

Series Load Performance

8 DB attenuator
 Series tuned secondary Load, 1/4/64
 140T, 11.68" long 620.52 load at center

Primary 5.33" dia, 28 turns, 5.33" long. 8 DB attenuator

Output μ a, 5 volt scale

MC

1.6	40	20	0	0	0	0
1.7	50	20	0	20	10	0
1.8	60	20	0	190	100	40
1.9	70	20	0	1.86 340	240	130
2.0	90	30	0	280	150	40
2.1	110	40	0	200	90	20
2.2	160	70	10	230	100	20
2.3	220	110	20	380	200	40
2.4	340	190	60	2.33 790	520	180
2.5	540	330	110	860	590	260
2.6	880	710	410	490	230	80
2.64	960	780	490	220	80	30
2.7	800	590	240	100	30	10
2.8	380	200	70	40	20	0
				20	0	0

Shunt movel. 820 180

movel 820 180

Pri. 3.31" diameter
 28 turns 3.31" long

Series ~~Transformer~~ ^{Load}, 8 DB attenuator

8/4/64

Primary Sec	A	A	A	A	A	A	A	A	A	A	A	A
Extra Resis, Ω	0	0	0	0	0	0	0	190	375	840	840	840
MC	Output μa , 5 volt scale										2V	5V
1.6	0	0	0	0	0	0	0	0	0	0	0	0
1.7	10	10	5	0	0	0	0	0	0	0	0	0
1.8	170	120	100	80	60	30	20	20	10	5	10	0
1.86	300	340	380									
1.9	260	310	370	420	440	380	310	220	140	90	220	75
2.0	190	220	240	270	300	330	390	320	290	260	290	175
2.1	220	230	240	240	260	250	260	250	220	180	480	140
2.2	390	360	340	320	290	260	260	230	200	140	400	120
2.3	750	690	620	520	460	370	320	260	210	140	400	120
2.33	810	820	820	800								
2.4	480	560	670	760	780	660	550	380	270	170	470	140
2.5	200	240	320	400	500	620	680	420	290	200	560	160
2.6	70*	100	120	160	200	270	360	280	230	190	530	150
2.7	30	40	50	60	80*	110	140	130	120	120	330	100
2.8	10	10	10	20	30	40	60	60	50	50	140	45
Prnt Res	0	0	0	0	0	0	0	0	0	0	36	36
MC	2V	2V	2V					MC	2V	2V	2V	
1.6	0	0	0	0	0	2.3	590	550	460	345	350	
1.7	0	0	0	0	0	2.4	700	630	520	390	380	
1.8	40	30	30	20	20	2.48	740	660	540	380	390	
1.9	370	340	270	160	160	2.5	740	660	540	380	390	
1.99	750											
2.0	740	640	490	320	320	2.6	620	530	450	320	330	
2.1	600	550	450	330	320	2.7	350	310	280	200	240	
2.2	560	520	440	320	330	2.8	160	140	130	100	120	
Sec ^{Drain}	375	375	375	375	375		375	315	375	375	375	
Prin ^{Drain}	36	55	91	136	136		36	55	91	136	136	
Scale	2V	2V	2V	2V	2V		2V	2V	2V	2V	2V	
Sec ^{Turns}	116	116	116	116	114		116	116	116	116	114	

Load
Series ~~tuning~~ 80B attenuator 8/4/67

2V olt scale

Primary Turns	Sec. extra sec resist.	MC	1.6	1.7	1.8	1.9	1.96	2.0	2.1	2.2	2.3	2.36	2.4	2.5	2.6	2.7	2.8
136	136	136	136	136	136	136	136	136	136	136	136	136	136	136	136	136	136
122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122
0	190	375	890														
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
120	80	50	20														
550	390	240	120														
690	530	370	240														
670	530	370	240														
620	510	370	250														
650	540	380	260														
720	580	410	280														
770	610	430															
750	600	430	310														
650	570	400	310														
420	380	290	290														
220	210	170	140														
100	100	80	70														

Adding resistance to secondary reduces high frequency peak faster than low frequency peak.

Adding resistance to primary reduces low frequency peak faster than high frequency peak.

