

02452C Multi-Band Indoor Omni-Ceiling Antennas

Patent # 710276

Description

The 02452C is a Multi-Band indoor ceiling antenna covering the CDMA, GSM, PCS, DECT, 3G/UMTS, ISM, WIRELESS LAN, and BLUETOOTH, Radio Bands. The Multi-Band functions of the 02452C antenna negate the requirement for separate antennas. It is lightweight, simple to install, and ideally suited to indoor applications.

The Radiation Patterns of the 02452C are deliberately inclined below the horizon enhancing low angle coverage.

Its general construction ensures low intermodulation levels. A common feed ensures straightforward connections.

Applications

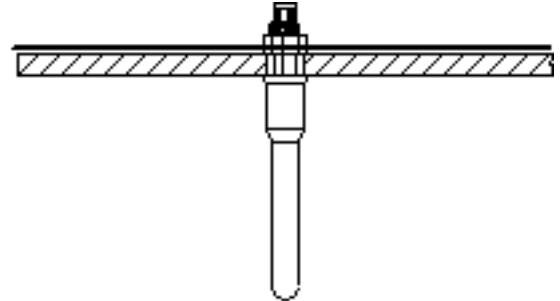
Indoor communications coverage for CDMA, GSM, PCS, DECT, 3G/UMTS, ISM, WIRELESS LAN, and BLUETOOTH bands. Ideally suited to indoor mounting through false ceilings.

Construction

The antenna is constructed in white high impact engineering plastics. The moulded stylised white radome offers a low profile and discrete appearance complementary to an indoor environment.

The antenna is fed via a short RG142 cable tail fitted with a high quality "N type" female connector. The antenna ground plane is circular, and constructed of high quality light gauge Aluminium sheet.

All radiators are constructed of brass, ensuring maximum radiation efficiency.



Electrical Specifications

Model	Frequency MHz	^Gain (dB)	Tuned Bandwidth	Operating VSWR	Input Impedance	Vertical Beamwidth	Horizontal Beamwidth
02452C	*825-960	See Below	135 MHz	<1.5:1	50 ohms (Nominal)	See Below	See Below
	*1710-1880		790 MHz	<1.65:1			
	*1850-1990		140 MHz	<1.6:1			
	*1920-2170		250 MHz	<1.5:1			
	*2400-2500		100 MHz	<1.6:1			
	825	0				See Pattern	Omni
	960	0				95°	
	1710	2				55°	
	1850	2				55°	
	1880	2				50°	
	1920	2				55°	
	1990	3				35°	
	2200	3				35°	
	2400	3				35°	
2500	3	35°					

* Antenna is full spectrum and covers both bands.

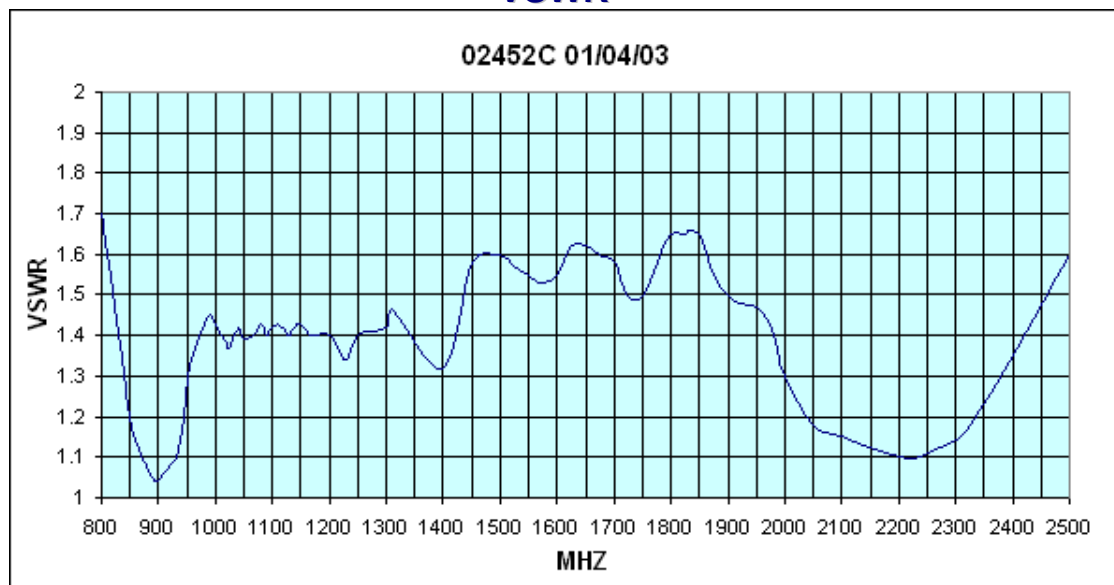
^ Gain over Dipole.

