

AEROTECH F23FJ

CERTIFIED VALUES

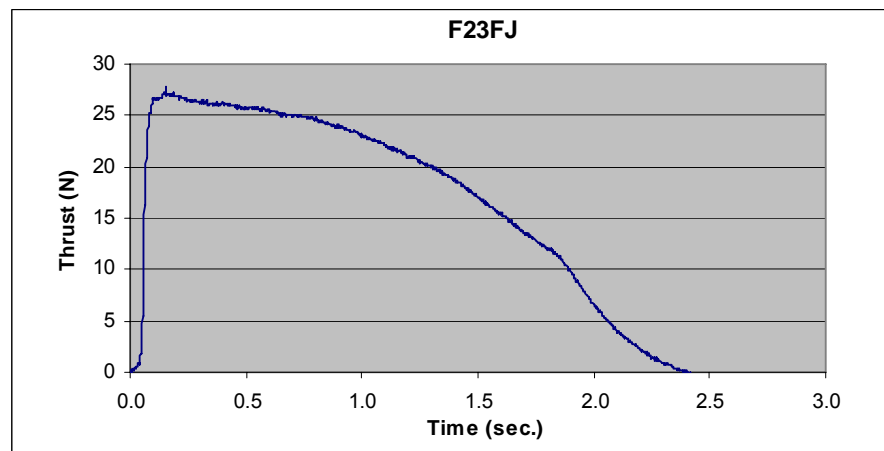
Total Impulse: 41.2 Newton-seconds
Delays: 4, 7 seconds
Propellant Type: Black Max
Propellant Mass: 30.0 grams
Casing Dimensions: 29mm × 83mm
Certification Date: August 24, 2007
Certification Type: Model Rocket Motor

STATIC TEST DATA

Date Tested: May 28, 2007
Total Impulse: 41.2 Newton-seconds (σ 0.8)
Peak Thrust: 29.8 Newtons (σ 3.6)
Burn Time: 2.21 seconds (σ 0.07)
Average Thrust: 18.58 Newtons (σ 0.78)
Mass After Firing: 46.6grams

Delay Time(sec.)	4	7	
Average Measured Delay(sec.)	3.75	7.22	
Initial Mass (gm.)	82.3	83.2	

TYPICAL THRUST-TIME CURVE



REMARKS



Data File #	Engine	Total Impulse	Max Thrust	Avg. Thrust	Burn Time	Delay Time	Init Weight	Fired Weight
070524W05	F23-7FJ	41.6	32.5	19.57	2.12	7.23	82.9	46.2
070524W06	F23-7FJ	41.5	37.6	18.10	2.28	6.78	83.1	46.0
070524W07	F23-7FJ	41.9	31.5	19.48	2.14	7.14	83.6	47.1
070524W08	F23-7FJ	40.8	31.5	18.80	2.17	7.47	83.3	46.8
070524W09	F23-7FJ	41.0	28.7	18.23	2.23	7.50	83.2	46.5
070524W10	F23-4FJ	42.6	29.7	19.38	2.19	3.38	81.9	46.3
070524W11	F23-4FJ	41.1	25.6	17.47	2.35	4.09	82.8	46.9
070524W12	F23-4FJ	41.9	28.5	19.00	2.20	3.84	82.0	46.3
070524W13	F23-4FJ	39.8	27.2	18.29	2.17	3.36	82.3	46.9
070524W14	F23-4FJ	40.1	25.8	17.52	2.29	4.10	82.6	47.0
Average		41.2	29.8	18.58	2.21		82.8	46.6

Std Dev		0.832	3.605	0.778	0.072			
Std Dev %		2.0%	12.1%	4.2%	3.3%			

Range	Indicated	Actual	Actual	Actual	Actual	Actual	Average
2.5 to 5.5	4	3.38	4.09	3.84	3.36	4.10	3.75

5.5 to 8.5	7	7.23	6.78	7.14	7.47	7.50	7.22
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; @File: F23FJ.txt, @Pts-I: 1411, @Pts-O: 31, @Sm: 0, @CO: 5%
; @TI: 40.694, @Tla: 40.6091, @Tle: 0.0%, @ThMax: 27.5128, @ThAvg: 18.45028, @Tb: 2.201
; Exported using ThrustCurveTool, www.ThrustGear.com
F23FJ 29 83 4,7 0.03 0.083 Aerotech

0.032 0.289468
0.044 1.108885
0.048 1.794702
0.054 5.29949
0.058 10.03786
0.06 13.77868
0.064 17.61302
0.07 20.6057
0.072 20.9575
0.078 23.6518
0.08 23.5761
0.082 24.8096
0.092 25.4019
0.096 26.3906
0.132 26.3193
0.154 26.778
0.156 27.5128
0.158 26.6177
0.188 26.9339
0.21 26.1234
0.216 26.5999
0.246 25.9541
0.4 25.9764
0.654 24.5825
0.802 24.4801
1.338 19.35428
1.776 11.9528
1.854 11.0844
2.05 4.96994
2.246 1.362726
2.374 0.0

Updated: August 31, 2007