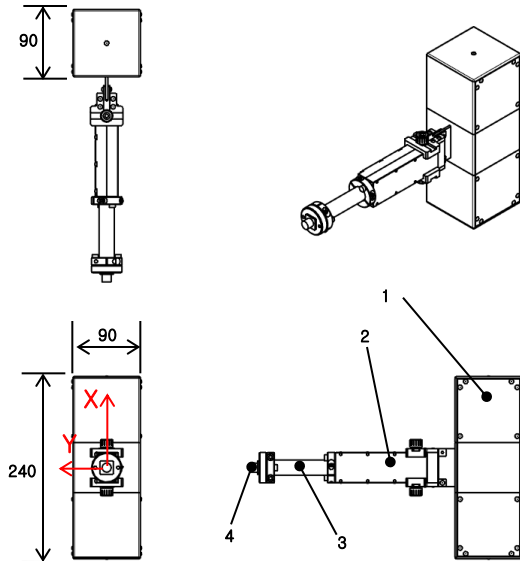


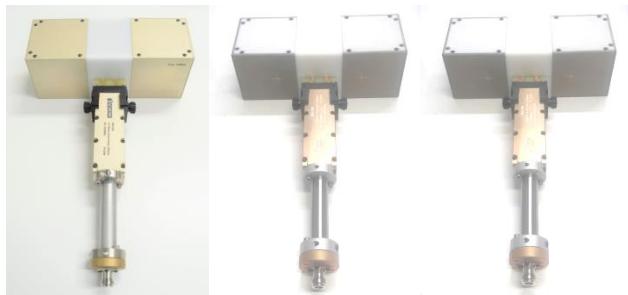
The IMDA series is an ISO 11452-9 compliant Folded Dipole Antennas and consists of five antennas and five baluns for evaluating the electromagnetic immunity of automotive electronic components.



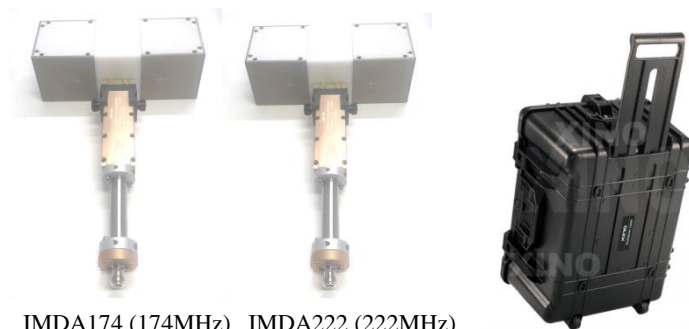
- 1. Radiation element (IMDA)
- 2. Broadband low loss balun 1:1(IBA520)
- 3. Ø20 mm tube for handling or fixture
- 4. N-female connector



IMDA + IBA520



IMDA146 (146MHz) IMDA155 (155MHz) IMDA165 (165MHz)



IMDA174 (174MHz) IMDA222 (222MHz)



IMDA Full Balun Set

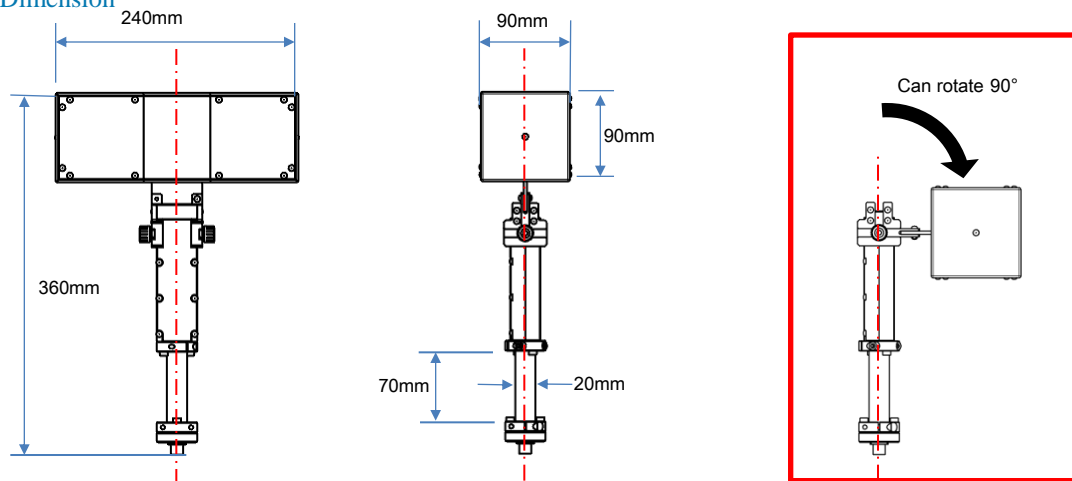
Description

It can be used in the frequency range from 146 MHz to 222 MHz by using the flat portion of a single antenna for the evaluation of electromagnetic immunity of near-field automotive electrical components. Antenna Radiator is powered by 1: 1 Balun.

