

AEROTECH F30FJ

CERTIFIED VALUES

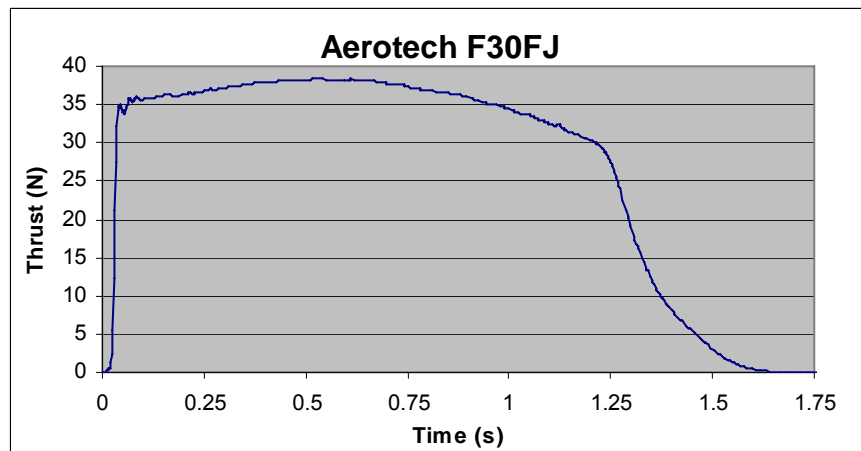
Total Impulse: 47.0 Newton-seconds
Delays: 4, 6, 8 seconds
Propellant Type: Fast Jack
Propellant Mass: 31.2 grams
Casing Dimensions: 24mm × 90mm
Certification Date: July 26, 2010
Certification Type: Model Rocket Motor

STATIC TEST DATA

Date Tested: July 22, 2010
Total Impulse: 47.0 Newton-seconds (σ 0.5)
Peak Thrust: 40.6 Newtons (σ 2.0)
Burn Time: 1.51 seconds (σ 0.03)
Average Thrust: 30.4 Newtons (σ 3.2)
Mass After Firing: 33.6 grams

Delay Time(sec.)	8	6	4
Average Measured Delay(sec.)	8.73	5.30	3.38
Initial Mass (gm.)	70.6	70.3	69.5

TYPICAL THRUST-TIME CURVE



REMARKS



Data File #	Engine	Total Impulse	Max Thrust	Avg Thrust	Burn Time	Delay Time	Init Weight	Fired Weight
100722W2	F30-8FJ	46.59	37.92	30.47	1.529	9.11	70.6	33.4
100722W2	F30-8FJ	46.75	39.41	31.29	1.494	7.88	70.8	33.6
100722W2	F30-8FJ	47.50	40.62	32.18	1.476	8.73	70.5	33.4
100722W2	F30-8FJ	46.95	39.53	31.38	1.496	9.21	70.6	33.3
100722W2	F30-6FJ	46.98	39.81	31.74	1.480	6.21	70.2	33.5
100722W2	F30-6FJ	47.10	40.07	31.63	1.489	4.73	70.3	33.8
100722W2	F30-6FJ	47.02	41.58	31.14	1.510	5.74	70.3	33.4
100722W2	F30-6FJ	48.01	43.33	32.40	1.482	4.52	70.2	35.5
100722W2	F30-4FJ	46.45	38.21	29.97	1.550	2.75	69.4	33.1
100722W2	F30-4FJ	46.44	44.12	20.86	1.565	4.43	69.5	33.1
100722W2	F30-4FJ	47.09	42.36	31.48	1.496	2.97	69.6	33.5
Average		47.0	40.6	30.4	1.51		70.2	33.6

Std Dev		0.462	2.005	3.243	0.030
Std Dev %		1.0%	4.9%	10.7%	2.0%

Range	Indicated	Actual	Actual	Actual	Actual	Average
2.5 to 5.5	4	2.75	4.43	2.97		3.38
4.5 to 7.5	6	6.21	4.73	5.74	4.52	5.30
6.5 to 9.5	8	9.11	7.88	8.73	9.21	8.73

; @File: F30FJ.txt, @Pts-I: 998, @Pts-O: 33, @Sm: 1, @CO: 5%
; @TI: 46.9665, @TIA: 46.8589, @TIE: 0.0%, @ThMax: 38.452, @ThAvg: 31.207, @Tb: 1.505
; Exported using ThrustCurveTool, www.ThrustGear.com
F30 24 90 8 6 4 0.0312 0.07 Aerotech/RCS

0.000 0.01239305
0.024 1.801758
0.026 3.49808
0.028 8.12845
0.032 30.7688
0.034 34.0732
0.036 31.9674
0.040 37.499
0.042 34.5469
0.044 34.0611
0.046 36.5413
0.050 32.7187
0.054 34.6949
0.056 32.7199
0.060 35.7104
0.064 34.9034
0.066 36.5495
0.070 35.2213
0.074 36.0751
0.078 35.157
0.088 36.2361
0.098 35.4002
0.540 38.452
0.862 36.4751
1.120 32.581
1.234 29.0596
1.262 25.7914
1.324 15.30658
1.366 10.51149
1.530 1.888078
1.632 0.1504397
1.994 0.01675642
1.995 0