

M5208 HighProt

基础参数 Specification I

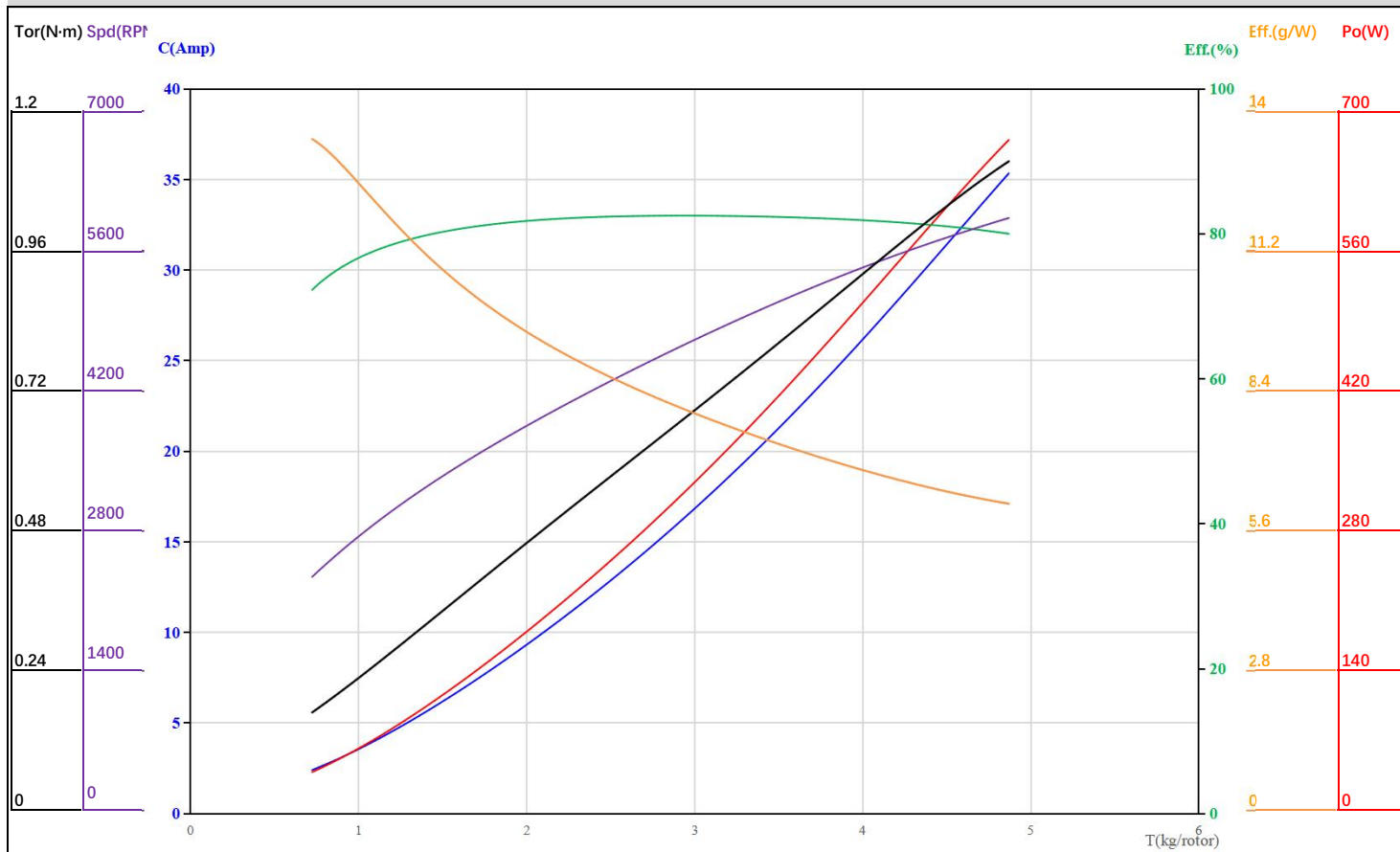
产品型号 Model	M5208 HighProt-320/380KV	防尘防水等级 Protection level	IP45
电机尺寸 Motor Size	Φ58*H29.8mm	槽极数 Slot& Pole	24槽28极 24N28P
定子尺寸 Stator Size	Φ52*H8mm	电机整体动平衡标准 Dynamic balance	≤8mg
定子工艺 Stator process	高品质硅钢片, 防锈处理, 耐180°C高温涂覆 High standard silicon steel sheet, rust proof, 180°C high temperature resistance paint-coat	轴承型号 Bearing	高品质防水轴承 Water proof bearing
漆包线等级 Enamelled wire	220°C	出轴轴径 Motor axle diameter	Φ4mm
磁铁等级 Magnet	180°C	桨叶安装孔尺寸 Props mounting dimensions	4*M3@D12mm, 4*M3@D18mm
线圈绝缘测试 Isolation test	500V交流耐压测试 500V AC high voltage resistance test	电机安装孔尺寸 Motor mounting dimensions	4*M3@D25mm
额定输入功率 Rated power input	150W	额定输出功率 Rated power output	127.5W

