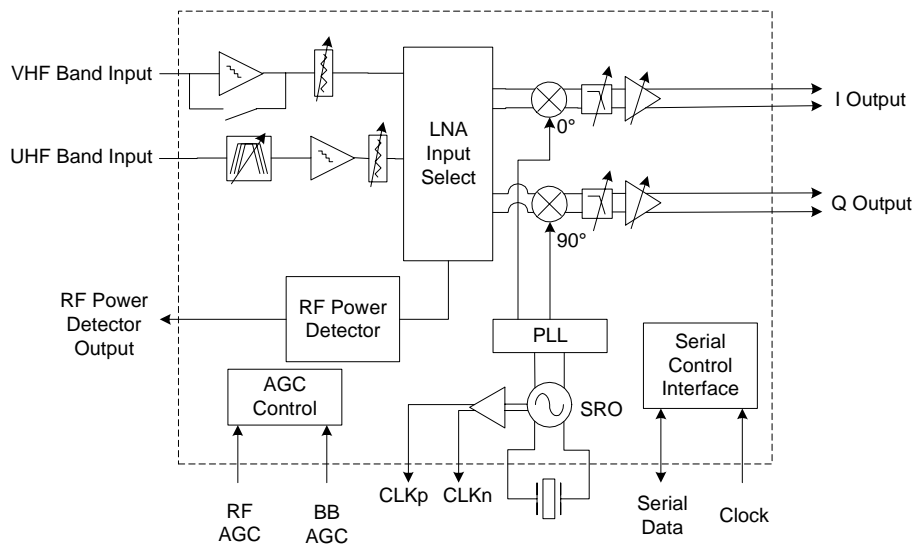
ABSOLUTE RATINGS

PARAMETER	MIN	MAX	UNIT
Supply voltage		3.6	V
Storage temperature	-50	150	°C
Lead-free solder temperature for 5 seconds		260	°C
Relative humidity		95	%



MT2266 Pin Diagram

PRELIMINARY



MT2266 Block Diagram



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