A = Primary in all tests 3.31" dia, 28 turns, 336" long
45µh inductance

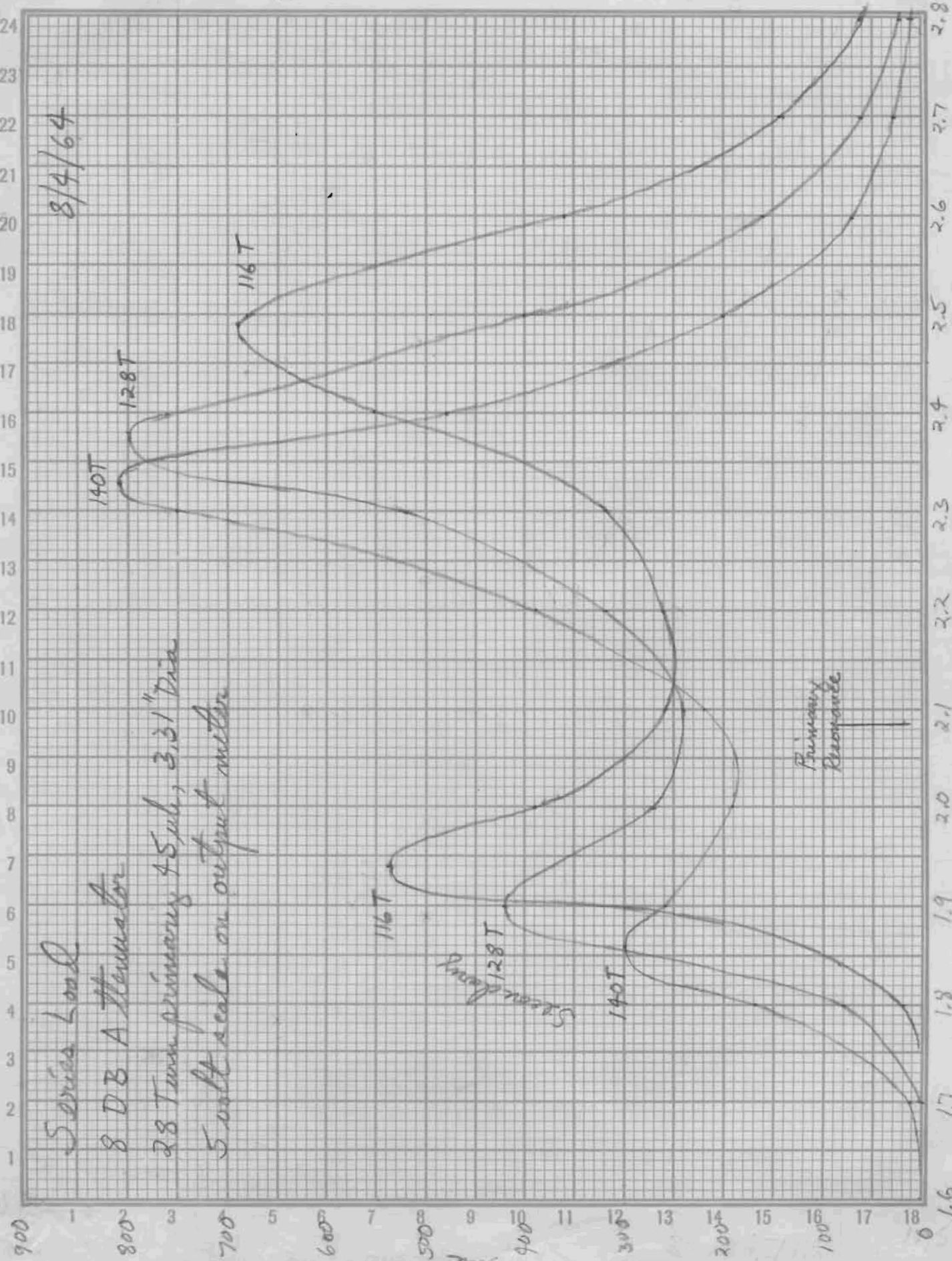
8/9/64

Series Load

8 DB Attenuator

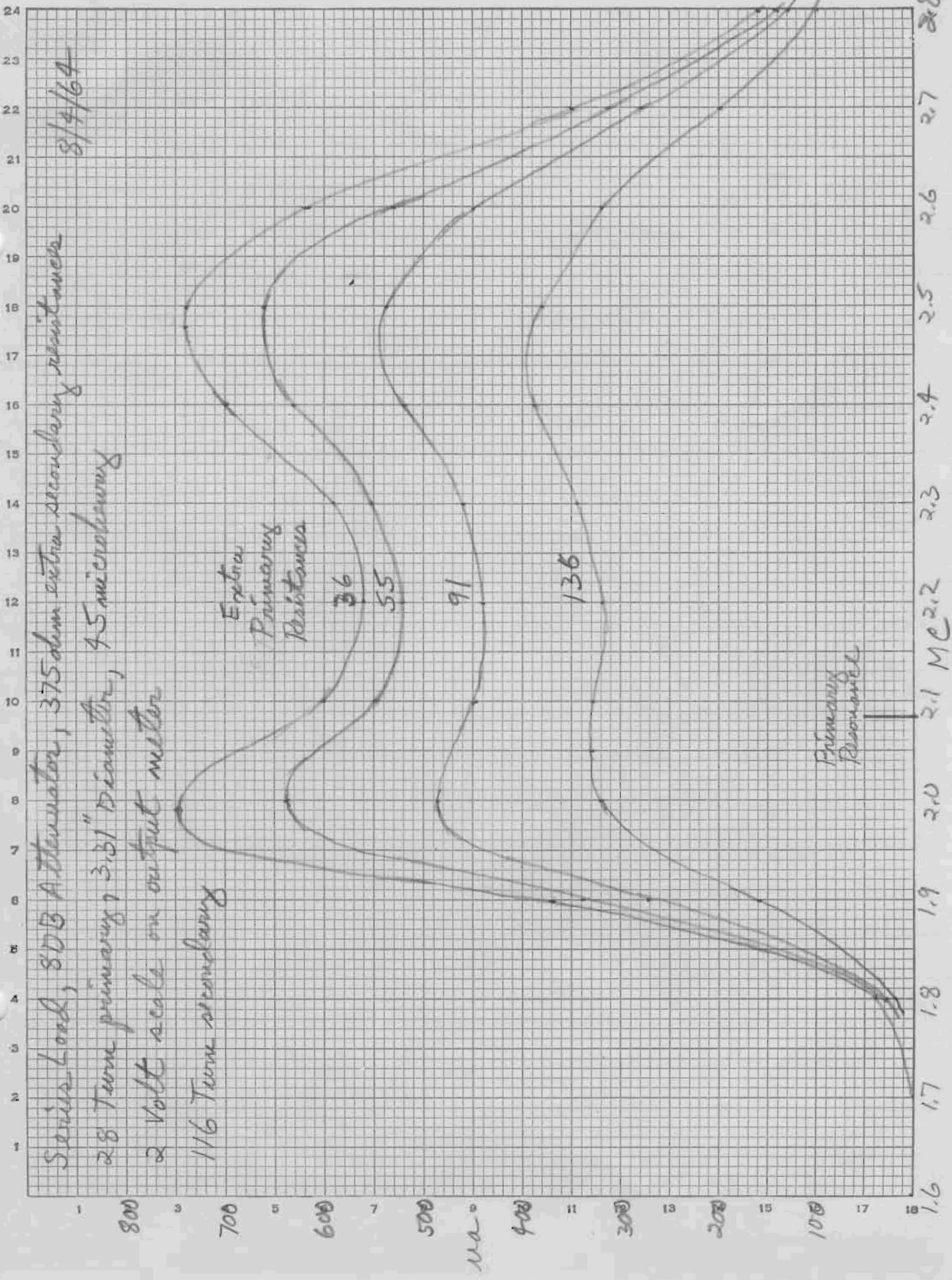
