AEROTECH G80

CERTIFIED VALUES

Total Impulse: 136.7 Newton-seconds

Delays: 7, 10, 13

Propellant Type: Blue Thunder

Propellant Mass: 62.5 grams

Casing Dimensions: 29mm × 128mm

Certification Date: November 28, 2007

Certification Type: Model Rocket Motor

STATIC TEST DATA

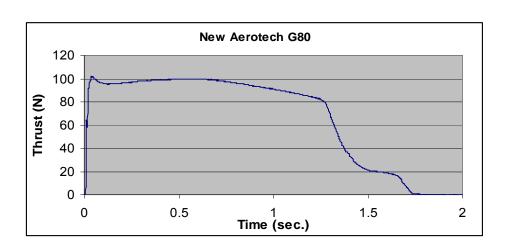
Date Tested: November 25, 2007

Total Impulse:136.6 Newton-seconds(σ 3.1)Peak Thrust:108.5 Newtons(σ 7.4)Burn Time:1.70 seconds(σ 0.03)Average Thrust:77.6 Newtons(σ 2.1)

Mass After Firing: 59.3grams

Delay Time(sec.)	7	10	13
Average Measured Delay(sec.)	5.88	9.09	12.85
Initial Mass (gm.)	127.6	127.9	129.3

TYPICAL THRUST-TIME CURVE



REMARKS

Motor can be identified from previous versions of the Aerotech G80 by the thrust ring molded into the case.



Data File		Total	Max	Avg.	Burn	Delay	Initial	Fired
#	Engine	Impulse	Thrust	Thrust	Time	Time	Weight	Weight
071125W03	G80-7T	135.2	116.2	73.5	1.762	5.77	127.7	58.7
071125W04	G80-7T	140.5	115.6	78.3	1.704	5.75	127.4	59.1
071125W05	G80-7T	140.3	116.8	81.6	1.679	5.86	127.6	59.2
071125W06	G80-7T	135.4	101.8	77.2	1.691	6.13	127.5	59.4
071125W07	G80-10T	138.1	106.1	78.2	1.693	9.16	127.9	59.2
071125W08	G80-10T	139.9	118.8	76.9	1.748	8.12	127.5	59.2
071125W09	G80-10T	137.1	104.9	79.3	1.684	10.00	128.4	59.3
071125W10	G80-13T	135.4	102.1	77.1	1.706	12.39	129.0	59.5
071125W11	G80-13T	131.5	100.5	76.5	1.665	12.59	129.6	59.8
071125W12	G80-13T	133.0	102.2	77.6	1.681	13.58	129.4	59.9
Average		136.64	108.5	77.6	1.701		128.2	59.3
						_		
Std Dev		3.096	7.400	2.080	0.031]		
Std Dev %		2.3%	6.8%	2.7%	1.8%			
						_		
Range	Indicated	Actual	Actual	Actual	Actual	Average	-	
7	5.5 to 8.5	5.77	5.75	5.86	6.13	5.88		
10	8.0 to 12.0	9.16	8.12	10.00		9.09		
13	10.4 to 15.6	12.39	12.59	13.58		12.85		

; @File: NewATG80.txt, @Pts-I: 905, @Pts-O: 31, @Sm: 0, @CO: 5%

; @TI: 133.2377, @TIa: 133.1309, @TIe: 0.0%, @ThMax: 102.2, @ThAvg: 77.9911, @Tb: 1.707

; Exported using ThrustCurveTool, www.ThrustGear.com

G78 29 128 7,10,13 0.0625 0.1282 RCS/Aerotech

0.0060 1.158086 0.0080 7.48984 0.01 33.7575 0.012 64.5955 0.014 62.9316 0.016 58.8272 0.018 74.9118 0.02 85.0062 0.022 91.1072 0.026 93.9913 0.028 98.4284 97.652 0.032 0.038 102.2 0.074 97.3192 0.124 95.4334 0.376 99.3159 0.68 99.4268 0.994 91.6619 1.2459 83.0095 1.2819 77.3522 1.3159 61.9332 1.3599 44.6285 1.4239 29.0986 1.5039 21.2227 1.5979 19.33693 1.6559 16.34188 1.6759 13.90147 1.6779 11.79384 1.7139 5.0938 1.7339 1.388816

0.0

1.8079