It consists of one balun and five Radiation Elements. You can unlock the knob and replace the Radiation Element.

The Radiation Element can be mounted orthogonally to the Balun.

Dimension



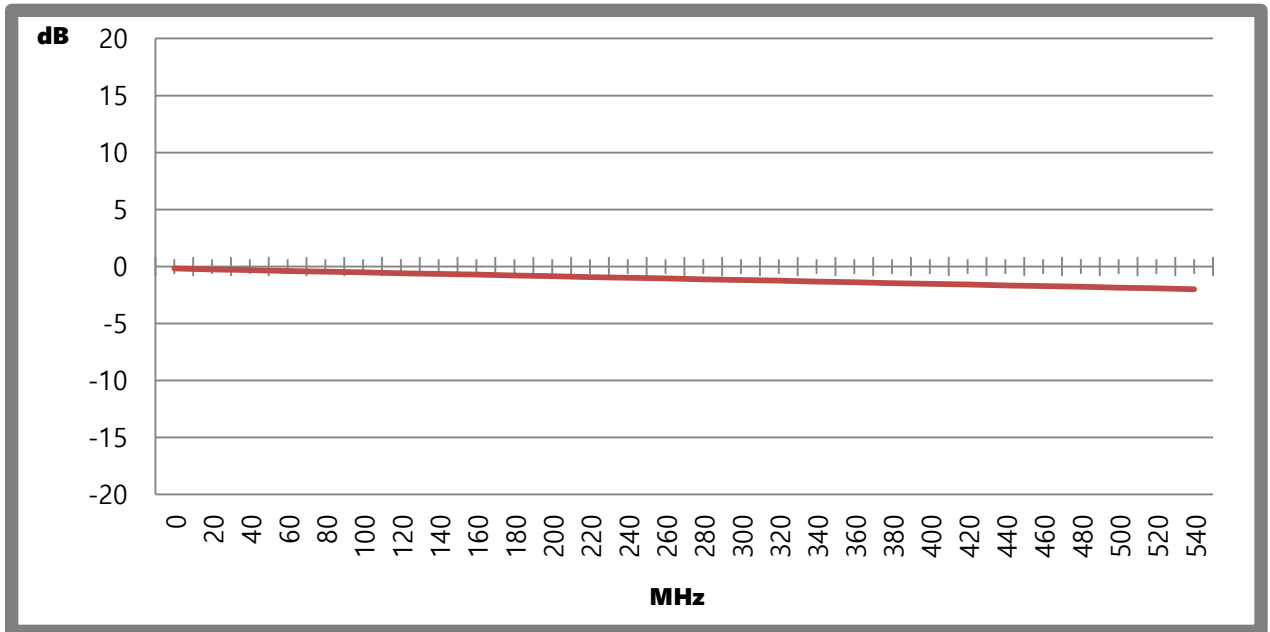
Electrical/Physical Characteristics

Category	Item	Specification	Unit	Conditions		
Folded Dipole With Balun	Electrical	Frequency	146 ~ 222	MHz typ.	@Total 5 Antenna (146,155,165,174,222MHz)	
		Bandwidth	≈5	%		
		Gain	146MHz	-1.85	dBi typ.	@ Antenna Factor (15.36dB/m)
			155MHz	-1.15		@ Antenna Factor (15.18dB/m)
			165MHz	-0.85		@ Antenna Factor (15.42dB/m)
			174MHz	-1.17		@ Antenna Factor (16.21dB/m)
			222MHz	-0.42		@ Antenna Factor (17.56dB/m)
		Impedance	50	Ω		
		Input Power	30	W	@Max.	
		Polarization	Linear			
VSWR		≤ 2.0		@ center		
		≤ 3.0		@ 5% BW of center		
Physical	Dimension	240 X 90 X 360	mm			
	Tube for Handle	20	mm	@Diameter		
	Weight	900	g	@IMDA Set Total 12kg		
	Port	N Female	type			

