



Pulse Embedded (SMT) Antennas for GPS/ Glonass/Beidou applications

Rev F (AUG 2016)

App.	Type	Pulse Part number	RF Performance								ME requirement			Note	Availability	
			Operating Frequency (MHz)	RL Min. (dB)	RHCP Gain (dBic)		Linear Gain (dBi)		Efficiency %/(dB)		Antenna DIM. (LxWxH,mm)	GC-area (L x W,mm)	Evaluation Board Size (L x W,mm)			
					Peak	Band edges	Peak	Band edges	Peak	Band edges						
GPS Only	Ceramic chip	W3000	1575.42 +/-10	-15	-3.9	-4.1	0.3	0	50/-3	45/-3.5	7 x 1.6 x 1.6	6 x 20	30 x 20	3 Matching components	Stock	
		W3009		-12	-3.5	-3.9	0.1	-0.2	50/-3	45/-3.5		6 x 11	40 x 11			
		W3011		-11	0.2	-0.6	3	2.3	83/-0.8	70/-1.5	10 x 3.2 x 4.0	10.80 x 6.25	80 x 37	On Ground shunt 3.3pF	Stock	
		W3213		-12	0.85	0.5	3.4	3	85/-0.7	80/-1	3.2 x 1.6 x 1.1	4.00 x 4.25	80 x 37	w/o matching	Stock	
	Patch	W3099		-14	3.5	-	-	-	-	-	-	25 x 25 x 4	-	70 x 70	AR: 3, V01; A	Contact to sales for datasheet
		W3213		-13	-1.5	-	-	-	-	-	-	13 x 13 x 4	-	30 x 30	AR: 3, V02; C	Stock
	Helical	W3110		-16	-2.1	-2.4	1.3	0.7	47/-3.3	43/-3.7	5.0 x 2.5 x 5.5	7.50 x 5.50	100 x 40	Vertical SMD, @ Corner	Stock	
GPS, Glonass, & Beidou	Ceramic chip	W3000	1559-1591 1575.42 +/-10 and 1598-1610	-18	-0.2	-1	2.4	1.5	70/-1.55	65/-1.9	7 x 1.6 x 1.6	6 x 10	80 x 37	3 Matching components, Horiz. Mount + @Corner	Stock	
		W3010		-12	1	0	3	2.2	75/-1.25	70/-1.5	10 x 3.2 x 2	10.80 x 6.25	80 x 37	@ Position1 shunt 3.3pF	Stock	
		W3011A		-12	1.5	0.4	3	1.8	70/-1.55	50/-3.0				3.2 x 1.6 x 1.1	4.00 x 6.25	80 x 37
		W3062A		-16	1	-0.4	3.7	2.5	88/-0.6	70/-1.5	7 x 1.6 x 1.6	7.80 x 5.25	80 x 37	Shunt 2.2pF	Stock	
		Patch		W3216	-7	-2	-	-	-	60	50	13 x 13 x 5	-	50 x 50	Shunt 1.5pF V02; C	Stock
	W3056			2400-2483.5	-8	-	-	3.2	2.5	80	70	10 x 3.2 x 1.5	10.80 x 6.25 (Notch)	100 x 40	Single feed and 2.4GHz +GPS	Stock
W3064C	1575.42±10	-10	-	-	2.5	1.5	75	65								
WiFi and GPS Combo	Ceramic chip	W3064C	2400-2483.5	-11	-	-	-0.7	-1.7	80	70	10 x 3.2 x 1.5	10.80 x 6.40 (Divided)	96 x 45	Dual feed and 2.4GHz +GPS	Contact to sales for datasheet	
		W3095	1575.42 ±10	-15	-	-	-1	-2.0	70	60						
	W3095	2400-2483.5	-10	-	-	2.7	1.5	85	80	10 x 3.2 x 1.5	17.80 x 6.45	80 x 50	Dual feed and Dual WiFi + GPS/Glonass/Beidou	Stock		
		4950-5850	-6	-	-	3.7	1.0	73	53							
		1559-1610.5	-8	-	-	1.7	0.7	75	62							

NOTE: 1. Recommended minimum GND dimensions of PIFA type and Monopole are roughly 40x20mm and 30x20mm (or 40x11mm), respectively. Need to construct matching values to optimize antenna performance on surrounding mechanics and materials. 2. Pulse offers very unique GPS+WiFi combo antennas on single ceramic chip (10x3.2x1.5mm). There are three different types of combo antennas. W3056 (2.4G Wifi +GPS, single feed), W3064C (2.4G WiFi+GPS, dual feed), and W3095 (2.4G and 5G Wifi +GPS/Glonass/Beidou, dual feed). 3. "Stock" Stocked parts are typically available from Pulse distribution partners immediately.