28 Turn primary 45 ohm, 3.31" Dia

5 volt scale on output meter



Primary Resonance

Wagoner



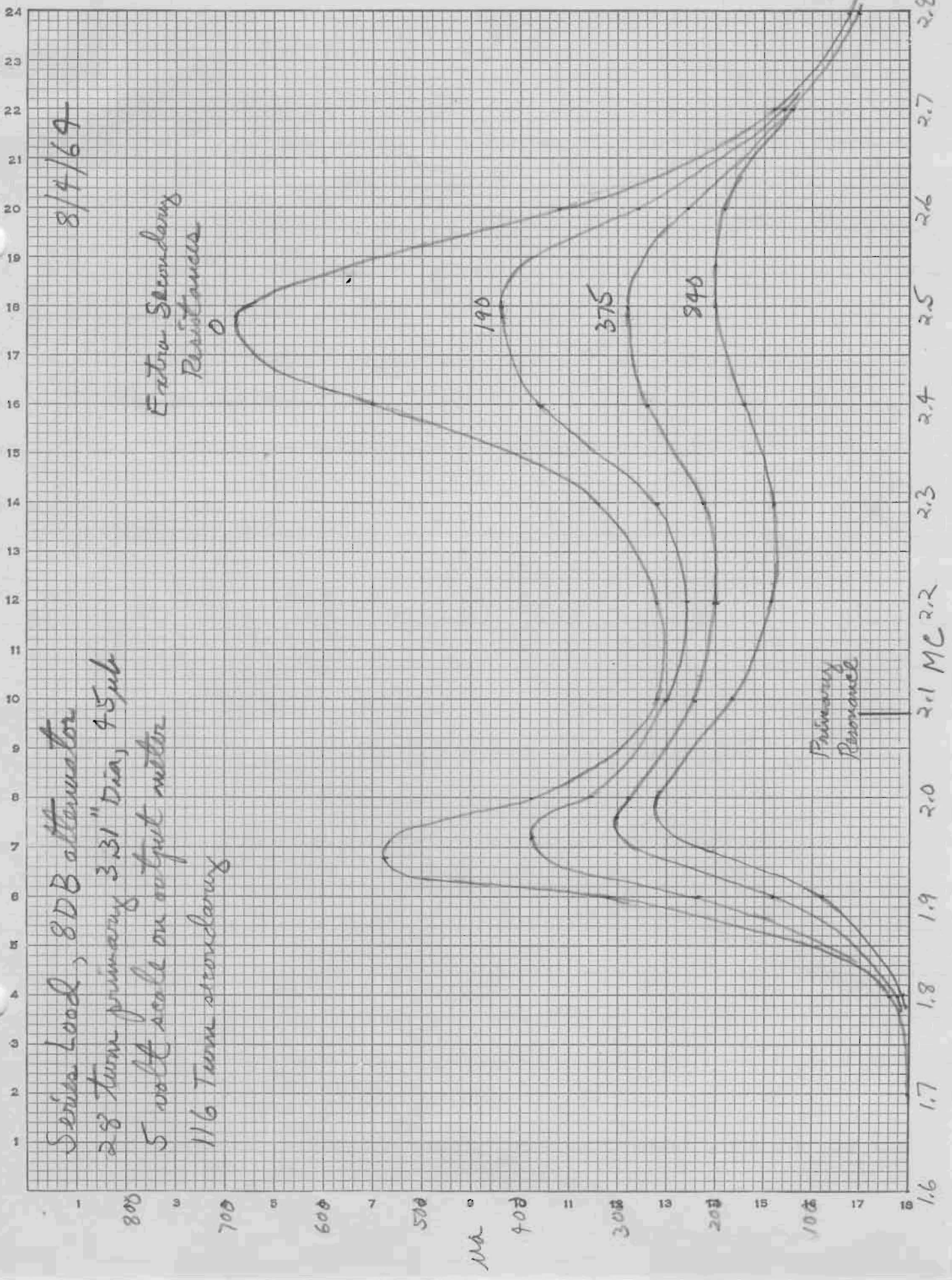
800
 700
 600
 500
 na.
 400
 300
 200
 100
 17
 18