Mechanical Specifications

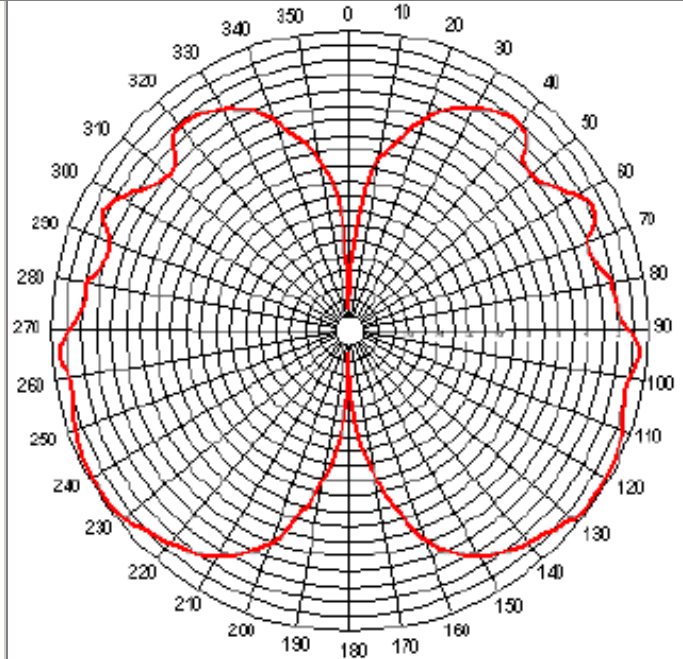
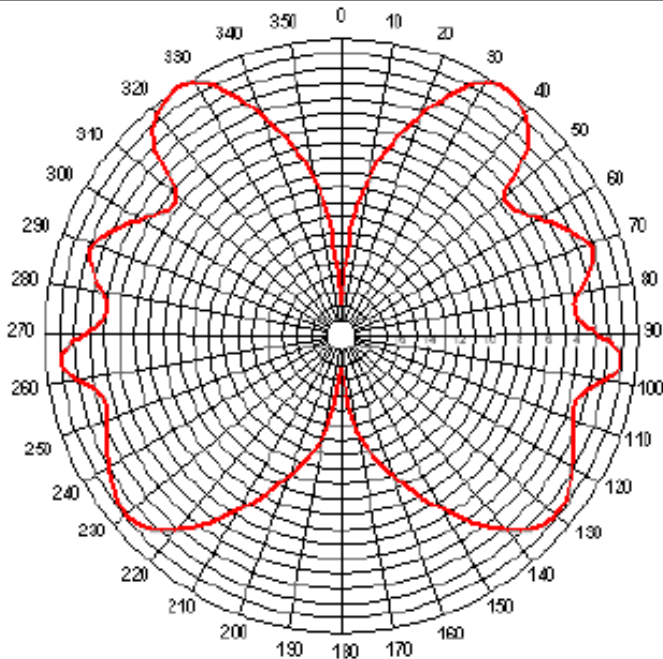
Model	Construction	Length (m)	Width (m)	Weight (kg)	Termination	Projected Area#	Wind Loading @160 KPH#
02452C	S/Steel, Brass, Delrin, Aluminium.	0.193	0.265	0.3	N Female, RG142 Cable Tail	N/A	N/A

Antenna is intended for internal use only; for external use see antenna model 02452

VSWR



Radiation Plots

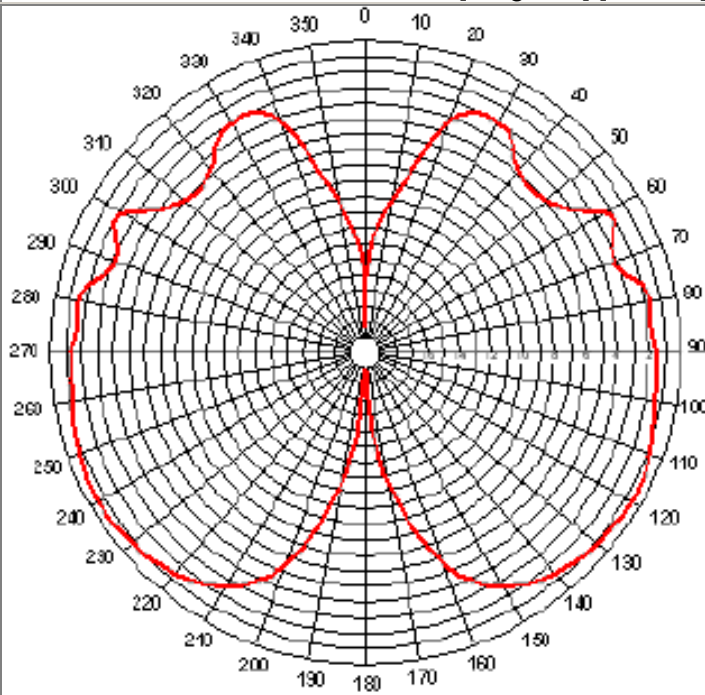


3 DB **E Plane** Beamwidth:
Frequency: 825 MHz
Gain: 0 dB

[Dwg 280] [Rev 01]