技术参数 Specification II

KV值 KV	320	380
额定电压 Battery(LiPo)	LiPo-6S	LiPo-6S
空载电流 No-load current	1.5A	1.8A
最大电流/A(非密闭环境温度 ≤25 °C) Maximum current (Non-hermetic Ambient Temperature ≤ 25°C)	55 A	45A
最大功率 Max power	964W	986W
最大拉力 Max thrust	5.4kg	5.2kg
相间内阻 Resistance	55.8 mΩ	43.4 mΩ
出线规格 Wire Size	16AWG	16AWG
出线长度 Wire length	80mm	80mm
电机重量(含线) Weight (With wire)	166g	165.5g

320KV+MSC 20x6.0 负载性能参数 Load performance parameters

曲线图 Graph



拉力数据表 Motor Propeller Pull Test Data

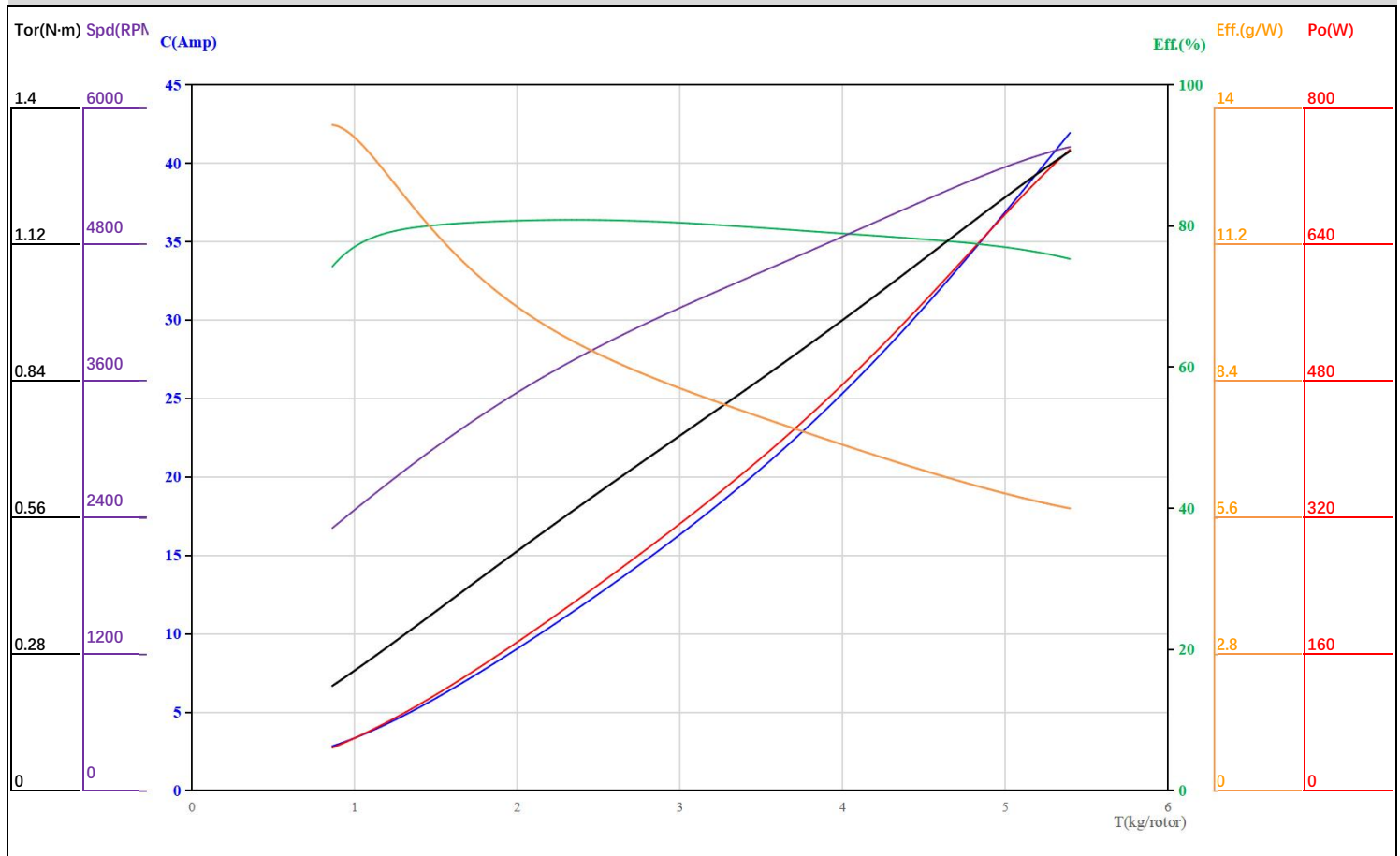
Voltage(V) 工作电压	Propeller 螺旋桨	Throttle(%) 油门	Thrust(g) 拉力	Current(A) 电流	Power Input(W) 输入功率	Speed(RPM) 转速	Efficiency(g/W) 力效	Torque(N-m) 扭矩	Power Output(W) 输出功率	Temperature(°C) 电机温度
23V (6S LiPo)	MSC 20x6.0	33%	765	2.6	59.1	2349	12.9	0.18	50.2	60.0
		35%	857	2.9	67.6	2483	12.7	0.19	57.5	
		37%	960	3.4	77.9	2624	12.3	0.22	66.2	
		39%	1070	3.9	89.7	2766	11.9	0.24	76.2	
		42%	1243	4.8	109.9	2976	11.3	0.28	93.4	
		45%	1422	5.7	132.4	3176	10.7	0.32	112.5	