8/4/69

Series Load, 8DB attenuator
28 turn primary 3.31" Dia, 45ub
5 volt scale on output meter
116 Turn secondary

Extra Secondary
Resistances
0

Primary
Resonance



Output Meter 5 volt scale Series Load

15/7/64

Attenuator	8DB				12DB	
MC	Output microamperes					
1.8	0	0	0	0	0	0
1.9	0	0	0	0	0	0
2.0	0	0	20	0	0	0
2.1	10	0	80	10	0	0
2.2	70	30	340	30	0	10
2.3		120	690	160	20	40
2.39	310		640			
2.4	810	640	360	800	130	240
	760	840	2.47	1000+	480	390
2.5	440	610	300	1000+	480	390
2.6	420	500	320	980	350	460
2.7	450	500	400	1040	310	320
2.72	460	370	430	1000+	190	80
2.8	380	370	400	840	80	
2.9	160	160	220	300	60	20
3.0	400	40	60	60	10	0
3.1	10	0	20	10	0	0
3.2	0	0	0	0	0	0
Sec	94T	94T	94T	94T	94T	100T
Pri	12T	10T	16T	9T	8T	8T
res	13.5	10.6	21.5	9.3	8.0	8.0
			37 Ω			128 Ω
Dia	3.31	3.31	3.31	3.31	3.31	3.31
Primary Resonance						
Dial	8.0	8.25	7.42	8.38	8.50	
MC	2.46	2.50	2.35	2.53	2.55	
Length	1.35	1.10	1.81	.93	.84	
d/d	.408	.333	.547	.281	.254	
l/d	4.1	3.2	6.5	2.8	2.4	same

