| Work Area: | | | Idle Current | Motor | Amps In | Watts In | Rec Min | Rec Max |
|---|---|---|---|---|---|---|---|---|
| Motor Data Sheet Info | Wt. grams | Kv | Io | Resistance | Max Con. | Max Con. | # of Cells | # of Cells |
| Racerstar 1806/2280Kv | 21 | 2280 | 0.50 | | 12 | 100 | 1 | 3 |

| Assumed Idle Factors | Av Volts In | Idle I | Resistance | Watts |
|---|---|---|---|---|
| 2C | 7.4 | 0.5 | 14.8 | 3.7 |
| 3C | 11.1 | 0.5 | 22.2 | 5.55 |

| Work Area: | | | | | | Motor | Watts | Prop | Thrust | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Propellor Data Sheet Info | Mfg Name | Diameter | Pitch | # of Cells | Voltage | Amps In | In | RPM | Grams | Kv | RE |
| 1 Mfg Data 1806/2280Kv | MFG Data | 5.0 | 3.0 | 2 | 7.4 | 4.6 | 34.04 | 16872 | 183 | 2280 | 496 |
| 2 Mfg Data 1806/2280Kv | MFG Data | 6.0 | 4.0 | 2 | 7.4 | 7 | 51.80 | 16872 | 288 | 2280 | 326 |
| 3 Mfg Data 1806/2280Kv | MFG Data | 5.0 | 3.0 | 3 | 11.1 | 8.3 | 92.13 | 25308 | 390 | 2280 | 275 |
| 4 Mfg Data 1806/2280Kv | MFG Data | 6.0 | 4.0 | 3 | 11.1 | 11.5 | 127.65 | 25308 | 468 | 2280 | 198 |
| 5 Racerstar 1806/2280Kv | Gemfan EP | 5.0 | 3.0 | 2 | 8.05 | 3.35 | 26.97 | 18424 | 169 | 2289 | 683 |
| 6 Racerstar 1806/2280Kv | Gemfan EP | 6.0 | 3.0 | 2 | 7.9 | 4.69 | 37.05 | 16932 | 232 | 2143 | 457 |
| 7 Racerstar 1806/2280Kv | APC E | 6.0 | 4.0 | 2 | 7.91 | 6.52 | 51.57 | 14435 | 227 | 1825 | 280 |
| 8 Racerstar 1806/2280Kv | Gemfan EP | 5.0 | 3.0 | 3 | 12.3 | 6.46 | 79.51 | 26338 | 342 | 2141 | 331 |
| 9 Racerstar 1806/2280Kv | Gemfan EP | 6.0 | 3.0 | 3 | 12.17 | 8.96 | 109.04 | 23269 | 455 | 1912 | 213 |
| 10 Racerstar 1806/2280Kv | APC E | 6.0 | 4.0 | 3 | 12.02 | 10.97 | 131.86 | 18461 | 397 | 1536 | 140 |

| Results: | Watts Output | System Eff. | (g/w) Eff. | Rec. ESC Amps Min | # LiPo Cells | Batt. mAh | Safe C-rate | Flight Time |
|---|---|---|---|---|---|---|---|---|
| 1 Mfg Data 1806/2280Kv | 30 | 89% | 5.38 | 14 | 2 | 300 | 19 | 5 |
| 2 Mfg Data 1806/2280Kv | 48 | 93% | 5.56 | 14 | 2 | 400 | 22 | 5 |
| 3 Mfg Data 1806/2280Kv | 87 | 94% | 4.23 | 14 | 3 | 500 | 21 | 5 |
| 4 Mfg Data 1806/2280Kv | 122 | 96% | 3.67 | 14 | 3 | 600 | 24 | 5 |
| 5 Racerstar 1806/2280Kv | 23 | 85% | 6.27 | 14 | 2 | 200 | 21 | 5 |
| 6 Racerstar 1806/2280Kv | 33 | 89% | 6.26 | 14 | 2 | 300 | 20 | 5 |
| 7 Racerstar 1806/2280Kv | 48 | 92% | 4.40 | 14 | 2 | 400 | 20 | 5 |
| 8 Racerstar 1806/2280Kv | 73 | 92% | 4.30 | 14 | 3 | 400 | 20 | 5 |
| 9 Racerstar 1806/2280Kv | 103 | 94% | 4.17 | 14 | 3 | 500 | 22 | 5 |
| 10 Racerstar 1806/2280Kv | 126 | 95% | 3.01 | 14 | 3 | 600 | 23 | 5 |

**Notes:**

**1) Flight time based on 100% Throttle continuous**

**2) C-Rate Safety Factor is 1.25 times Amps in**

**3) Choosing a smaller Batt requires Higher C-Rate!**