



Pulse*LARSEN* *Antennas*

Antenna Solutions for ISM Networks



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PULSE ANTENNAS FOR ISM 868/915MHZ

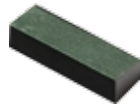
Style	App.	Antenna Type	Pulse Part No.	RF Performance			
				Frequency range (MHz)	RL, Min. (dB)	Gain, Peak (dBi)	Efficiency, Avg. (%)
Embedded (SMD)	ISM 868	Ceramic chip	W3000	868-870	-15	-1.4	30
			W3013	868-870	-11	1.5	65
			W3016	868-870	-19	-2.2	25
		Helical	W3117	869-894	-9	0	56
			W3118A	869-894	-9	0	52
	ISM 915	Ceramic chip	W3012	902-928	-6	2	70
			W3014	880-960	-7	-0.5	45
		Helical	W3112A	902-928	-10	0.9	67
	ISM 868/915	PCB(direct mount)	W3113	902-928	-10	0.8	66
			W3331	863-928	-5	1.7	64
W3333			863-928	-8	2.3	80	
W3229			863-928MHz	-6	1	60%	
W3330	844-928 & 2400-2483.5	6	0.4 & 2.0	60% & 60%			
Style	App.	Type	Pulse Part No.	Frequency range (MHz)	RL, Min (dB)	Gain, Peak (dBi)	Efficiency, Avg. (%)
Internal	ISM 868/915	FPC	W3312B0100	860-930	-8	2.3	50
		PCB	W3502B0200	860-930	-6	2	78
	ISM+WiFi Combo		W3332B0150	863-928	-5	0.2	55
				2400-2500	-10	4.1	64
Style	App.	Type	Pulse Part No.	Frequency range (MHz)	RL, Min. (dB)	Gain, Peak (dBi)	Efficiency, Avg. (%)
External	ISM 868/915	Stick / Swivel	W1063	868-928	-7.5	3	-
			W1063M	868-928	-10	3	-
			SPDA24918	863-973	-10	2	-
		Stick / no Swivel	W1900	860-930	-10	1	-
			W1910	860-930	-10	1	-
			SPWH24RP918	863-973	-10	2	-
			W5012	868-928	-8	2	-
			W5017	868-928	-8	2	-
			W5021	868-928	-10	2.2	70
			App.	Type	Pulse Part No.	Frequency range (MHz)	RL, Min. (dB)
External	ISM 868/ 915	Stealth Blade	SB800SMA3	806-896	-10	2.14	80
			SB900SMA3	890-960	-10	2.14	80
			SB698SMA3	698-960	-10	2.14	80
			W1991	698-960	-10	2.1	50
Style	App.	Type	Pulse Part No.	Frequency range (MHz)	RL, Min. (dB)	Gain, Peak (dBi)	Efficiency, Avg. (%)
Outdoor (IP 65 or IP 67)	ISM 868/915	Stick / no Swivel	W5012	868-928	-8	2	-
			W5017	868-928	-8	2	-
			W5021	868-928	-10	2.2	70
		LP	LP800	806-960	-13	3	-
		LPT	LPT698/2700DMN	860-930 (698-960)	-10	3	80
		SLPT	SLPT698/2170DMN	860-930 (698-960)	-10	4	90
		Radome Omni	RO8061/21702NF	860-930 (824-960)	-10	1	-
			W5063	863-928	-10	1.5	-
			RO8063/21704NF	860-930 (806-960)	-10	3	-
			RO8605NF	860-930	-10	5	65
	RO3ISMNM	430-440 / 860-930	-10	3 / 3	90 / 65		
	ISM 868	Magnetic mount	MS3E800SMA	806-896	-10	4	-
	ISM 915		MS3E900SMA	890-960	-10	4	-

Note: 1. See datasheets for details. 2. Sales/FAE contact. Email: antennas.us@pulseelectronics.com. Phone: 800-ANTENNA (268-3662) or 360-944-7551.