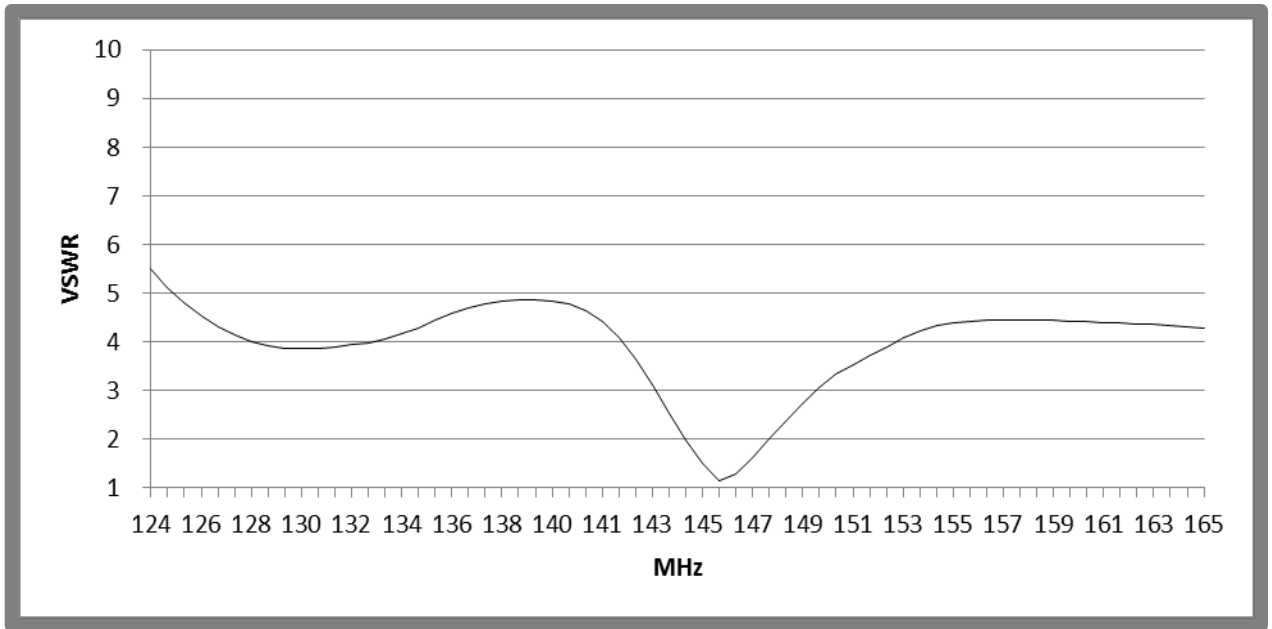
■ Electrical/Physical Characteristics (IBA520)

Category	Item	Specification	Unit	Conditions	
Balun	Electrical	Frequency	20 ~ 520	MHz typ.	
		Insertion Loss	< 2.0	dB	@20 ~ 520MHz Max.
		Impedance	50	Ω	
	Physical	Dimension	250X50X43	mm	@Except Nobe
		Tube for Handle	20	mm	@Diameter
		Weight	520	g	
		Port	N Female	type	

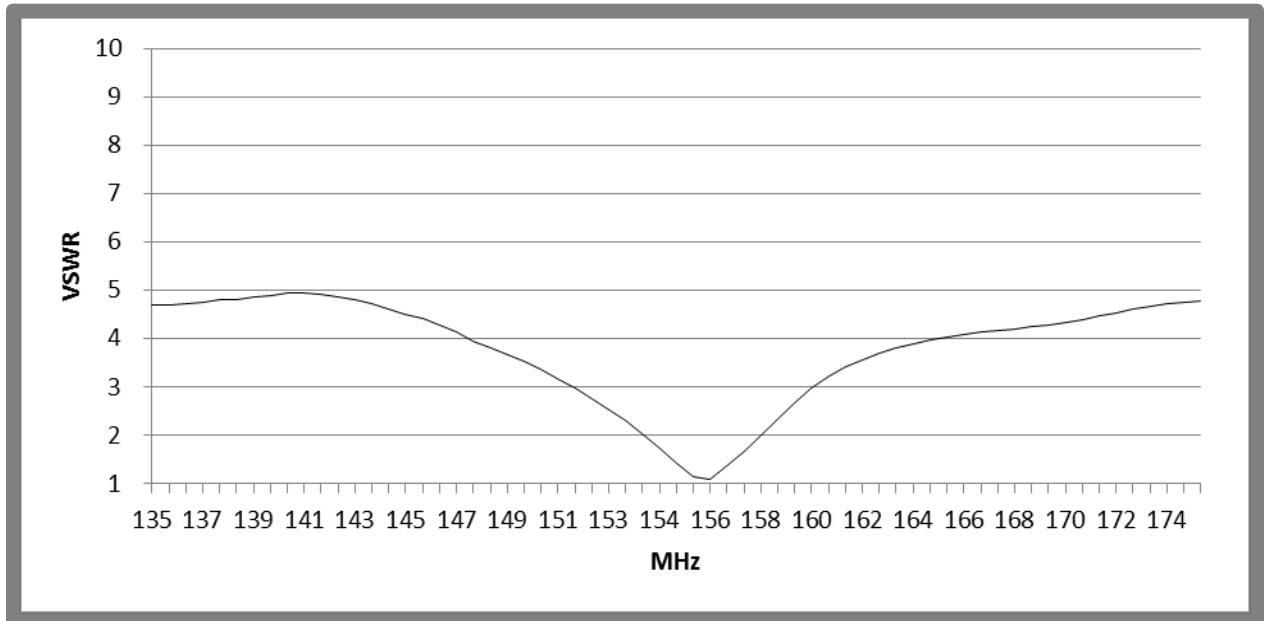
■ Insertion Loss (IBA-520)



