SECONDARY CONSTANTS OF LOADED CABLE
24 GAUGE DSM, FSM
H88 LOADING

AT 68° F*

Freq. Hertz	Propagation Constant Per Mile			Mid-Section Impedance			
	Attenuation		Phase Shift				
	α Nepers	dB	β Radians	R Ohms	X Ohms (Neg.)	Z Ohms	Angle Degrees (Neg.)
1	.00934	.081	.00799	17414	14847	22884	40.5
50	.05855	.509	.06367	2412	2202	3266	42.4
100	.07921	.688	.09409	1781	1492	2324	40.0
200	.1029	.894	.1449	1372	971	1691	35.3
300	.1163	1.010	.1923	1216	733	1420	31.1
500	.1299	1.129	.2870	1094	493	1201	24.3
800	.1378	1.197	.4341	1047	331	1098	17.5
1000	.1399	1.215	.5357	1045	272	1079	14.6
1200	.1409	1.224	.6402	1055	231	1080	12.4
1400	.1413	1.227	.7477	1074	203	1093	10.7
1600	.1414	1.228	.8587	1102	183	1117	9.4
1800	.1414	1.228	.9739	1140	169	1152	8.5
2000	.1414	1.228	1.0940	1189	161	1200	7.7
2200	.1415	1.229	1.2205	1253	158	1263	7.2
2400	.1422	1.235	1.3551	1338	162	1348	6.9
2500	.1429	1.241	1.4262	1391	167	1401	6.9
2600	.1439	1.250	1.5004	1454	176	1465	6.9
2700	.1454	1.263	1.5783	1530	189	1541	7.1
2750	.1464	1.272	1.6188	1573	198	1586	7.2
2800	.1476	1.282	1.6606	1622	209	1635	7.4
3000	.1560	1.355	1.8433	1884	290	1906	8.7
3200	.1771	1.538	2.0640	2353	533	2413	12.8
3400	.2548	2.213	2.3562	3072	1774	3547	30.0

* Temperature Variation per Degree F.

Hz	dB	Rad.	R	X
300	.0018	.00015	.531	-1.045
1000	.0026	.00019	.021	- .526
3000	.0029	.00063	.717	- .971

Notes: Nominal Cutoff Frequency = 3950 Hz.
Phase Delay = 85.26×10^{-6} seconds/mile at 1000 Hz.
Velocity of Propagation = 11.73×10^{3} miles/second at 1000 Hz.

END-SECTION IMPEDANCE

Frequency (Hz) / End Section	300		500		1000		1600	
	R	X	R	X	R	X	R	X
0 (Full Coil)	1212	-644	1076	-344	963	+ 30	875	+307
.1	1214	-663	1085	-375	995	- 26	955	+236
.2	1216	-681	1090	-405	1019	- 86	1022	+146
.3	1217	-699	1094	-435	1036	-148	1072	+ 43
.4	1217	-716	1095	-465	1045	-210	1100	- 69
.5 (Mid Section)	1216	-733	1094	-493	1045	-272	1102	-183
.6	1215	-749	1092	-521	1038	-330	1083	-291
.7	1213	-765	1088	-547	1025	-386	1044	-387
.8	1210	-781	1083	-573	1006	-437	992	-468
.9	1207	-796	1076	-597	982	-482	930	-531
1.0 (Full Section)	1203	-810	1068	-621	954	-523	866	-578

Frequency (Hz) / End Section	2000		2500		2750		3000	
	R	X	R	X	R	X	R	X
0 (Full Coil)	803	+462	682	+646	601	+738	500	+834
.1	923	+397	860	+620	806	+750	723	+906
.2	1036	+297	1058	+534	1060	+697	1044	+921
.3	1127	+164	1246	+367	1335	+524	1461	+775
.4	1181	+ 6	1373	+118	1543	+204	1835	+343
.5 (Mid Section)	1189	-161	1391	-167	1573	-198	1884	-290
.6	1152	-317	1300	-425	1415	-544	1569	-776
.7	1080	-448	1140	-605	1167	-747	1165	-966
.8	987	-544	963	-703	926	-821	847	-971
.9	888	-608	803	-738	733	-819	631	-906
1.0 (Full Section)	793	-644	671	-736	591	-782	489	-824