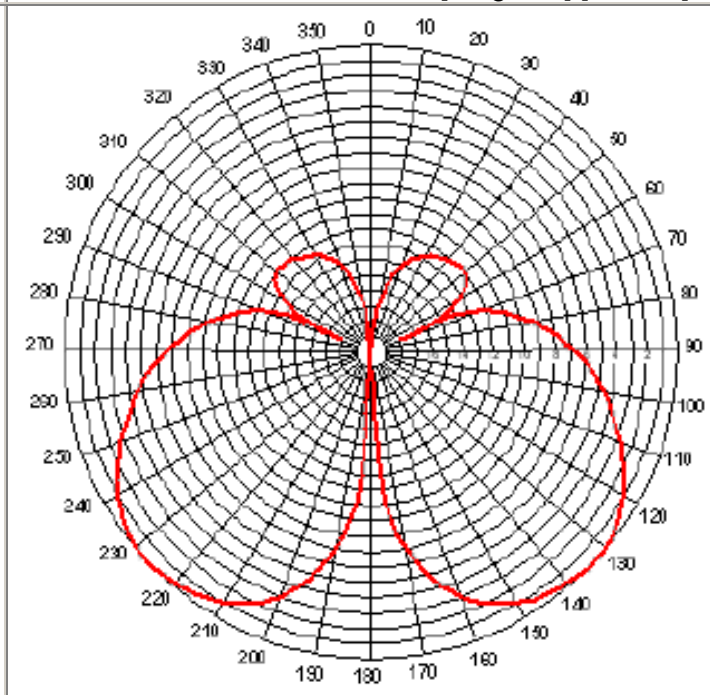
3 DB **E Plane** Beamwidth: 95 Deg
Frequency: 890 MHz
Gain: 0 dB

[Dwg 281] [Rev 01]



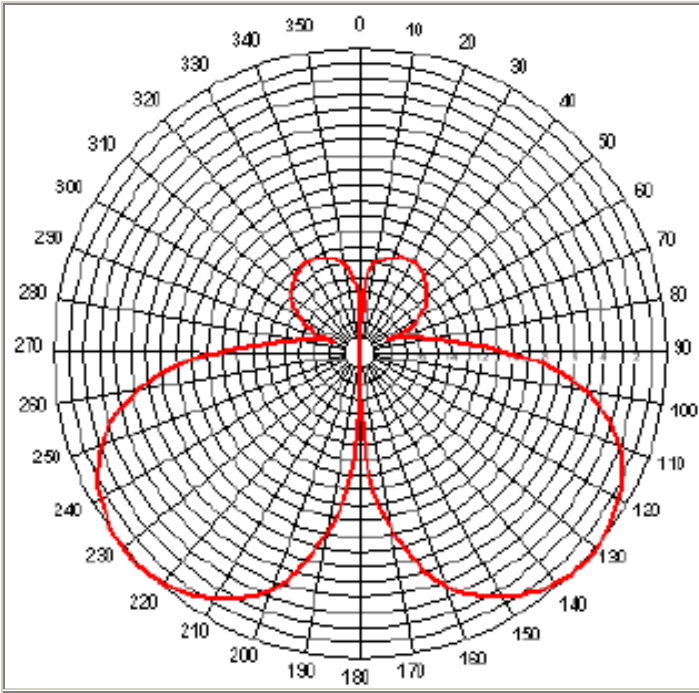
3 DB **E Plane** Beamwidth: 95 Deg
Frequency: 960 MHz
Gain: 0 dB

[Dwg 283] [Rev 01]