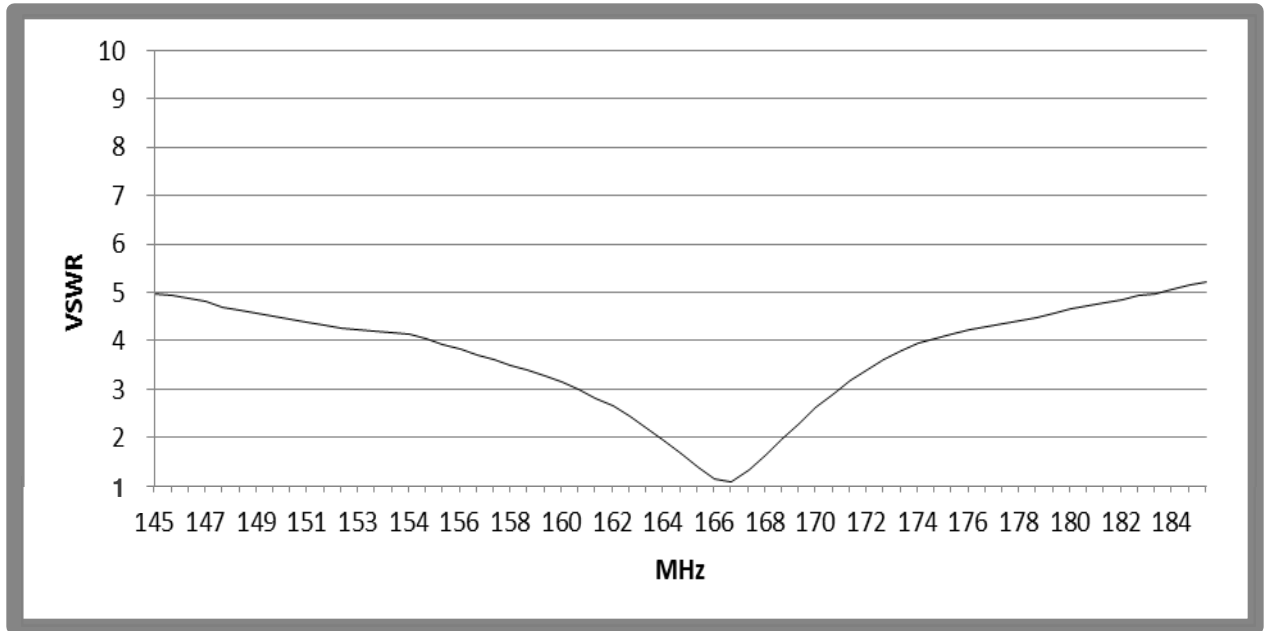
■ Typical Passive Performance Curves (IMDA146 VSWR)