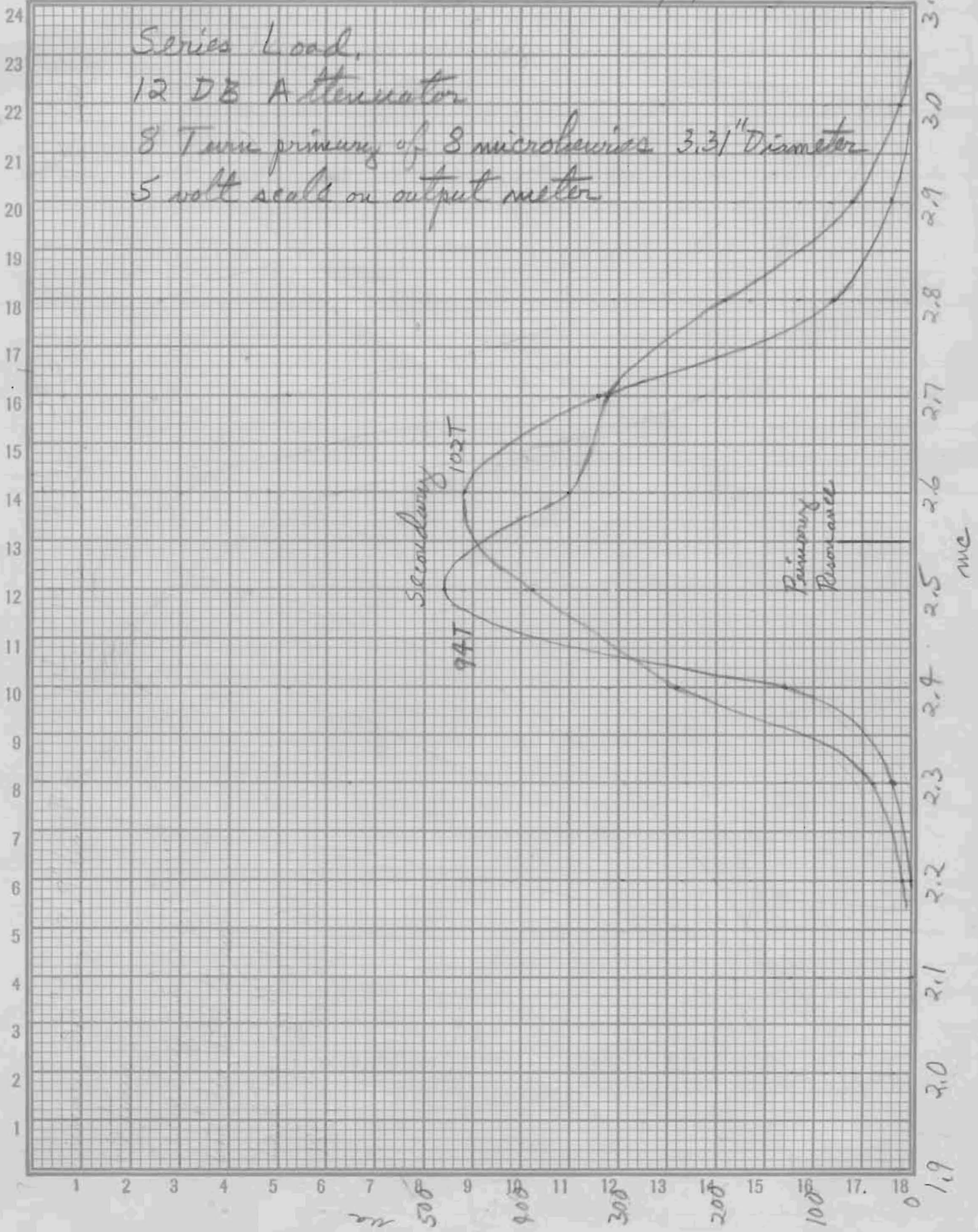
15/4/64

Series Load,

12 DB Attenuator

8 Turn primary of 8 microhenries 3.3" Diameter

5 volt scale on output meter



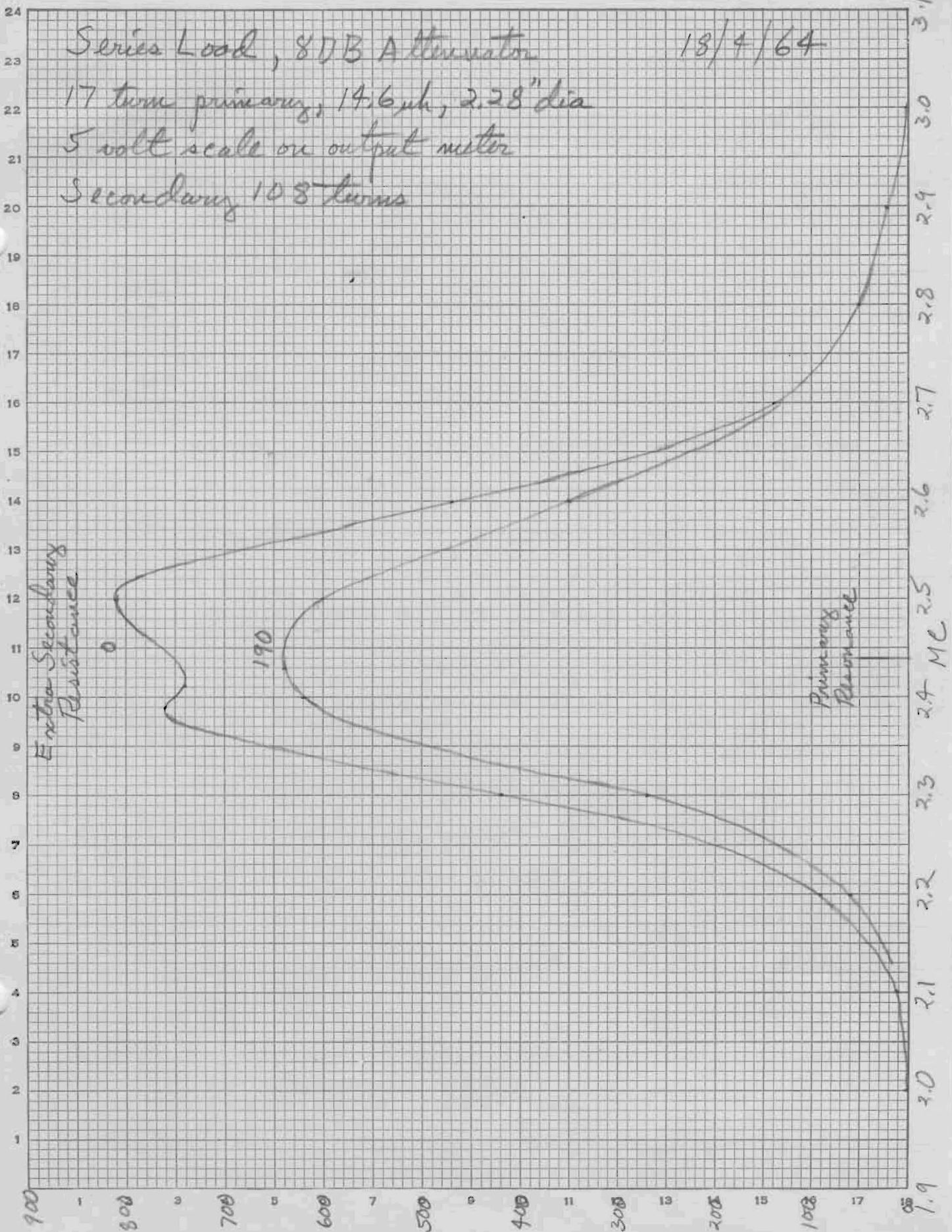
Series Load, 8DB Attenuator

13/4/64

17 turn primary, 14.6 μ h, 2.28" dia

5 volt scale on output meter

Secondary 108 turns



Series load.