ME requirement					
Antenna DIM. (L x W x H,mm)	GC-area (L x W,mm)	Board Size (L x W,mm)	Cable Type, Length (mm)	Connector type	Note
7 x 1.6 x 1.6	20 x 9.50	40 x 20	-	Feed trace on board	Vertical, tuned by stripline
10 x 3.2 x 4.0	10.80x8.25	80 x 37	-	Feed trace on board	Center edge
10 x 3.2 x 4.0	11.50 x 7	25 x 25	-	Feed trace on board	Corner, Small GC-area
12.4 x 8 x 2.5	8 x 40	100 x 40	-	Feed trace on board	Horizontal, Center top
2.5 x 8 x 8	6 x 11	100 x 40	-	Feed trace on board	Vertical, Corner
10 x 3.2 x 4	10.80x8.25	100 x 37	-	Feed trace on board	Center edge
10 x 3.2 x 1.5	40 x 16	96 x 40	-	Feed trace on board	Center Top
2.5 x 8 x 8	6 x 11	100 x 40	-	Feed trace on board	Vertical, Corner
12.4 x 8 x 2.5	8 x 40	100 x 40	-	Feed trace on board	Horizontal, Center top
45 x 10	3 x 45	118 x 110	-	Feed trace on board	Feed1: Dual WiFi Feed2: Dual ISM
40 x 15	3 x 40	118 x 110	-	Feed trace on board	
22x5x3	40.6 x 8.6	128.6x40.6	-	Feed trace on board	None
25.1x5x3	40.6 x 8.6	128.6x40.6	-	Feed trace on board	2 separated feeds
Antenna DIM. (L x W x H,mm)	Cable Alignment w/ Antenna		Cable Type, Length (mm)	Connector type	Note
75 x 15	PERP	-	L:100 D:1.13	U.FL compatible	
43 x 17 x 0.5	PERP	-	L:100 D:1.13	U.FL compatible	824-960, 1710-1990MHz
82 x 15 x 0.56	PERP	-	L:150 D:1.13	U.FL compatible	ISM 868/915 and 2.4GHz WiFi (two feed cables). Isolation: <-11dB.
Height (mm), straight [Bent]	Diameter (mm), Max [Min]	Package type	Cable Type, Length (mm)	Connector type	Note
195 [172]	13 [6]	A	-	RP-SMA (m)	
195 [172]	13 [6]	A	-	SMA (m)	
222 [202]	11 [6]	A	-	SMA (m)	SPDA17806/2170: TNC
49	8	E	Tested on ground plane (70x50mm)	SMA(m), Right Angle	W1901: RP-SMA(m), RA
49	10.4	F		RP-SMA (m)	W1911: RP-SMA(m)
82	15	C		RP-SMA (m)	SPWH24918: SMA
179	10	B1		RP-SMA (m)	IP65
179	10	B1		SMA (m)	IP65
179	10	B2		-	Right Angle RP-SMA (m)
Antenna DIM. (L x W x H,mm)	-	Package type	Cable Type, Length (mm)	Connector type	Note
Antenna DIM. (L x W x H,mm)	-	Package type	Cable Type, Length (mm)	Connector type	Note
131 x 18 x 1.5	-	D	RG174, L: 914	SMA (m)	IP65
131 x 18 x 1.5	-	D	RG174, L: 914	SMA (m)	IP65
105 x 26 x 2.1	-	D	RG316, L: 914	SMA (m)	IP65
106 x 26 x 2.1	-	D	RG316, L: 3048	SMA (m)	IP65
Height (mm),	Diameter (mm), Max [Min]	Package type	Cable Type, Length (mm)	Connector type	Note
179	10	B	-	RP-SMA (m)	IP65
179	10	B	-	SMA (m)	IP65
179	10	B2	-	Right Angle RP-SMA (m)	IP65
31	143 [95]	G	RG58, L: 914	SMA (m)	Tested on 12x12" GND
77	41	H	-	N (f)	Tested on 12x12" GND
79	38	I	-	N (f)	Tested on 19" DIA. GND
215	26 [22]	J or K	-	N (f) or N (m)	N (m): W5005
196	26 [22]	K	-	N (m)	
388	37 [33]	J or K	-	N (f) or N (m)	N (m): RO8063/2170NM
795	25 [22]	J	-	N (f)	Sigfox approved
541	37 [33]	J or K	-	N (f) or N (m)	Public safety
330	-	L	RG58, L: 914	SMA (m)	
330	-	L	RG58, L: 914	SMA (m)	



