



## HDFMVEE

- Full 20 MHz bandwidth
- Power ratings up to 10 class C stations
- Stainless steel element for excellent reliability
- Designed for -10 dB IBOC signals
- Antenna isolation >40 dB for analog and IBOC
- Single or dual EIA inputs
- Element radome standard
- Low downward radiation
- Omni-directional free space pattern performance
- Ideal for space combining analog and digital signals
- -40 dB isolation

The HDFMVee antenna offers FM stations the advantages of top-mounting and combined station operation. It's designed for digital, analog, or both types of service. When operating in dual mode (IBOC/analog), it offers space combining with superior antenna isolation.

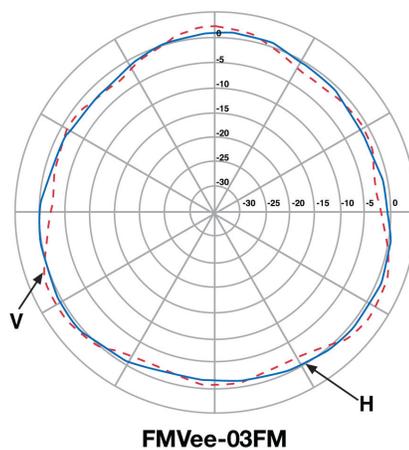
Multi-station FM operation—where two or more stations share the same antenna—has increased in popularity due to the inherent cost savings. The wide bandwidth characteristics of the HDFMVee antenna make possible multi-station operation with excellent pattern circularity, through the use of broadband radiating elements in conjunction with high-power element hybrids.

The unique design of the HDFMVee antenna offers precise control of the elevation pattern, which is critical in mobile receiver reception. Beam tilt and null fill may be provided by means of standard phase and power distribution techniques.

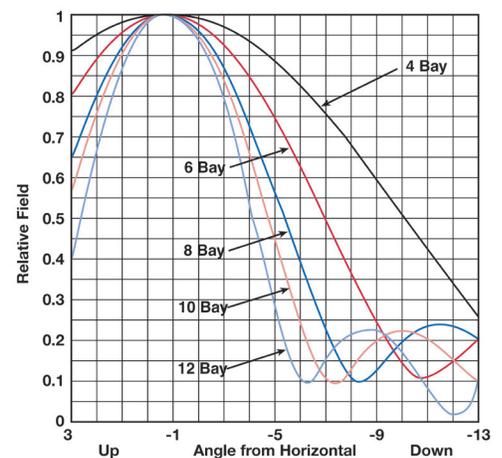
The HDFMVee antenna is designed for high-power operation, enabling station flexibility in transmission system design. Our conservative power rating ensures adequate design headroom for long-term reliability. The Dielectric HDFMVee antenna can be configured with one or two input ports for analog and digital. This feature allows the top and bottom four bays of a typical eight-bay antenna to be fed by two independent transmission lines. Should standby operation be necessary, one half of the eight-bay antenna may be used at reduced power.

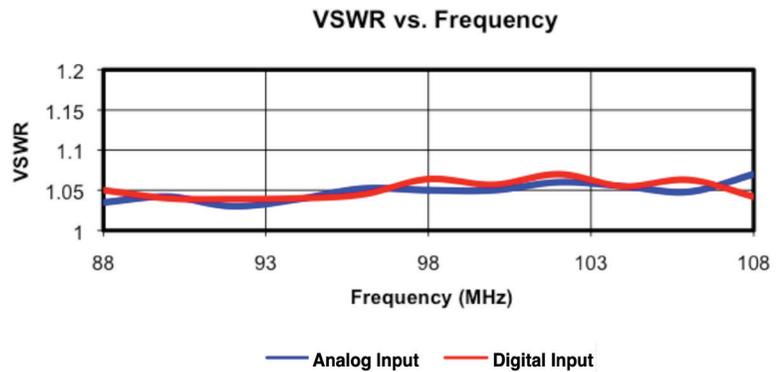
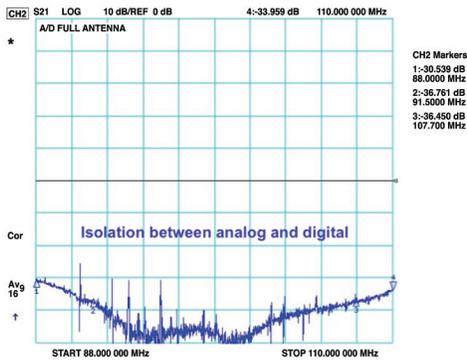
The Dielectric HDFMVee antenna will meet the specific requirements of FM broadcasters worldwide. Your Dielectric representative can provide you with additional information for your review and consideration.

**Measured Relative Field**



**CALCULATED ELEVATION PATTERN**





### Mechanical Specifications

Antenna Type	# of Bays	Weight lbs (kg)	Windload lbs (kg)	Projected Area ft <sup>2</sup> (m <sup>2</sup> )
HDFMvee-O3-2FM/6U-1	2	6,500 (2,958)	4,600 (2,093)	92 (8.5)
HDFMvee-O3-4FM/12U-1	4	12,500 (5,688)	9,200 (4,186)	184 (17.1)
HDFMvee-O3-6FM/18U-1	6	19,000 (8,645)	13,800 (6,279)	276 (25.6)
HDFMvee-O3-8FM/24U-1	8	26,000 (11,830)	18,400 (8,372)	368 (34.2)
HDFMvee-O3-10FM/30U-1	10		Contact Factory	
HDFMvee-O3-12FM/36U-1	12		Contact Factory	

**Notes:**

1. FMvee antennas must be pressurized with dry air or nitrogen.
2. Loads provided assume 50/33 PSF, no ice.
3. Length includes standard 4 ft. (1.22 m) lightning rods.
4. Windloads will vary depending on design wind speed and conditions at installation location.
5. Area calculated expressed in terms of equivalent flats (RS-222-C standard).
6. Windload force calculated based on 50 pounds per square foot (50 PSF) on flats (RS-222-C standard).
7. To convert area to equivalent rounds, multiply area by 1.5.
8. To convert area to Aerodynamic area (CaAa - linear or CaAc - discrete) based on EIA-222-F standard, multiply area by 1.8.

### Electrical Specifications

Antenna Type	# of Bays	Gain Polarization <sup>1</sup>		Power Rating kW <sup>3</sup>
		Power Gain	dB	
HDFMvee-O3-2FM/6U-1	2	0.90	-0.46	125
HDFMvee-O3-4FM/12U-1	4	1.80	2.56	135
HDFMvee-O3-6FM/18U-1	6	2.70	4.31	185
HDFMvee-O3-8FM/24U-1	8	3.70	5.68	185
HDFMvee-O3-10FM/30U-1	10	4.60	6.63	185
HDFMvee-O3-12FM/36U-1	12	5.60	7.48	250

**Notes:**

1. RMS gain data is given relative to dipole. Values given are for each polarization and nominal for mid band and include standard harness configurations. Gain will vary depending on feed system, frequency, null fill and beam tilt.
2. Null fill 10% is standard for 4 bays or greater. Beam tilt .75 degrees assumed. Other values of tilt and fill are available upon request.
3. Power ratings are nominal @ 104°F (40°C) and assume pressurization with dry air or nitrogen to 5 psi minimum. Power ratings may vary dependent on specific feed system design, and local conditions.
4. Higher power ratings and dual inputs are available on request.
5. Antenna components and feed harnesses are optimized for FM channels of interest.
6. Typical circularity ±1.5 dB