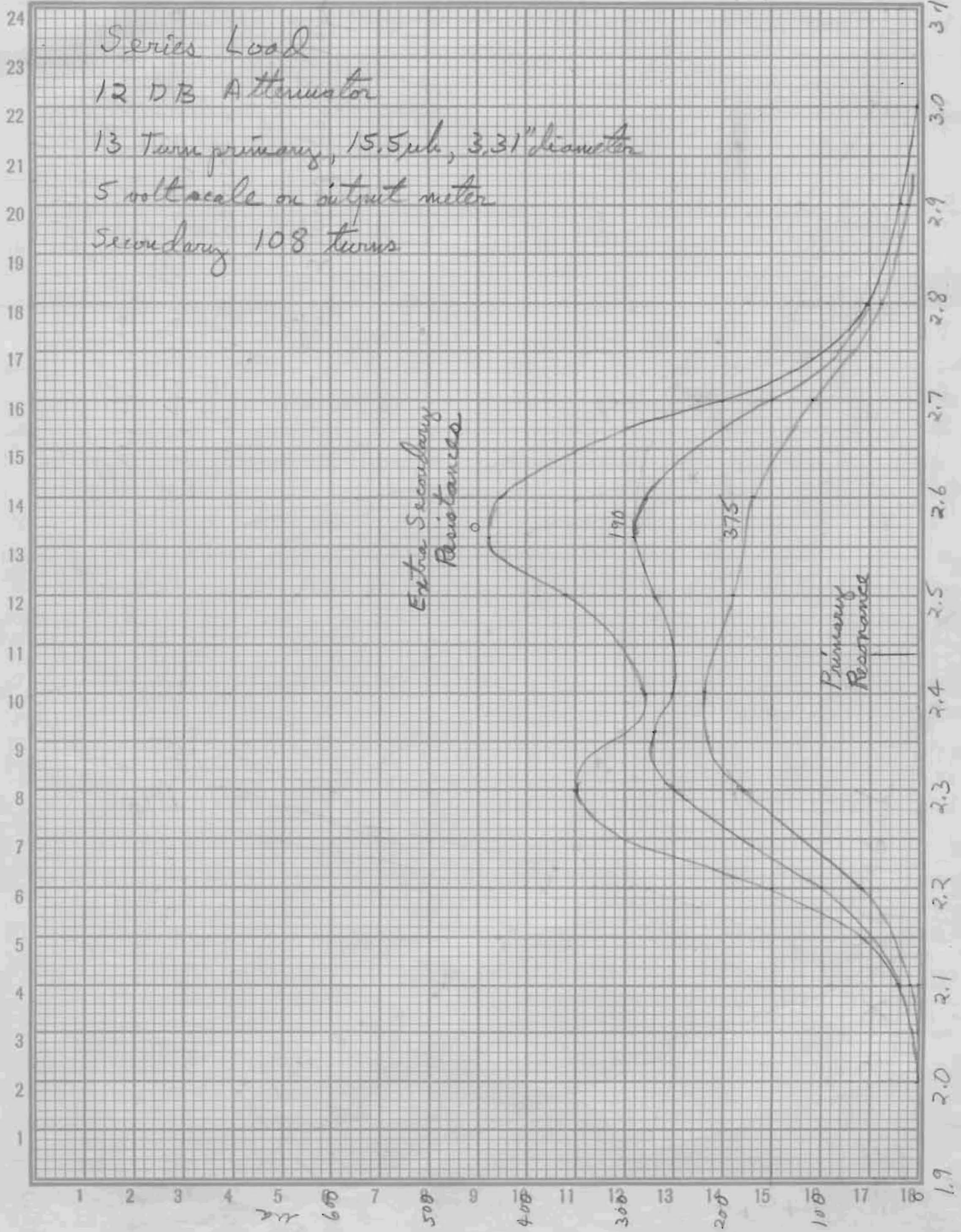
Primary 2.28" dia, 17 turns, 14.6 μ h.

18/4/64

Attenuator	8DB	8				
Extra Sec. Resistance	0	190				
Sec. Turns	108	108				
MC.	Output μ a, 5 volt scale					
1.8	0	0				
1.9	0	0				
2.0	0	0				
2.1	10	10				
2.2	90	60				
2.3	420	270				
2.39	760					
2.4	750	620				
2.41	740(2.43)	640				
2.5	810	600				
2.6	470	350				
2.7	190	140				
2.8	50	60				
2.9	20	20				
3.0	0	0				
3.1	0	0				
3.2	0	0				

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Series Load
12 DB Attenuator
13 Turn primary, 15.5 μ h, 3.31" diameter
5 volt scale on output meter
Secondary 108 turns



Series Load

Primary 3.31" D, 13 turns, 15.5uh.

18/4/64

Attenuator	12DB	12	12	12	12	12
Extra Sec. Turns	0	0	0	0	190	375
Sec. Turns	114	112	110	108	108	108

MC Output ma, 5 volt scale.

