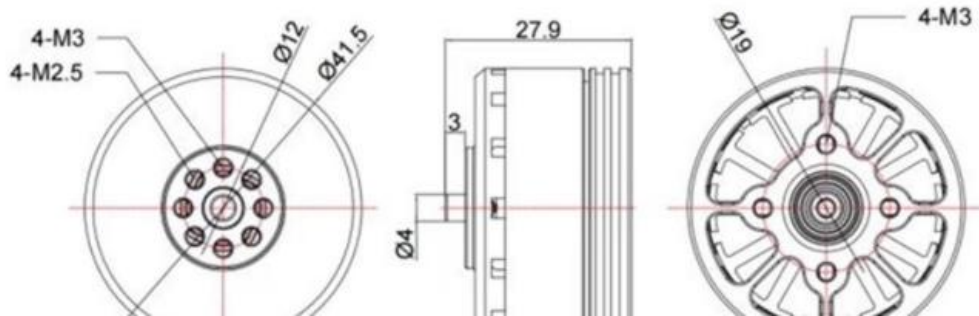


3509-430KV

HIGH-PERFORMANCE BRUSHLESS MOTOR

Application: 12–13-Inch Aerial Photography

ENGINEERING DRAWING OVERVIEW



Specification	Value
Outer Diameter	Ø41.5 mm
Total Height	27.9 mm
Shaft Diameter	Ø4 mm
Mounting Pattern	Ø19 mm (4-M3)
Auxiliary Pattern	Ø12 mm (4-M2.5)

BASIC PARAMETERS

Parameter	Value
KV Value	430
Configuration (Slots/Poles)	12N14P
Shaft Diameter	4 mm
Silicone Wire	18#
Motor Weight (including cable)	109 g
Phase Terminal Resistance (including cable)	132.00 mΩ
Working Voltage	6S
No-Load Current (10V)	0.5 A
Maximum Power	411.40 W
Maximum Current	17.41 A

PERFORMANCE TEST DATA (3509-430KV)

Propeller: 12-inch Folding Propeller

Test Voltage: 6S

Throttle (%)	Voltage (V)	Current (A)	Speed (RPM)	Thrust (gf)	Power (W)	Efficiency (gf/W)
20	24.02	0.32	1867	89.30	7.7	11.6
25	24.02	0.51	2319	148.26	12.1	12.2
30	24.01	0.74	2744	206.25	17.8	11.6
35	24.01	1.07	3191	285.23	25.6	11.1
40	23.99	1.48	3628	376.71	35.5	10.6
45	23.98	2.10	4139	489.92	50.3	9.7
50	23.96	2.70	4526	589.20	64.7	9.1
55	23.94	3.48	4924	717.45	83.2	8.6
60	23.92	4.34	5330	833.21	103.8	8.0
65	23.91	5.20	5681	945.26	124.4	7.6
70	23.88	6.28	6055	1085.85	150.0	7.2
75	23.85	7.40	6403	1207.72	176.4	6.8
80	23.82	8.74	6739	1326.16	208.2	6.4
85	23.77	10.42	7134	1477.97	247.8	6.0
90	23.75	11.84	7430	1650.15	281.1	5.9
95	23.71	13.31	7697	1743.69	315.7	5.5
100	23.70	13.64	7779	1794.31	323.3	5.6

* Technical specifications are based on manufacturer's lab environment testing. Actual performance may vary.

PERFORMANCE TEST DATA (3509-430KV)

Propeller: 13-inch Folding Propeller

Test Voltage: 6S

Throttle (%)	Voltage (V)	Current (A)	Speed (RPM)	Thrust (gf)	Power (W)	Efficiency (gf/W)
20	24.02	0.35	1829	116.04	8.4	13.8
25	24.02	0.58	2265	185.39	14.0	13.3
30	24.01	0.89	2676	269.13	21.4	12.6
35	24.00	1.34	3103	373.7	32.0	11.7
40	23.98	1.86	3513	478.02	44.6	10.7
45	23.96	2.64	3967	615.01	63.2	9.7
50	23.94	3.55	4389	758.95	84.9	8.9
55	23.92	4.47	4746	890.45	107.0	8.3
60	23.90	5.61	5125	1051.69	134.1	7.8
65	23.87	6.81	5463	1193.84	162.6	7.3
70	23.84	8.09	5775	1346.09	192.8	7.0
75	23.80	9.59	6089	1523.86	228.1	6.7
80	23.76	11.18	6403	1664.25	265.6	6.3
85	23.72	13.09	6688	1862.77	310.3	6.0
90	23.67	15.09	6959	2016	357.3	5.6
95	23.64	16.81	7211	2133.14	397.5	5.4
100	23.62	17.41	7273	2188.43	411.4	5.3