		48%	1602	6.8	156.6	3365	10.2	0.36	133.1	
		51%	1782	7.9	182.2	3542	9.8	0.40	154.8	
		54%	1961	9.1	208.9	3710	9.4	0.44	177.5	
		57%	2140	10.3	236.8	3871	9.0	0.48	201.3	
		60%	2321	11.6	266.2	4028	8.7	0.52	226.3	
		63%	2505	12.9	297.5	4183	8.4	0.56	252.9	
		66%	2696	14.4	331.1	4338	8.1	0.60	281.5	
		69%	2894	16.0	367.7	4495	7.9	0.64	312.5	
		72%	3101	17.7	407.7	4654	7.6	0.69	346.6	
		75%	3318	19.6	451.6	4814	7.3	0.74	383.8	
		78%	3543	21.7	499.3	4974	7.1	0.79	424.4	
		81%	3775	23.9	550.7	5131	6.9	0.84	468.1	
		84%	4008	26.3	604.5	5280	6.6	0.90	513.8	
		87%	4236	28.6	658.8	5417	6.4	0.95	560.0	
		90%	4450	30.9	710.8	5537	6.3	0.99	604.2	
		100%	4869	35.3	813.3	5754	6.0	1.08	691.3	

*以上数据为好盈实验室于室温25°C、海平面高度，变化油门输入调节测得，电机温度为65%油门运行10分钟数据，仅供参考。

*The above data was measured by HOBBYWING Laboratory at room temperature 25°C, at sea level, with varying throttle input. The motor temperature is measured after running for 10 minutes at 65% throttle, for reference only.