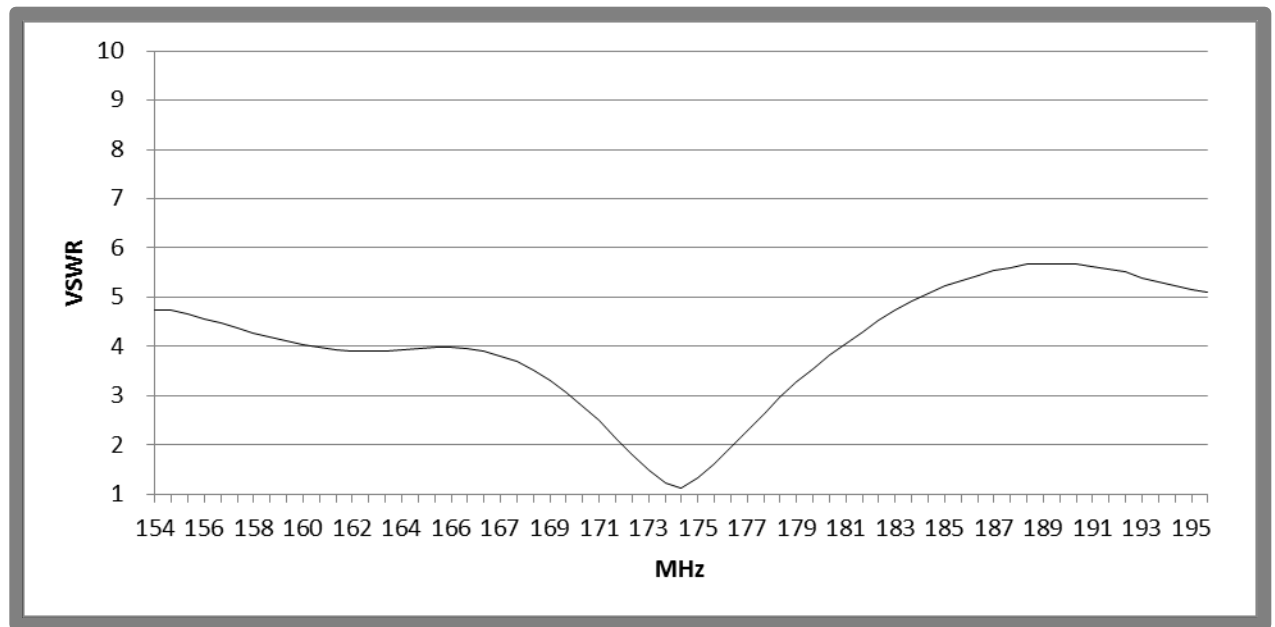
■ Typical Passive Performance Curves (IMDA155 VSWR)



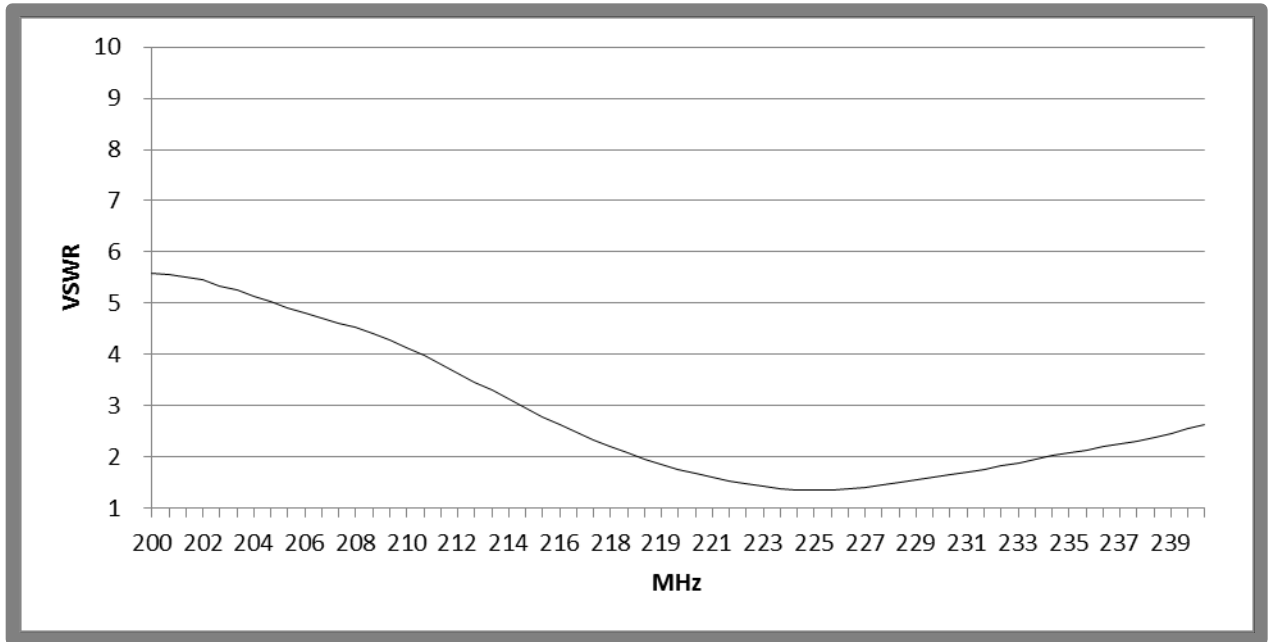
■ Typical Passive Performance Curves (IMDA165 VSWR)



