



Pulse Internal Antennas for NFC applications

Rev G.01 (DEC2016)

App.	Type	Part Number	RF Performance								Mechanical requirement		Note
			Frequency (MHz)	With matching network			Without matching network (Bare coil)				Package Type	Dimension (in/mm)	
				Reading distance EMVCo (mm)	Reading Distance Grid Scan (Avg.,mm)	Impedance (ohm)	Self resonant frequency (MHz)	Inductance (μH)	Resistance (ohm)	Q-Factor			
NFC	Flex only	W7001	13.56	40	33	50/80	100	0.9	1.55	49	A	0.98 x 0.98 x 0.005 (25 x 25 x 0.12)	Without a ground plane near antenna
	Flex with Ferrite	W3579	13.56	40	28	50/80	42	1.6	3.60	37.8	B	1.38 x 1.97 x 0.012 (50 x 50 x 0.30)	On ground plane (metal objects like battery) solution
		W7013	13.56	20	25	50/80	71.5	1.05	2.70	33	C	1.18 x 0.98 x 0.014 (30 x 25 x 0.36)	
		Wire loop on plastic carrier	W7002	13.56	40	35	50/80	89	0.65	0.95	57	D	3.72 x 2.24 x 0.14 (94.6 x 56.8 x 3.65)
WiFi and NFC combo	Trace on PCB	W5100	13.56	-	-	50	65.9	0.95	-	44	E	1.57 x 1.57 x 0.05 (40 x 40 x 1.2)	Test setup over 80x80 mm metal GP
			2400-2483.5	RL Min. (dB): -8		Peak Gain in free space: -1dBi		Peak Gain on Metal: 1dBi		-			
		W5101	13.56	-	-	50	57.6	1.13	-	46	E	1.77 x 1.77 x 0.05 (45 x 45 x 1.2)	Test setup over 80x80 mm metal GP
			2400-2483.5	RL Min. (dB): -8		Peak Gain in free space: 0.5dBi		Peak Gain on Metal: 1.5dBi		-			

NOTE: 1. Wire assembly option: Picoblade connector with wire. 2. "Stock" Stocked parts are typically available from Pulse distribution partners immediately.