BOOSTER DIPOLE FIELD COMPUTATIONS

Booster Technical Note
No. 5

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January 10, 1986

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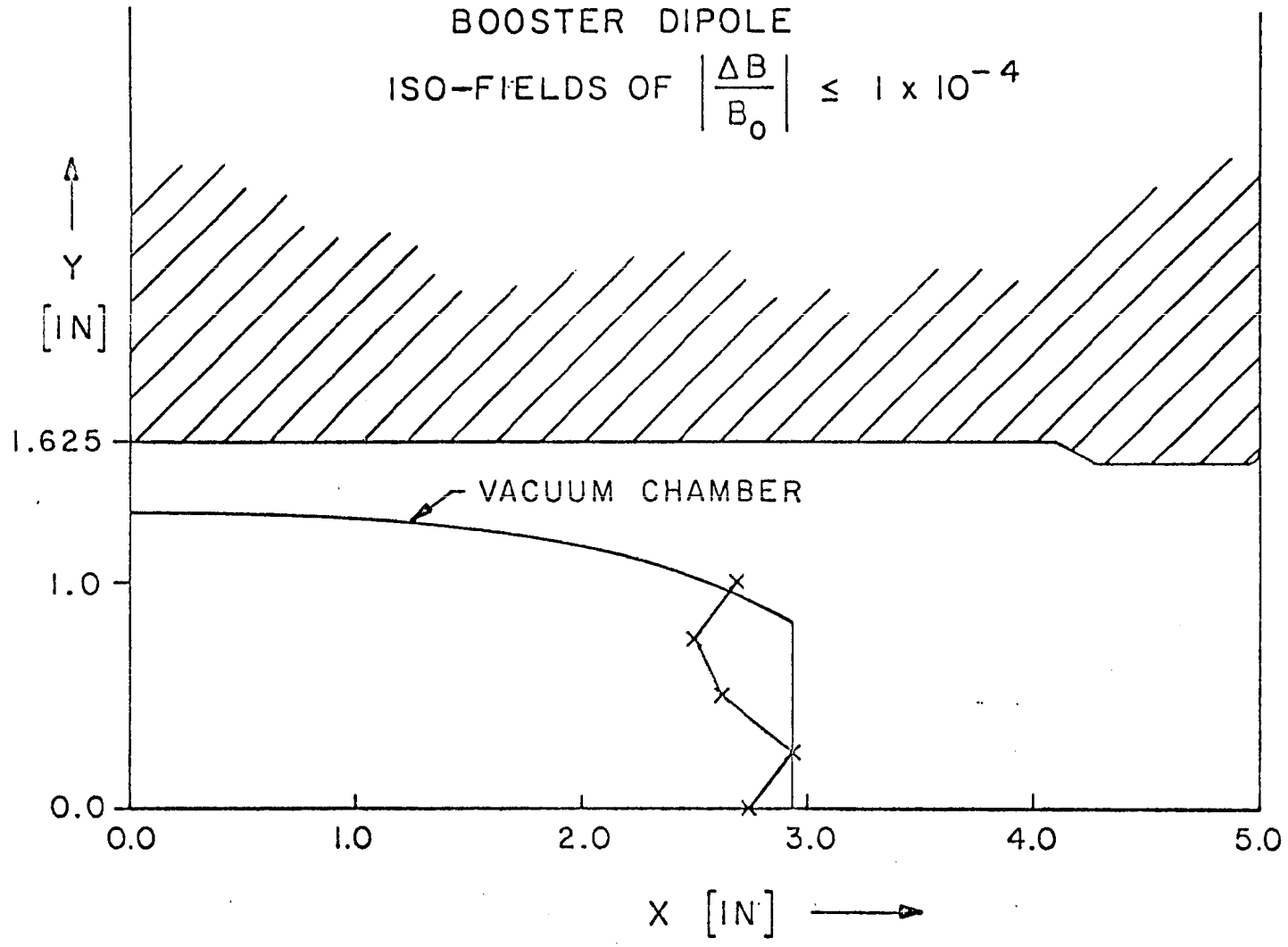
BOOSTER DIPOLE
ISO-FIELDS OF $\left|\frac{\Delta B}{B_0}\right| \leq 1 \times 10^{-4}$
Y
[IN]
1.625
1.0
0.0
VACUUM CHAMBER
0.0
1.0
2.0
3.0
4.0
5.0
X [IN]

Fig. 1.

Fig. 2.