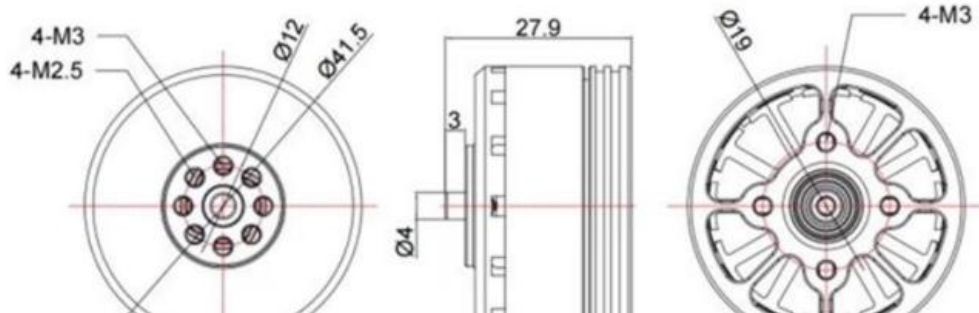
* Technical specifications are based on manufacturer's lab environment testing. Actual performance may vary.

3509-480KV

HIGH-PERFORMANCE BRUSHLESS MOTOR

Application: 12–13-Inch Aerial Photography

ENGINEERING DRAWING OVERVIEW



Specification	Value
Outer Diameter	Ø41.5 mm
Total Height	27.9 mm
Shaft Diameter	Ø4 mm
Mounting Pattern	Ø19 mm (4-M3)
Auxiliary Pattern	Ø12 mm (4-M2.5)

BASIC PARAMETERS

Parameter	Value
KV Value	480
Configuration (Slots/Poles)	12N14P
Shaft Diameter	4 mm
Silicone Wire	18#
Motor Weight (including cable)	106 g
Phase Terminal Resistance (including cable)	113.00 mΩ
Working Voltage	6S
No-Load Current (10V)	0.58 A
Maximum Power	517.60 W
Maximum Current	22.04 A

PERFORMANCE TEST DATA (3509-480KV)

Propeller: 12-inch Folding Propeller

Test Voltage: 6S

Throttle (%)	Voltage (V)	Current (A)	Speed (RPM)	Thrust (gf)	Power (W)	Efficiency (gf/W)
20	24.07	0.401	2036.1	113.4	9.7	11.747
25	24.07	0.636	2537.3	181.43	15.3	11.86
30	24.06	0.939	2988.6	250.62	22.6	11.097
35	24.06	1.369	3465	350.22	32.9	10.634
40	24.04	1.958	3957.1	454.05	47.1	9.649
45	24.02	2.669	4430.9	573.39	64.1	8.946
50	24.00	3.439	4849.1	694.07	82.5	8.409
55	23.98	4.414	5350	843.16	105.8	7.968
60	23.96	5.472	5762.8	979.41	131.1	7.471
65	23.92	6.696	6161.8	1116.35	160.2	6.969
70	23.88	8.215	6590.5	1269.9	196.2	6.474
75	23.84	9.647	6924.9	1412.69	230	6.143
80	23.8	11.138	7241.2	1553.69	265.1	5.892
85	23.74	13.191	7617.1	1706.96	313.2	5.461
90	23.7	14.635	7893.9	1813.44	346.9	5.228
95	23.66	16.864	8209.1	2038.91	399	5.111
100	23.65	17.262	8309.5	2057.48	408.2	5.041

* Technical specifications are based on manufacturer's lab environment testing. Actual performance may vary.

PERFORMANCE TEST DATA (3509-480KV)

Propeller: 13-inch Folding Propeller



Test Voltage: 6S

Throttle (%)	Voltage (V)	Current (A)	Speed (RPM)	Thrust (gf)	Power (W)	Efficiency (gf/W)
20	24.02	0.438	1988.3	141	10.5	13.403
25	24.01	0.752	2489.7	233.46	18	12.941
30	24	1.15	2928.2	328.25	27.6	11.894
35	23.98	1.718	3407	447.37	41.2	10.86
40	23.96	2.519	3887.4	591.21	60.4	9.793
45	23.94	3.516	4356.5	753.07	84.2	8.95
50	23.92	4.576	4759	904.09	109.4	8.263
55	23.89	5.711	5129.6	1051.6	136.5	7.707
60	23.86	7.136	5513.7	1234.37	170.2	7.251
65	23.82	8.597	5846.2	1392.25	204.8	6.799
70	23.78	10.459	6231.2	1574.94	248.7	6.333
75	23.73	12.287	6568	1727.07	291.6	5.924
80	23.68	14.378	6888.1	1905.65	340.5	5.596
85	23.64	16.547	7186	2062.29	391.2	5.272
90	23.56	19.379	7470	2266.26	456.6	4.963
95	23.51	21.436	7676.7	2429.13	503.9	4.821
100	23.49	22.037	7743.5	2467.86	517.6	4.768

* Technical specifications are based on manufacturer's lab environment testing. Actual performance may vary.

PACKING LIST

Standard accessories included with the supplied packaging reference.

No.	Image	Description	Qty.
1		3509-480KV Brushless Motor	1 pc
2		M3 × 8 mm Pan-Head Screws	4 pcs