

Tavvel™ WideBand Tunable Media Antenna Solution

48–120, 170–240 & 470–870 MHz



KEY BENEFITS

Ethertronics' Tavvel series of internal, tunable WideBand media antennas deliver on the key needs of today's unified media product designers: high performance, small form factor and low power consumption. The WideBand antenna solution operates in the FM, UHF and VHF bands and can be used to support standards including CMMB, DVB-H, DVB-T and Analog TV. Ethertronics' internal WideBand Media Antenna Solution eliminates the need for external whip and FM antennas. The antenna solution is composed of a pre-tested, small form factor, SMD antenna tuning module and antenna elements to support the various bands. The antenna solution can be customized to fit in a wide range of broadcast video enabled handsets and mobile products, including:

- Mobile Phones
- Notebook Computers
- Portable DVD Players
- Media Appliances
- Netbooks and Ultra Mobile PC's

TECHNOLOGY ADVANTAGES

Real-World Performance and Implementation

Ethertronics' unique technology optimizes antenna size, performance and emissions to meet customer and MBRAI specifications (in case of DVB) quickly while reducing time-to-market. High performance (efficiency/gain) is achieved across the entire WideBand range of frequencies. High receive performance leads to lower overall system power consumption. Plus, high RF selectivity eliminates the cost and space for band-pass circuitry.

DESIGN ADVANTAGES

Quicker Time-to-Market

- By optimizing antenna size, performance and emissions, customer and protocol specifications are more easily met.

High Receive Performance, Low Power Consumption

- Unique internal antenna approach provides high receive performance and low power consumption.

Simplified Integration

- Minimal control lines simplify integration with the receiver.

Flexible, Internal Form Factors Support Advanced Industrial Designs

- Smaller, more efficient, internal antennas break through restrictive design rules and provide new freedom in component placement.

Superior Range & Signal Strength

- Ethertronics' WideBand antenna and mobile solution meets MBRAI specifications (in case of DVB) in an internal form factor providing greater receiver performance—delivering greater customer satisfaction while building brand loyalty.

RoHS Compliant

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

SERVICE AND SUPPORT

Extensive RF Experience

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

PRODUCT: Internal, Tunable WIDEBAND Antenna

Ethertronics' Tavvel™ Internal (Embedded) WideBand Antenna Specifications
 Ethertronics produces a wide variety of standard and custom antennas to meet user needs.
 Below are the typical specs for a WideBand application.

Electrical Specifications

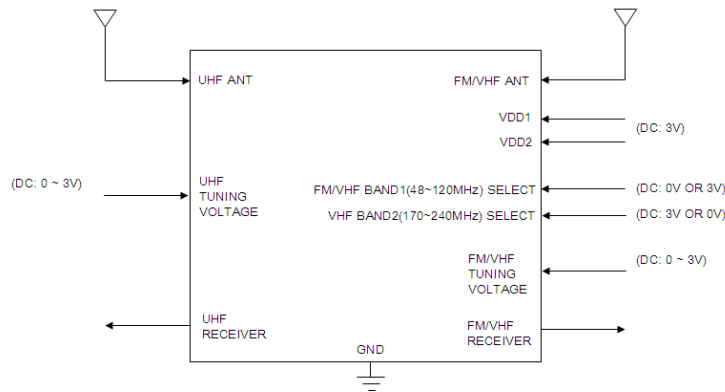
Typical Characteristics
 (inside an enclosure)

WideBand Media Antenna	FM/VHF1	VHF2	UHF
VSWR	3.5:1 (Max)	2:1 (Max)	2.8:1 (Max)
Feed Point Impedance	50 ohms	50 ohms	50 ohms
Polarization	Linear	Linear	Linear
Control Voltage	0-3V	0-3V	0-3V
Current Consumption	100 µAmps (Max)	100 µAmps (Max)	100 µAmps (Max)

Mechanical Specifications

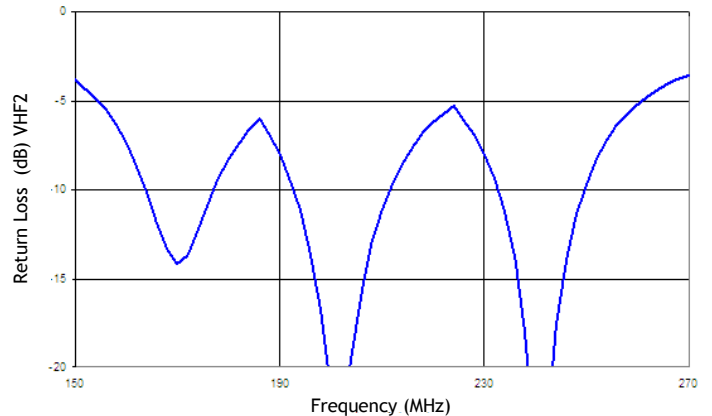
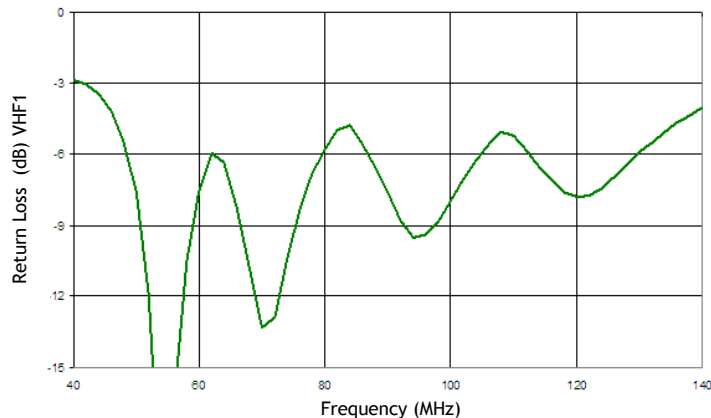
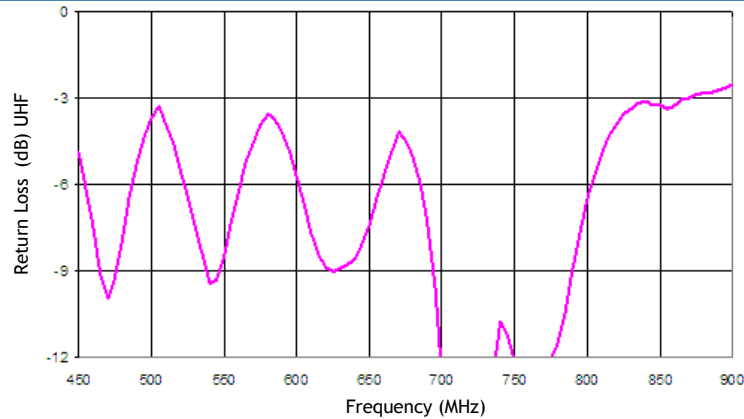
Antenna Module Size	25x9x1 mm
FM/VHF Antenna Element Size (Coil)	30 mm length x 3.85 mm diameter (dimensions can vary)
UHF Antenna Element Size	32x8x1 mm (dimensions can vary)
Weight (module + antenna elements)	<5 grams

Block Diagram



Return Loss by Band

(Not all tuning states shown)



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