

Tavvel™ FM-p10 Antenna

High Performance Series

87.5–108 MHz

903
1000447-X1



Module (top)

Module (underside)

Coil Element



DESIGN ADVANTAGES

Flexible, Internal Form Factors for Compact & Advanced Industrial Designs

- Smaller, more efficient internal antennas and modules break through restrictive design rules and provide new freedom in component placement.
- Eliminates need for external whips, wires, or stub antennas.

Quick Design In & Time-to-Market

- Simple integration. A single control line simplifies integration with the receiver to tune the antenna via pre-set voltage settings
- Matched components, tested extensively by Ethertronics, ensure optimum performance

High receive performance, Low power consumption

- Active circuit consumes under 2 mA of current
- Precision tuning greatly reduces noise from adjacent channels
- High performance even in small ground plane design situations.

RoHS Compliant

- Ethertronics' antennas are fully compliant with the European RoHS Directive 2002/95/EC.

TECHNOLOGY ADVANTAGES

Real-World Performance and Implementation

- Ethertronics' unique active technology optimizes antenna size, performance and emissions to meet your specifications quickly to reduce time-to-market.
- High performance is achieved across the entire range of frequencies in an internal form factor and low overall system power consumption.
- High RF selectivity eliminates the cost and space for band-pass circuitry.

APPLICATIONS

Ethertronics' Tavvel p-series of internal, active FM antennas deliver on the key needs of today's unified media product designers: **high performance and small form factor**. The antenna solution is composed of a pre-tested, small form factor, SMD active antenna tuning module with an antenna element and can be customized to fit in a wide range of FM enabled products, including:

- Mobile Phones
- Notebook & Netbook Computers
- Portable Music/MP3 Players
- DVD Players
- FM Radios & Stereos
- USB Dongles
- Multimedia Photo Frames
- Audio headsets

Electrical Specifications

Typical Characteristics

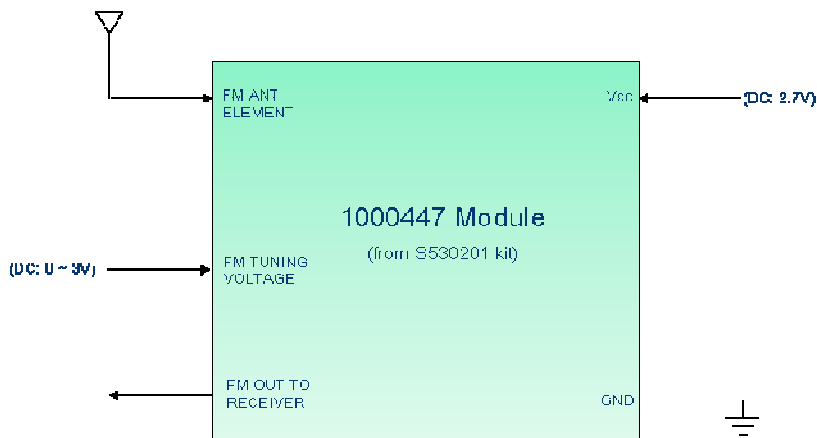
Parameters	Minimum	Nominal	Maximum	Units
Frequency Range		87.5 - 108.1		MHz
3dB Bandwidth		600		kHz
Output Impedance		100		Ohm
VSWR		<2:1		
Typical Isolation at 200 MHz		40		dB
Voltage Supply	2.5	2.7	3.0	V
Current Consumption		1.8	2.0	mA
Voltage Supply Ripple			10	mV
Tuning Voltage	0		2.7	V
Tuning Current		30		μA
Antenna System Gain*	-6		-3	dB

*Antenna mounted on demo board, measured in free space
Parameters are measured at a 2.7 Volt supply unless otherwise stated.

Mechanical Specifications

Electronic tuning module size	6.1 x 3.5 x 1 mm
Antenna Element Size	10mm length x 4 mm diameter (dimensions can vary)
Antenna and PCB Weight	5 grams

Module Block Diagram



Service & Support

Ethertronics' global applications engineering teams have extensive RF and antenna integration experience and are available to support design-in of our FM antenna solution into your product. Comprehensive application documentation is also available.

Part Numbers

Kit	Tuning Module	Coil Antenna	Demo Board
S530201	1000447	1000469	S530200