320KV+MSC 21x6.3 负载性能参数 Load performance parameters

曲线图 Graph



拉力数据表 Motor Propeller Pull Test Data

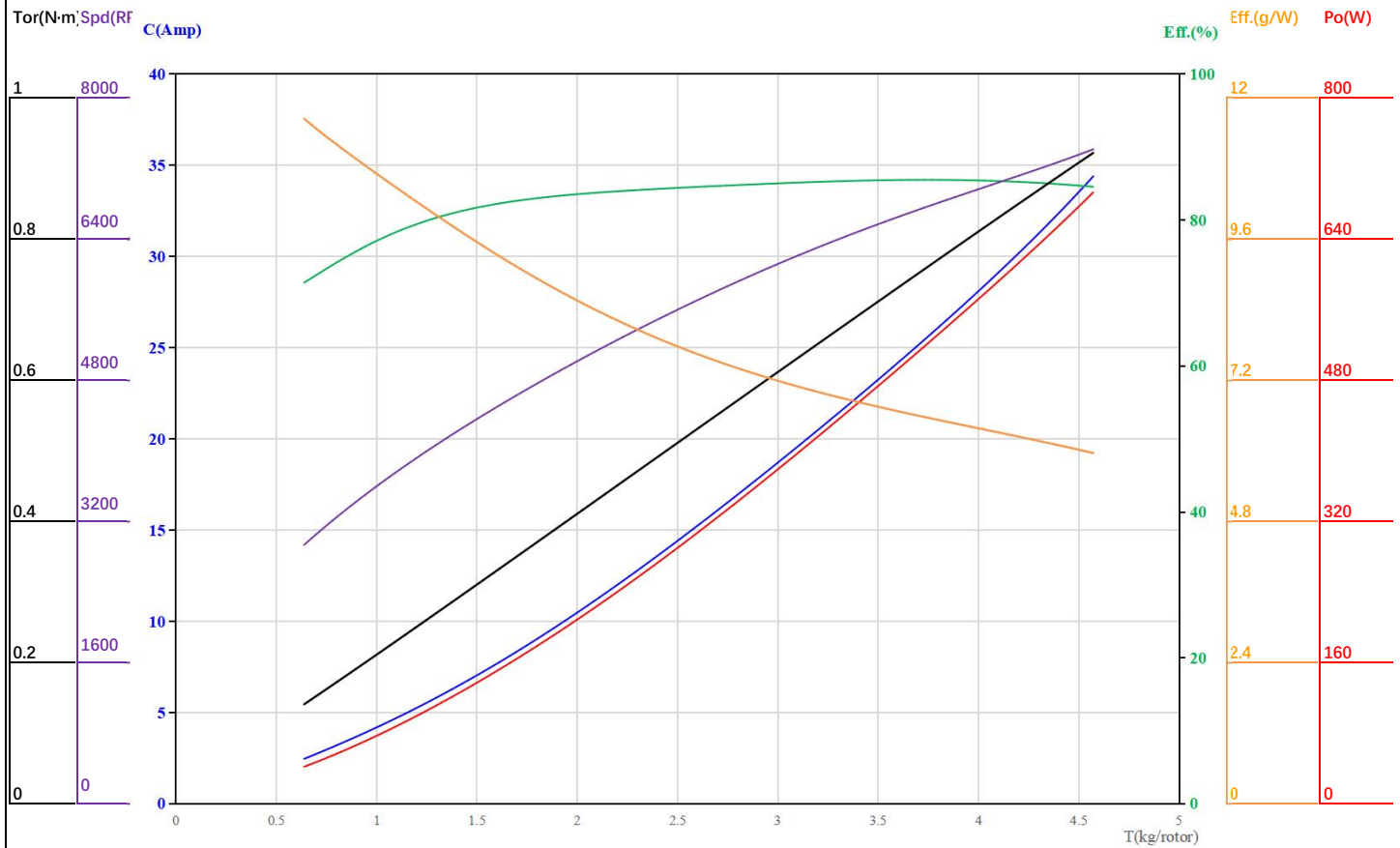
Voltage(V) 工作电压	Propeller 螺旋桨	Throttle(%) 油门	Thrust(g) 拉力	Current(A) 电流	Power Input(W) 输入功率	Speed(RPM) 转速	Efficiency(g/W) 力效	Torque(N-m) 扭矩	Power Output(W) 输出功率	Temperature(°C) 电机温度
23V (6S LiPo)	MSC 21x6.3	33%	923	3.0	70.2	2299	13.1	0.22	59.7	82.0
		35%	1042	3.5	81.3	2433	12.8	0.25	69.1	
		37%	1164	4.1	94.1	2567	12.4	0.28	80.0	
		39%	1287	4.7	108.4	2700	11.9	0.30	92.1	
		42%	1475	5.7	132.3	2895	11.1	0.35	112.5	
		45%	1666	6.9	158.8	3083	10.5	0.40	135.0	
		48%	1861	8.1	187.4	3263	9.9	0.44	159.3	
		51%	2061	9.5	217.8	3434	9.5	0.49	185.2	
		54%	2265	10.9	250.1	3597	9.1	0.54	212.6	
		57%	2473	12.3	284.3	3752	8.7	0.58	241.6	
		60%	2688	13.9	320.5	3901	8.4	0.63	272.4	
		63%	2907	15.6	359.1	4045	8.1	0.68	305.3	
		66%	3133	17.4	400.5	4186	7.8	0.73	340.4	
		69%	3363	19.3	445.0	4325	7.6	0.79	378.3	
		72%	3598	21.4	493.1	4466	7.3	0.84	419.1	
		75%	3835	23.7	544.9	4609	7.0	0.89	463.1	
		78%	4073	26.1	600.2	4753	6.8	0.95	510.2	
		81%	4308	28.6	658.6	4897	6.5	1.01	559.8	
		84%	4537	31.2	718.7	5037	6.3	1.06	610.9	
		87%	4756	33.8	778.7	5166	6.1	1.12	661.9	
		90%	4957	36.3	836.0	5278	5.9	1.17	710.6	
		100%	5399	41.9	964.6	5471	5.6	1.27	819.9	

