



Pulse Internal Antennas for NFC applications

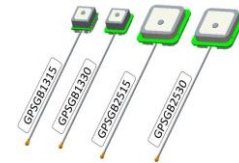
Rev F.01 (SEP 2016)

App.	Type	Pulse Part number	RF Performance								Mechanical requirement		Note	Availability
			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 (uH)	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 GND near antenna	Stocked
	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 GND solution	Stocked
		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)		Stocked
	Flex with twisted pair cable + connector	W7000	13.56	-	36	50	75.5	1.27	2.20	49	F	1.69 x 1.34 x 0.005 (43x 34 x 0.11)	Adhesive tape under coil included	Lead time
	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)	Optimized for metal proximity within the device	Stocked
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	Lead time
			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	Lead time
			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.

Pulse Internal Active Antennas for GNSS (GPS/ Glonass/BeiDou, Galileo) applications

v G (Aug. 2016)



App.	Type	Pulse Part number	RF Performance							ME requirement				Availability
			Operating Frequency (MHz)	Antenna Element		LNA			Antenna Dimension (mm)	Overall Dimension (mm)	Connector type	Coaxial Cable (Length; Diameter)		
				VSWR	RHCP Gain (dBic)	Gain (dB)	NF (dB)	Current (mA)					VCC (Vdc)	
GNSS (GPS, Glonass, BeiDou, and Galileo)	Ceramic patch with LNA	GPSGB1315	1561 +/- 2.046, 1575.42 +/- 10.23, and 1602.5625 +/- 4 MHz	2	-1 ± 1	15 ± 2	< 2.4	< 6	3.3-5 ± 0.5	13x13x5	16x17x8.15	IPEX MHF 20278	L:100; D:1.13	stock
		GPSGB1330		2	-1 ± 1	30 ± 2	< 2.4	< 6	3.3-5 ± 0.5	13x13x5	16x17x8.15	IPEX MHF 20278	L:100; D:1.13	stock
		GPSGB2515		2	1 ± 1	15 ± 2	< 2.4	< 6	3.3-5 ± 0.5	25x25x4	30x30x8	IPEX MHF 20278	L:100; D:1.13	stock
		GPSGB2530		2	1 ± 1	30 ± 2	< 2.4	< 6	3.3-5 ± 0.5	25x25x4	30x30x8	IPEX MHF 20278	L:100; D:1.13	stock

Note: 1. Further detailed specs such as 'Out of band rejection' of LNA can be found on a datasheet.