

ESTES C5-3

CERTIFIED VALUES

Total Impulse: 7.79 newton-seconds
Delays: 3

Propellant Type: black powder
Propellant Mass: 11.0 grams

Casing Dimensions: 18 mm X 70 mm

Certification Type: Model Rocket

STATIC TEST DATA

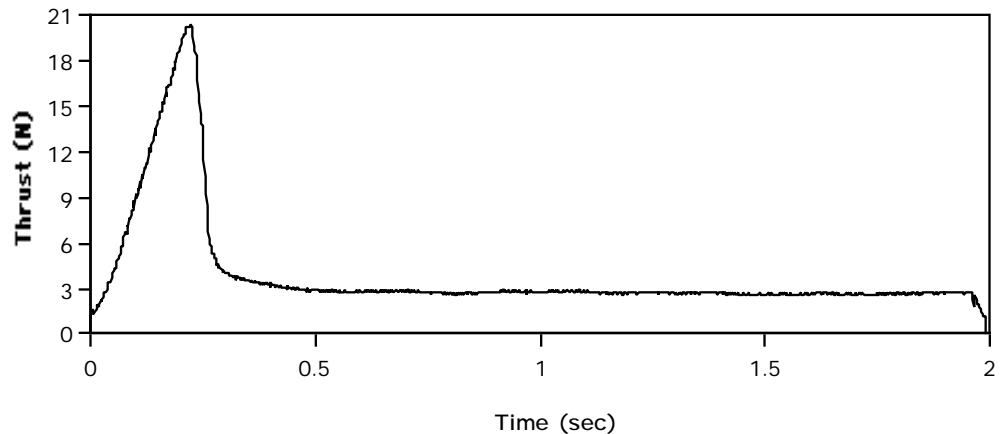
Date Tested: Dec 15, 2019

Total Impulse: 7.79 newton-seconds (0.11)
Peak Thrust: 20.41 newtons (0.41)
Burn Time: 1.99 seconds (0.04)
Average Thrust: 3.91 newtons

Mass After Firing: 10.1 grams

Delay Time	Average Measured Delay	Initial Mass
3	3.30	23.8 g

TYPICAL THRUST-TIME CURVE



REMARKS



FILE NAME	MANUF	MOTOR	IT	F-MAX	F-AVG	T-BURN	T-DELAY	M-INIT	M-BO
E191201	ESTES	C5-3	7.64	20.22	3.72	2.05	3.43	23.8	10.1
E191202	ESTES	C5-3	7.77	19.79	3.79	2.05	3.46	23.8	10.1
E191203	ESTES	C5-3	7.89	20.38	3.93	2.01	3.43	23.9	10.0
E191204	ESTES	C5-3	7.88	20.30	3.94	2.00	3.40	23.8	10.1
E191205	ESTES	C5-3	8.00	20.15	4.05	1.98	3.04	23.8	10.3
E191206	ESTES	C5-3	7.71	20.66	4.01	1.92	3.09	23.7	10.0
E191207	ESTES	C5-3	7.82	19.86	3.95	1.98	3.15	23.8	10.2
E191208	ESTES	C5-3	7.93	20.47	4.03	1.97	3.18	23.9	10.1
E191209	ESTES	C5-3	7.69	21.32	3.91	1.97	3.25	23.8	10.1
E191210	ESTES	C5-3	7.70	20.67	3.92	1.96	3.39	24.1	10.1
E191211	ESTES	C5-3	7.70	20.73	3.89	1.98	3.29	23.7	9.9
E191212	ESTES	C5-3	7.72	20.36	3.77	2.05	3.46	24.1	10.5
AVG			7.79	20.41	3.91	1.99	3.30	23.85	10.13
STD			0.11	0.41	0.10	0.04	0.15		
% STD			1.46	2.02	2.64	2.03	4.61		