■ Typical Passive Performance Curves (IMDA174 VSWR)



■ Typical Passive Performance Curves (IMDA222 VSWR)

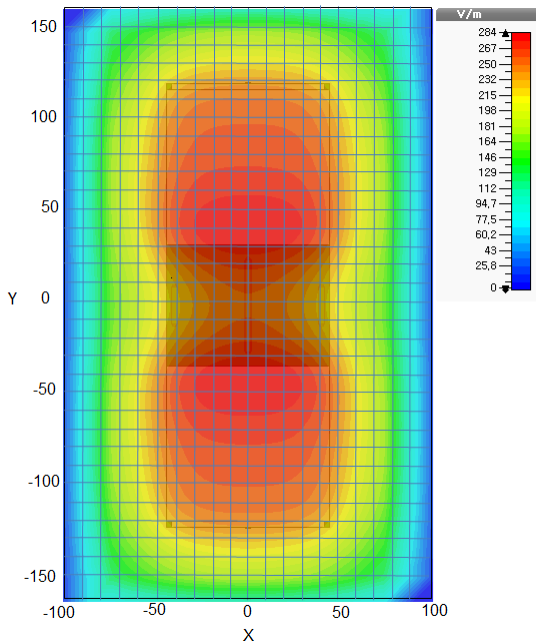


■ Field Uniformity

Field uniformity measurements were estimated using simulations. Consists of a plane above the area separated by a constant distance $d = 50$ mm. All diagrams come with the same color scale normalized to 0 dB.

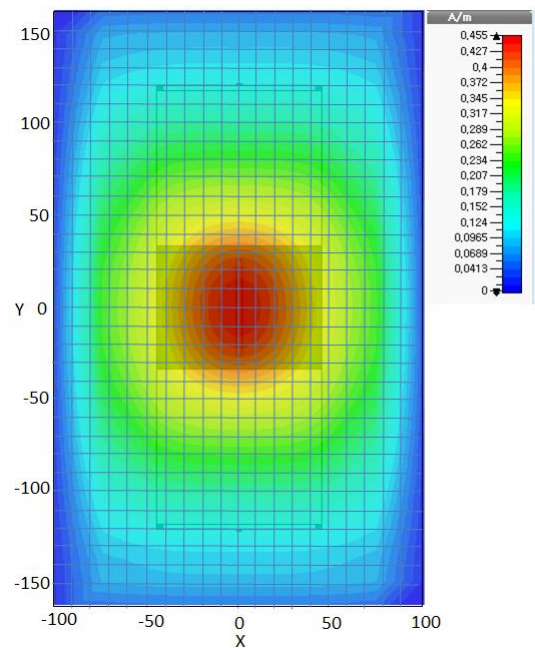
Simulated for each frequency at $d = 50$ mm. The reference plane of distance d is the WBD3656 surface facing the EUT.

■ Electric Field (V/M)



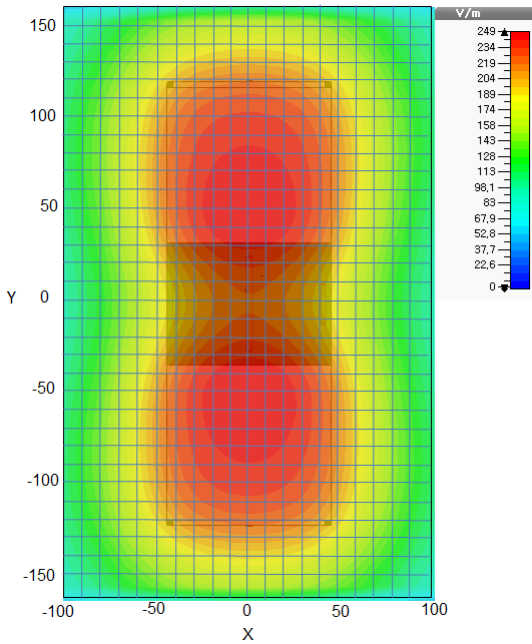
146 MHz; 1 W net input
Field strength: 284 V/m