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380KV+MSC 17x5.8 负载性能参数 Load performance parameters

曲线图 Graph



拉力数据表 Motor Propeller Pull Test Data

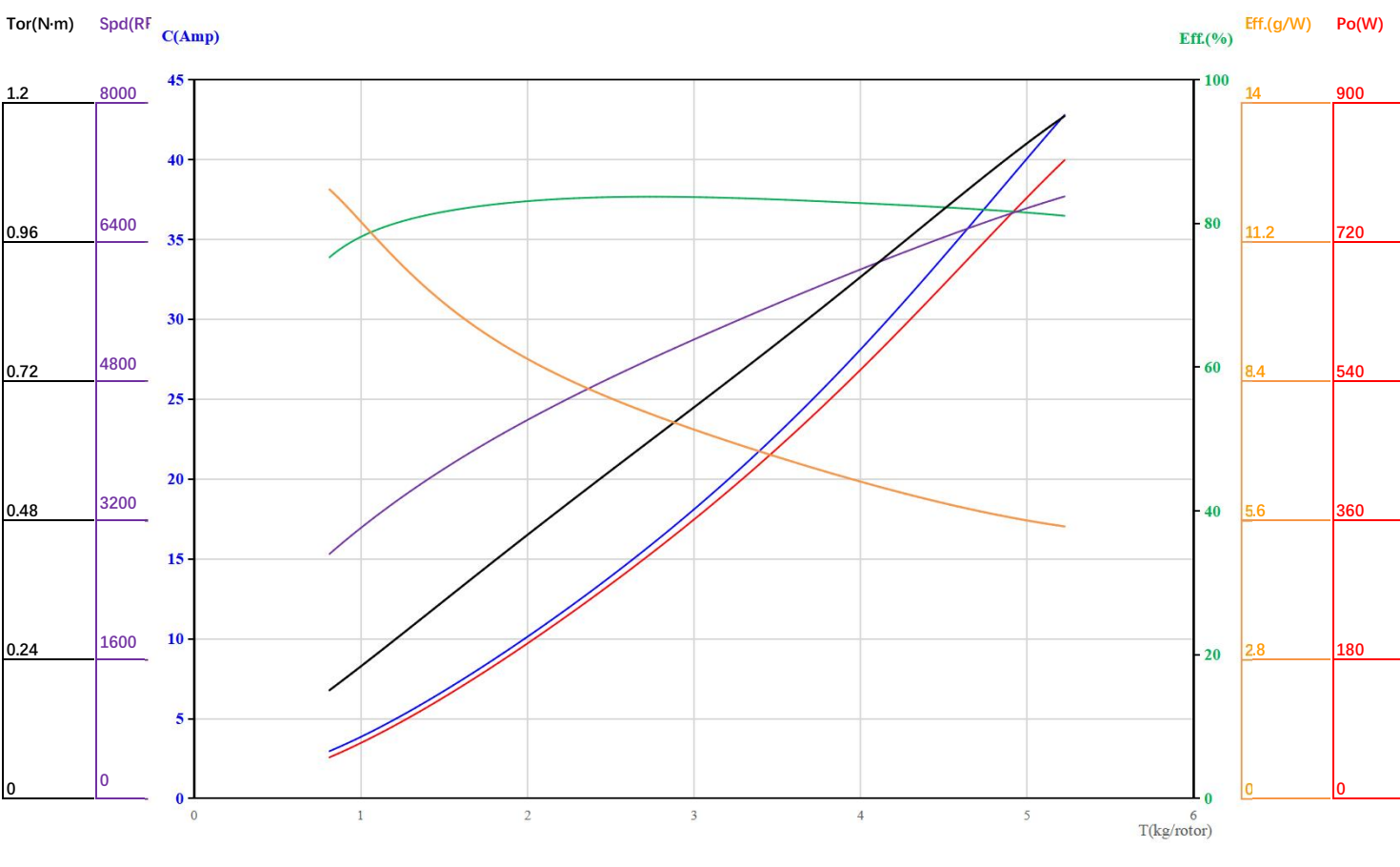
Voltage(V) 工作电压	Propeller 螺旋桨	Throttle(%) 油门	Thrust(g) 拉力	Current(A) 电流	Power Input(W) 输入功率	Speed(RPM) 转速	Efficiency(g/W) 力效	Torque(N-m) 扭矩	Power Output(W) 输出功率	Temperature(°C) 电机温度
23V (6S LiPo)	MSC 17x5.8	33%	658	2.5	58.6	2875	11.2	0.14	49.8	53.0
		35%	737	2.9	67.0	3026	11.0	0.15	57.0	
		37%	825	3.3	76.5	3185	10.8	0.17	65.1	
		39%	919	3.8	87.1	3347	10.6	0.19	74.0	
		42%	1067	4.5	104.5	3587	10.2	0.22	88.8	
		45%	1220	5.4	123.8	3821	9.9	0.25	105.2	
		48%	1375	6.3	144.7	4046	9.5	0.28	123.0	
		51%	1533	7.2	167.2	4263	9.2	0.31	142.1	
		54%	1693	8.3	191.4	4472	8.8	0.34	162.7	
		57%	1856	9.4	217.6	4678	8.5	0.37	184.9	
		60%	2024	10.7	245.8	4881	8.2	0.40	208.9	
		63%	2199	12.0	276.6	5084	8.0	0.44	235.1	
		66%	2383	13.5	310.2	5290	7.7	0.47	263.7	
		69%	2576	15.0	347.0	5497	7.4	0.51	294.9	
		72%	2781	16.8	387.1	5707	7.2	0.55	329.0	
		75%	2996	18.7	430.5	5915	7.0	0.59	365.9	
		78%	3222	20.7	477.0	6120	6.8	0.63	405.5	
		81%	3454	22.8	526.1	6317	6.6	0.68	447.2	
		84%	3688	25.0	577.1	6504	6.4	0.72	490.5	
		87%	3918	27.3	628.7	6677	6.2	0.77	534.4	
		90%	4134	29.5	679.5	6837	6.1	0.81	577.6	
		100%	4572	34.4	792.7	7176	5.8	0.89	673.8	