1.8	0	0	0	0	0	0
1.9	0	0	0	0	0	0
2.0	10	0	0	0	0	0
2.1	60	40	30	20	20	10
2.2	240	230	200	150	100	60
_{2.25}	280(2.27)	320(2.27)	340			
2.3	240	290	330	350	250	180
2.4	240	260	260	280	^(2.36) 270	220
2.5	480	420	380	360	270	190
_{2.54}	560(2.58)	510(2.58)	470(2.59)	440(2.56)	290	
2.6	400	420	440	430	280	170
2.7	130	160	170	200	150	110
2.8	40	50	50	50x	50	40
2.9	20	20	20	20	20	10
3.0	0	0	0	0	0	0
3.1	0	0	0	0	0	0
3.2	0	0	0	0	0	0

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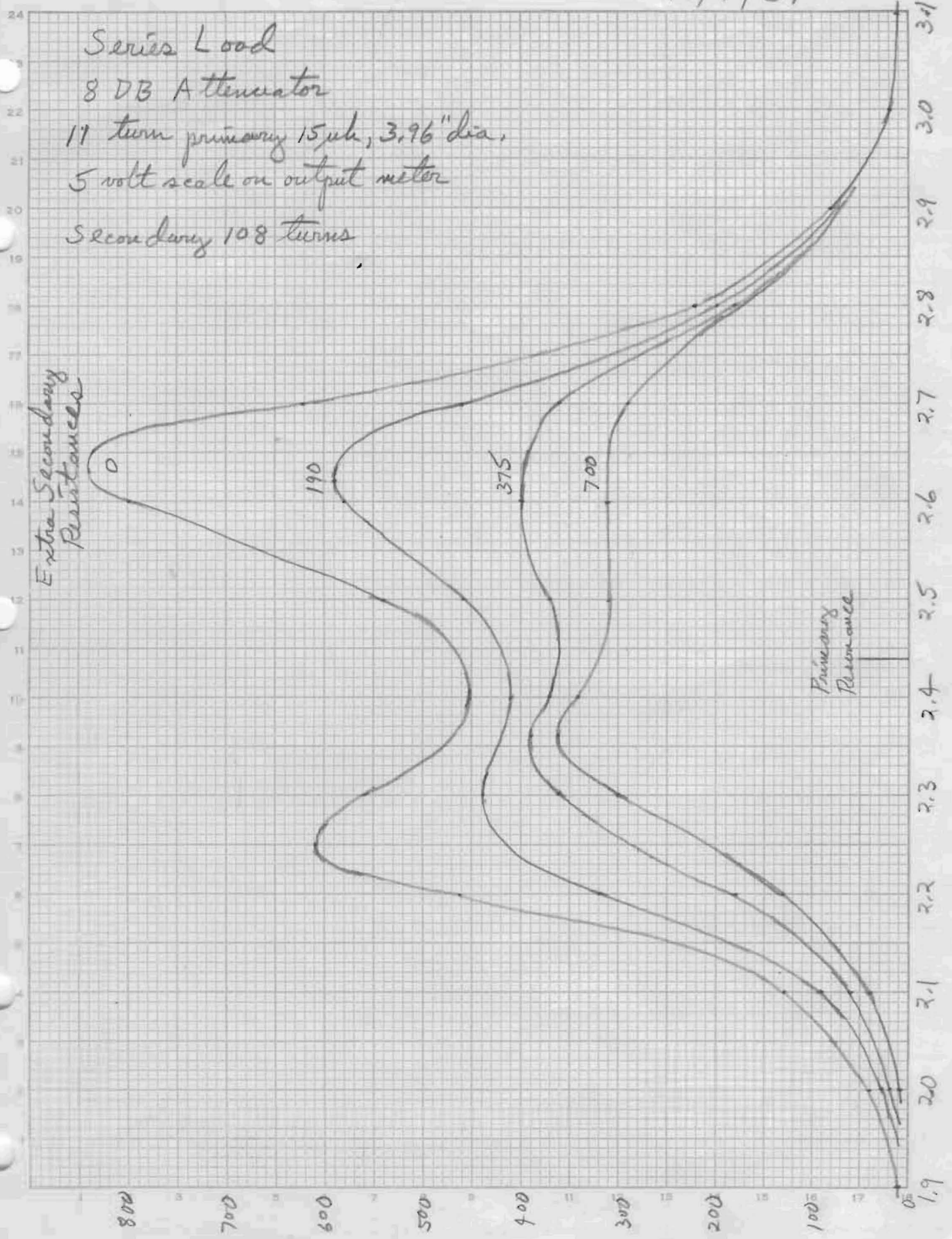
Series Load