■ Magnetic Field (A/M)



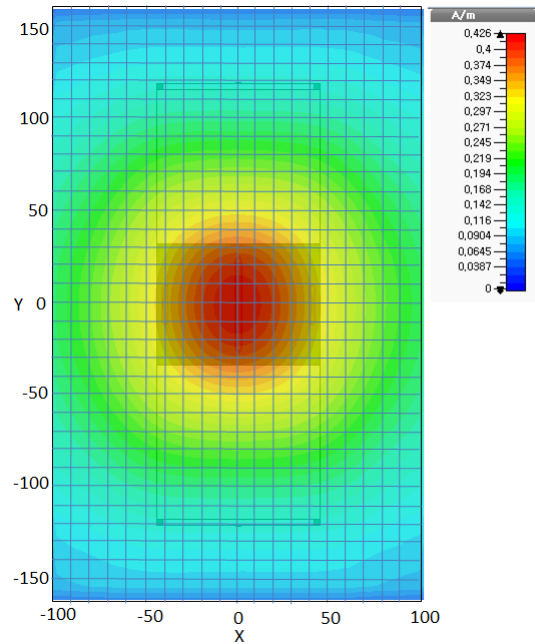
146 MHz; 1 W net input;
Field strength: 0.46 A/m

■ Electric Field (V/M)

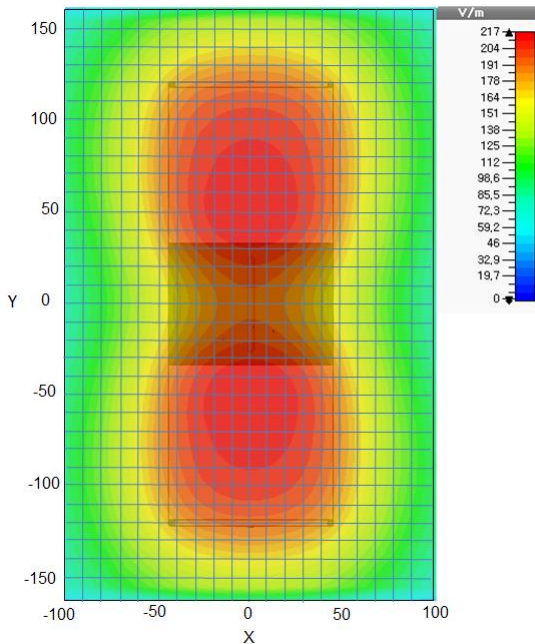


155 MHz; 1 W net input
Field strength: 265 V/m

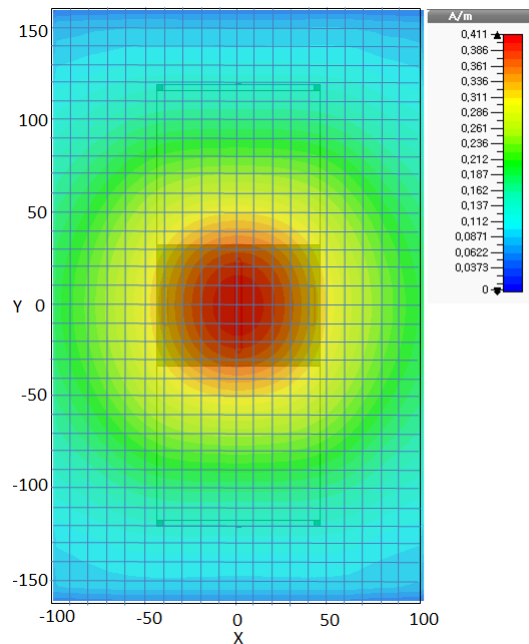
■ Magnetic Field (A/M)