W3796



W3070



W3073



W3544A and W3544B

PULSE ANTENNAS FOR ISM 868/915MHZ

App.	Type	Pulse Part number	RF Performance			
			Frequency range (MHz)	RL Min. (dB)	Peak Gain (dBi)	
					Peak	Band edges
LTE	Composite	W3796	698-960	-6	1.5 (Avg. peak gain)	
			1427.9-1660.9	-5.5	2 (Avg. peak gain)	
			1695-2200	-6	5.5 (Avg. peak gain)	
			2300-2700	-6	5 (Avg. peak gain)	
Penta Band		W3544A	824-960	-3.7	0.5	1.8
			1710-1880	-4.6	2.9	2.3
			1850-1990	-8.6	2.4	1.7
			1920-2170	-5.6	2.2	1.1
		W3544B	824-960	-6.5	1	-0.7
			1710-1880	-5.7	2.7	1.7
			1850-1990	-9.3	2	1
			1920-2170	-5	1.8	0.2
Quad band (US)	Ceramic	W3073	824-894	-4.7	0.4	-2.6
			1710-1880	-3.5	2.3	0.7
			1850-1990	-5.9	2.5	1.6
			1920-2170	-3.3	2.2	0.9
Quad band (EU)		W3073	880-960	-3.8	1	-1.8
			1710-1880	-4.9	2.9	2
			1850-1990	-8	2.9	2.5
			1920-2170	-4.4	2.8	2.3
Dual band (EU)		W3070	880-960	-5.1	1.2	-0.4
			1710-1880	-5.7	2.5	1.5

NOTE: 1. "Stock" Stocked parts are typically available from Pulse distribution partners immediately. 2. * SE = Series and *SH = Shunt



Questions? Visit our website at: pulselarsenantennas.com

Efficiency (%)/(dB)		ME requirement			Note	Availability
		Antenna DIM. (LxWxH,mm)	GC-area W,mm)	(L x W,mm)		
Peak	Band edges					
65 (Avg.)		40 x 7 x 3	40.6 x 15	120 x 40.6	- Top mount: Horizontal - Matching: SE3.3nH+SH0.7pF; SH6.8nH	Stock
55 (Avg.)						
75 (Avg.)						
70 (Avg.)						
65	44	7.65 x 26 x 3	21 x 33.5 (W3544A)	110 x 50	1. Corner mount (vertical). 2.match- ing: *SE12nH	Stock
74	45					
74	64					
68	60					
70	53	7.65 x 26 x 3	50 x 18 (W3544B)	110 x 50	1. Top mount (Horizontal) 2.match- ing: 10nH	Stock
77	59					
77	69					
71	58					
51	28	10 x 3.2 x 4	40 x 10	105 x 40	1. Matching: SE10nH+SE12nH+SH- 12nH. 2.Tuning strip on PCB.	Stock
59	40					
59	54					
58	46					
60	34	10 x 3.2 x 4	40 x 10	105 x 40	1. Matching: *SE10nH+*SE10nH+*SH- 15nH. 2.Tuning strip on PCB.	Stock
70	54					
71	62					
67	59					
65	47	10 x 3.2 x 2	40 x 10	95 x 40	Matching: *SE18nH+ *SE10nH	Stock
60	50					



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