8 DB Attenuator

11 turn primary 15 μ h, 3.96" dia,

5 volt scale on output meter

Secondary 108 turns



Series Load

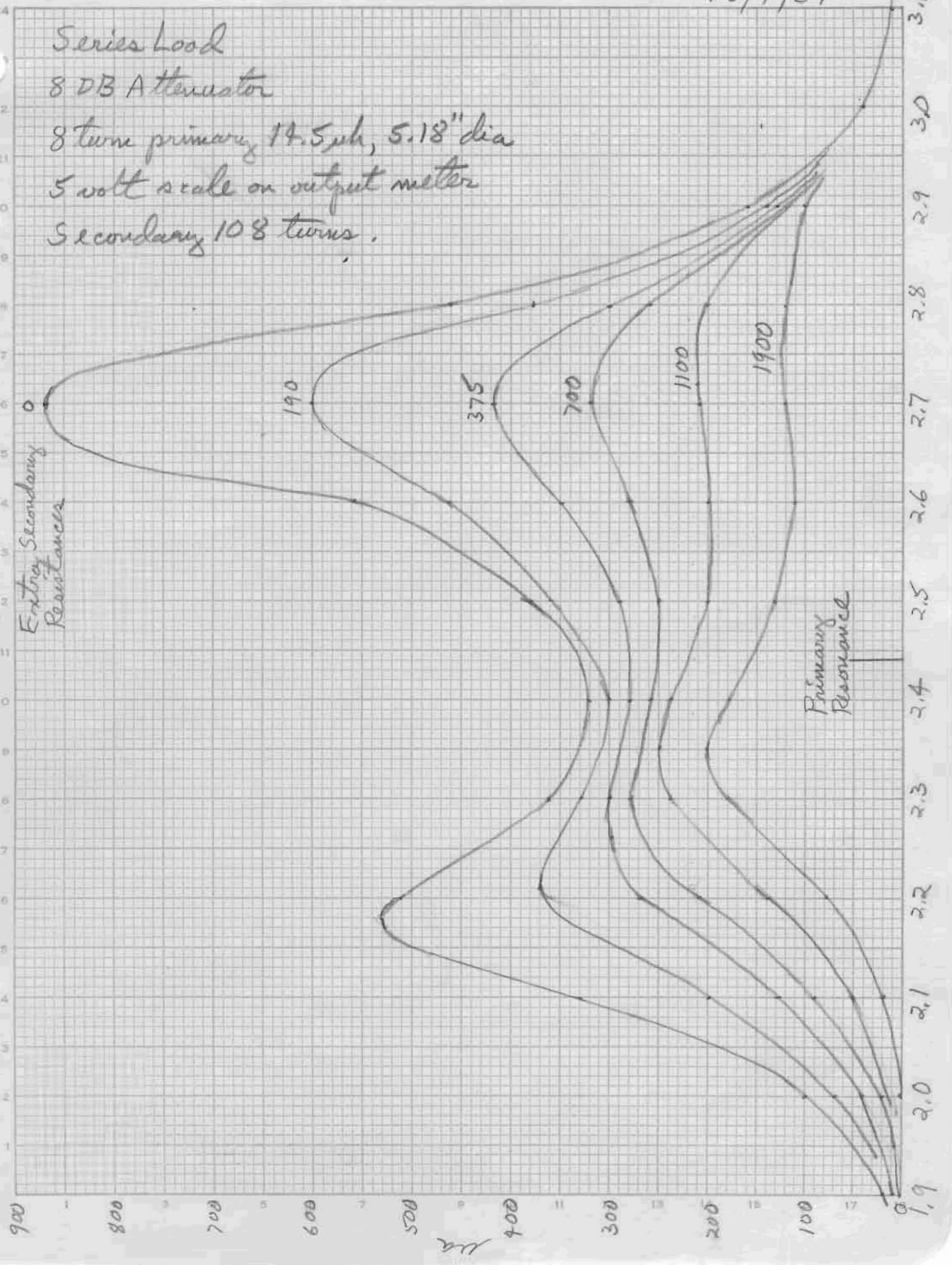
18/4/64

Primary 3.96" Dia, 11 turns, 15,0 μ h.

attenuator	8DB	8DB	8	8				
Extra Sec. Resist.	0	190	375	700				
Sec. Turns	108	108	108	108				
MC	Output μ a, 5 volt scale							
1.8	0	0	0	0				
1.9	10	10	0	0				
2.0	40	30	20	10				
2.1	130	90	60	40				
2.2	460	320	180	130				
2.25	610							
2.3	560	440	360	300				
2.4	450	410	(2.36) 390 (2.36) 360	340				
2.5	540	460	370	310				
2.6	800	580	400	310				
2.63	840 (2.62)	590						
2.7	620	460	360	290				
2.8	220	200	180	180				
2.9	80	80	80	80				
3.0	20	20	20	20				
3.1	10	10	0	0				
3.2	0	0	0	0				

18/4/64

Series Load
8 DB Attenuator
8 turns primary, 14.5 μ h, 5.18" dia
5 volt scale on output meter
Secondary, 108 turns.



Series Load

Primary 5.18" Dia, 8 turns, 14.5 μh

18/4/64

Attenuator	8DB	8	8	8	8	8	8
Extra Sec. Turns	0	190	375	700	840	1,100	1,900
Sec. Turns	108	108	108	108	108	108	108

MC Output μa, 5 volt scale

1.8	0	0	0	0	0	0	0
1.9	20	20	10	0	0	0	0
2.0	100	70	40	20	20	20	0
2.1	330	200	130	90	80	50	20
2.18	530						
2.2	510	360	270	210	210	140	80
2.3	360	370	300	280	280	240	180
2.4	320	300	280	260	260	240	180
2.5	380	360	290	250	250	200	130
2.6	560	460	350	280	270	200	110
2.7	870	600	420	320	310	210	120
2.8	460	380	300	260	260	210	120
2.9	160	140	130	130	120	120	100
3.0	40	40	40	30	30	30	30
3.1	10	10	10	10	10	10	10
3.2	0	0	0	0	0	0	0

Series Load, 8DB Attenuator
 4 Turn Primary 6.18" D,
 5 volt scale on output meter
 Secondary 99 turns

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