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380KV+MSC 18x6.1 负载性能参数 Load performance parameters

曲线图 Graph



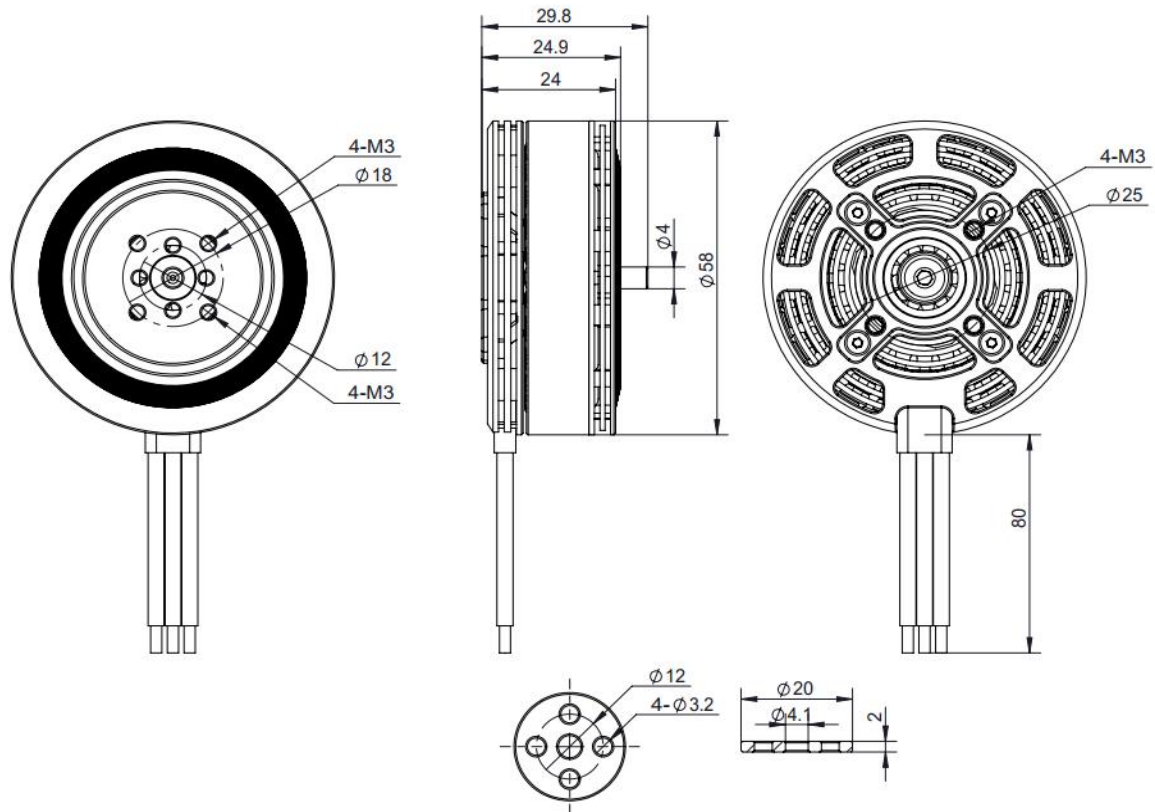
拉力数据表 Motor Propeller Pull Test Data

Voltage(V) 工作电压	Propeller 螺旋桨	Throttle(%) 油门	Thrust(g) 拉力	Current(A) 电流	Power Input(W) 输入功率	Speed(RPM) 转速	Efficiency(g/W) 力效	Torque(N-m) 扭矩	Power Output(W) 输出功率	Temperature(°C) 电机温度
23V (6S LiPo)	MSC 18x6.1	33%	838	3.1	71.1	2764	11.8	0.19	60.4	68.0
		35%	944	3.6	82.6	2927	11.4	0.21	70.2	
		37%	1051	4.1	95.1	3085	11.1	0.23	80.8	
		39%	1160	4.7	108.7	3238	10.7	0.26	92.4	
		42%	1327	5.7	130.9	3458	10.1	0.29	111.3	
		45%	1499	6.7	155.3	3668	9.7	0.33	132.0	
		48%	1675	7.9	181.8	3871	9.2	0.37	154.5	
		51%	1858	9.1	210.5	4067	8.8	0.41	178.9	
		54%	2048	10.5	241.5	4260	8.5	0.45	205.3	
		57%	2245	11.9	275.1	4449	8.2	0.49	233.9	
		60%	2450	13.5	311.5	4638	7.9	0.54	264.8	
		63%	2663	15.2	351.1	4825	7.6	0.58	298.4	
		66%	2884	17.1	394.2	5013	7.3	0.63	335.0	
		69%	3113	19.1	441.0	5201	7.1	0.68	374.8	
		72%	3348	21.3	491.8	5389	6.8	0.73	418.1	
		75%	3588	23.7	546.7	5577	6.6	0.78	464.7	
		78%	3830	26.2	605.3	5762	6.3	0.83	514.5	
		81%	4072	28.9	666.7	5942	6.1	0.89	566.7	
		84%	4308	31.7	729.7	6112	5.9	0.94	620.3	
		87%	4535	34.4	792.2	6270	5.7	0.99	673.4	
		90%	4746	37.0	851.6	6411	5.6	1.04	723.9	
		100%	5225	42.8	986.0	6700	5.3	1.14	838.1	

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尺寸图 Dimension figure



应用搭配推荐 Recommended application combinations

旋翼电机 Motor	M5208 HighProt-320/380KV
旋翼桨叶 Propeller	MSC 20x6.0/MSC 21x6.3/MSC 17x5.8/MSC 18x6.1
搭配电调 ESC	XRotor Pro H60A 6S
电池电压 Battery	6S LiPo
单轴应用拉力区间 Takeoff weight / rotor	1.4~1.6kg
四轴最大起飞重量 Takeoff weight of quadrotor	5.6~6.4kg