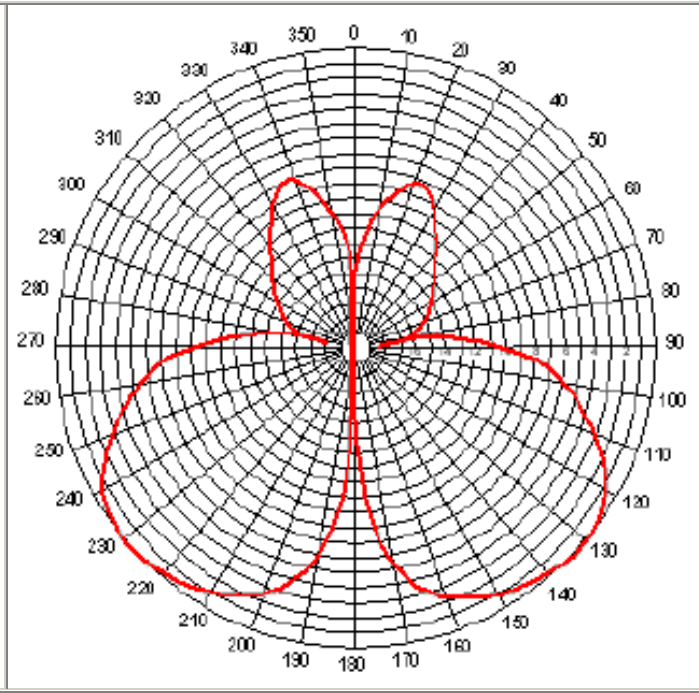


3 DB **E Plane** Beamwidth: 50 Deg
Frequency: 1710 MHz
Gain: 0 dB

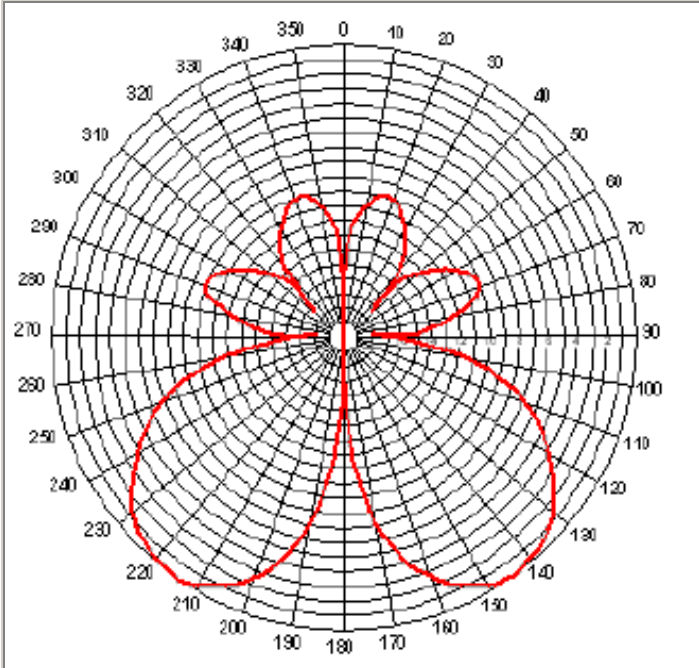
[Dwg 900] [Rev 01]



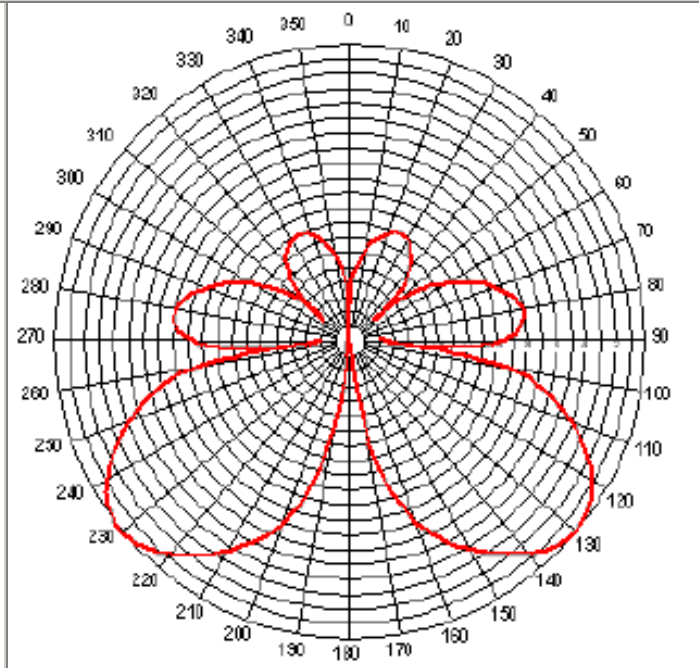
3 DB E Plane Beamwidth: 55 Deg
Frequency: 1850 MHz
Gain: 2 dB [Dwg 899] [Rev 01]



3 DB E Plane Beamwidth: 55 Deg
Frequency: 1920 MHz
Gain: 2 dB [Dwg 897] [Rev 01]



3 DB E Plane Beamwidth: 36 Deg
Frequency: 2200 MHz
Gain: 3 dB [Dwg 895] [Rev 01]



3 DB E Plane Beamwidth: 36 Deg
Frequency: 2500 MHz
Gain: 3 dB [Dwg 893] [Rev 01]