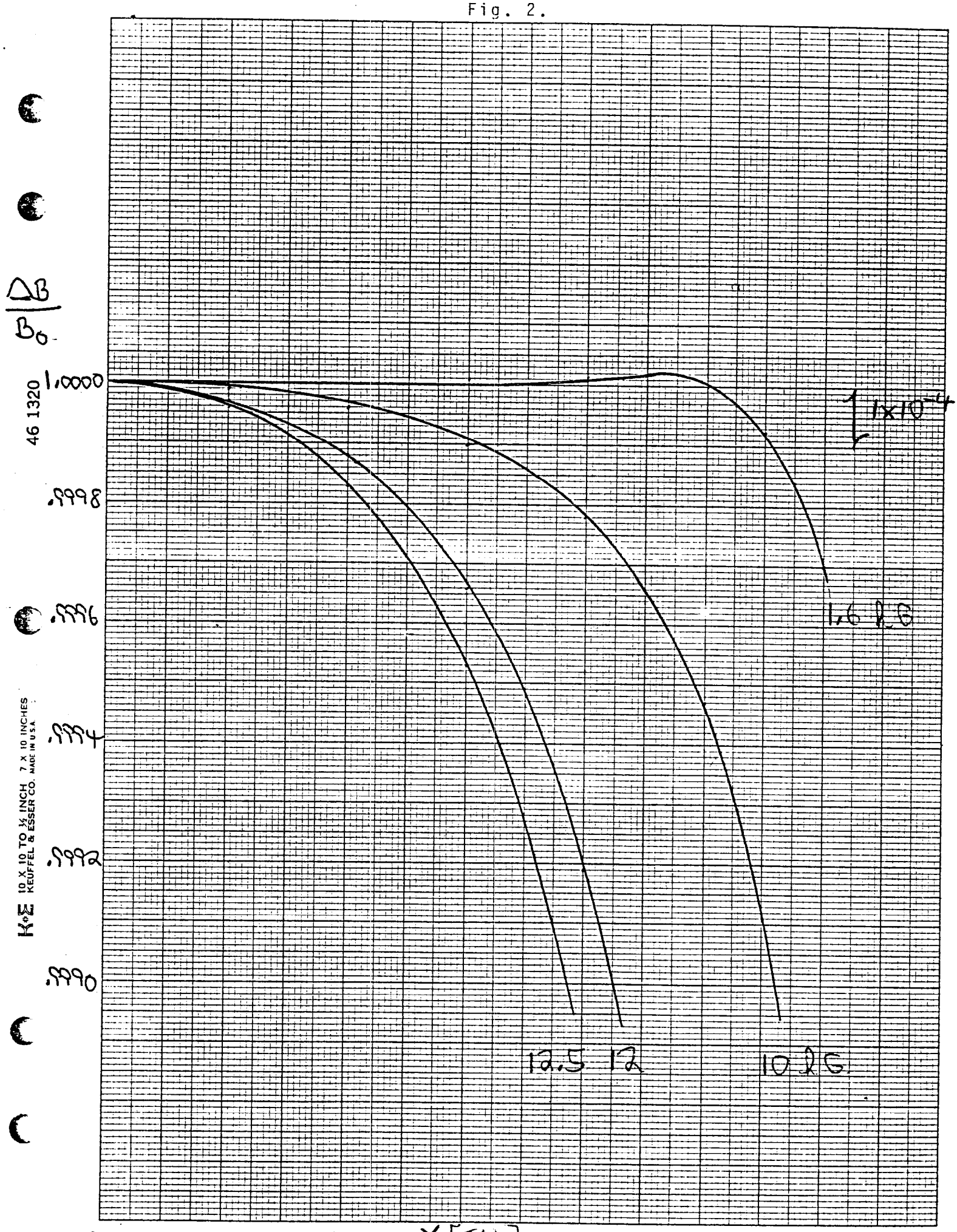
ΔB / B₀
1.0000
.9998
.9996
.9994
.9992
.9990
1×10⁻⁴
1.6 kG
12.5
12
10 kG
X [IN.]
46 1320
K+E 10 X 10 TO ½ INCH 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.

TABLE I.

BOOSTER DIPOLE CONCEPTUAL DESIGN

B_0 (κG)	1.6	10	11	12	12.5	13
B_2/B_0	1.6	-0.314	-0.545	-1.042	-1.466	-2.032
B_4/B_0	0.2	-0.038	-0.076	-0.161	-0.229	-0.307
B_6/B_0	0.1	-0.003	-0.008	-0.015	-0.018	-0.019
B_8/B_0	0.1	-0.001	0.000	0.000	0.000	0.000
B_{10}/B_0	0.0	0.000	0.000	0.000	0.000	0.000

MULTIPOLES EXPRESSED IN UNITS OF 10^{-4} AT X = 1 IN., Y = 0 EXCEPT FOR 1.6 κG (INJECTION) WHICH IS EXPRESSED IN PPM'S.