155 MHz; 1 W net input;
Field strength: 0.43 A/m

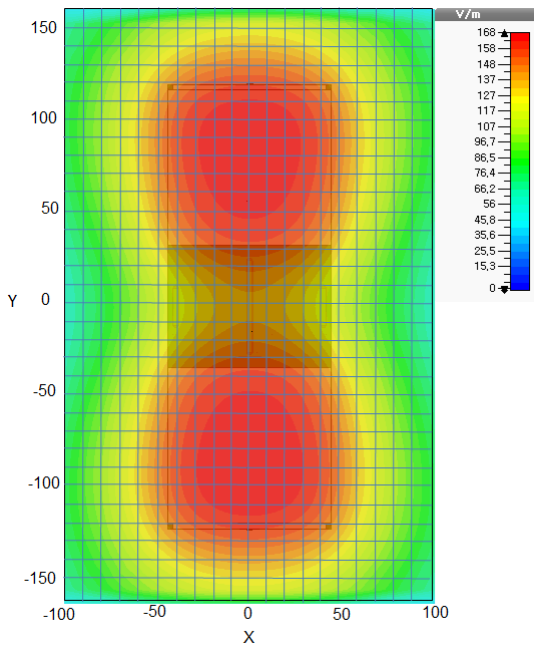


165 MHz; 1 W net input
Field strength: 249 V/m



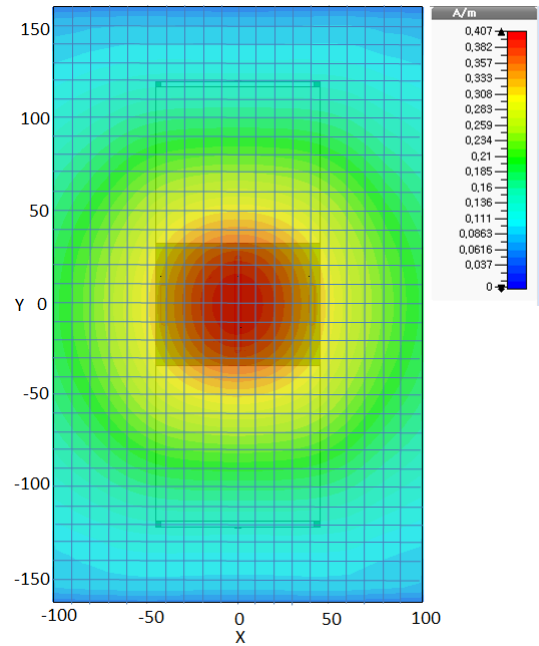
165 MHz; 1 W net input;
Field strength: 0.41 A/m

■ Electric Field (V/M)

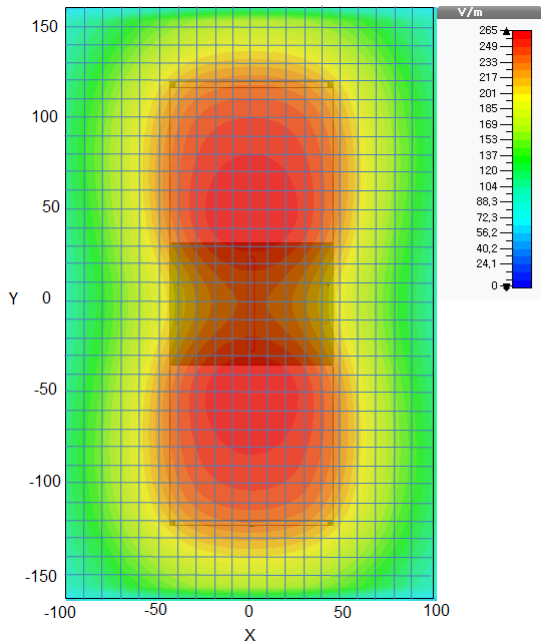


174 MHz; 1 W net input
Field strength: 217 V/m

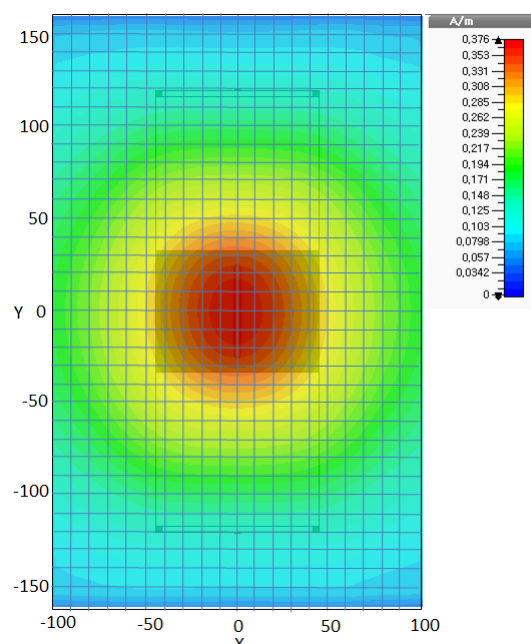
■ Magnetic Field (A/M)



174 MHz; 1 W net input;
Field strength: 0.41 A/m



222 MHz; 1 W net input
Field strength: 168 V/m



222 MHz; 1 W net input;
Field strength: 0.38 A/m