

■ Wire Table

AWG Wire No.	Bare Area		Resistivity 10 ⁶ Ω cm at 20 °C	Heavy Synthetics					Current Capacity Amps (listed by columns of amps/cm ²)			
	cm ² (×10 ⁻³)	Cir-Mil		Area		Diameter		Weight gm/cm	200	400	600	800
				cm ² (×10 ⁻³)	Cir-Mil	cm	inch					
10	53.61	10384	32.70	55.9	11046	0.267	0.1051	0.468	10.4	20.8	31.2	41.6
11	41.68	8226	41.37	44.5	8798	0.238	0.0938	0.3750	8.23	16.4	24.6	32.8
12	33.08	6529	52.09	35.64	7022	0.213	0.0838	0.2977	6.53	13.06	19.6	26.1
13	26.26	5184	65.64	28.36	5610	0.190	0.0749	0.2367	5.18	10.4	15.5	20.8
14	20.82	4109	82.80	22.95	4556	0.171	0.0675	0.1879	4.11	8.22	12.3	16.4
15	16.51	3260	104.3	18.37	3624	0.153	0.0602	0.1492	3.26	6.52	9.78	13.0
16	13.07	2581	131.8	14.73	2905	0.137	0.0539	0.1184	2.58	5.16	7.74	10.3
17	10.39	2052	165.8	11.68	2323	0.122	0.0482	0.0943	2.05	4.10	6.15	8.20
18	8.228	1624	209.5	9.326	1857	0.109	0.0431	0.07472	1.62	3.25	4.88	6.50
19	6.531	1289	263.9	7.539	1490	0.0980	0.0386	0.05940	1.29	2.58	3.87	5.16
20	5.188	1024	332.3	6.065	1197	0.0879	0.0346	0.04726	1.02	2.05	3.08	4.10
21	4.116	812.3	418.9	4.837	954.8	0.0785	0.0309	0.03757	0.812	1.63	2.44	3.25
22	3.243	640.1	531.4	3.857	761.7	0.0701	0.0276	0.02965	0.640	1.28	1.92	2.56
23	2.588	510.8	666.0	3.135	620.0	0.0632	0.0249	0.02372	0.511	1.02	1.53	2.04
24	2.047	404.0	842.1	2.514	497.3	0.0566	0.0223	0.01884	0.404	0.808	1.21	1.62
25	1.623	320.4	1062.0	2.002	396.0	0.0505	0.0199	0.01498	0.320	0.641	0.962	1.28
26	1.280	252.8	1345.0	1.603	316.8	0.0452	0.0178	0.01185	0.253	0.506	0.759	1.01
27	1.021	201.6	1687.6	1.313	259.2	0.0409	0.0161	0.00945	0.202	0.403	0.604	0.806
28	0.8046	158.8	2142.7	1.0515	207.3	0.0366	0.0144	0.00747	0.159	0.318	0.477	0.636
29	0.6470	127.7	2664.3	0.8548	169.0	0.0330	0.0130	0.00602	0.128	0.255	0.382	0.510
30	0.5067	100.0	3402.2	0.6785	134.5	0.0294	0.0116	0.00472	0.100	0.200	0.300	0.400
31	0.4013	79.21	4294.6	0.5595	110.2	0.0267	0.0105	0.00372	0.0792	0.158	0.237	0.316
32	0.3242	64.00	5314.9	0.4559	90.25	0.0241	0.0095	0.00305	0.0640	0.128	0.192	0.256
33	0.2554	50.41	6748.6	0.3662	72.25	0.0216	0.0085	0.00214	0.0504	0.101	0.152	0.202
34	0.2011	39.69	8572.8	0.2863	56.25	0.0191	0.0075	0.00189	0.0397	0.0794	0.119	0.159
35	0.1589	31.36	10849	0.2268	44.89	0.0170	0.0067	0.00150	0.0314	0.0627	0.0940	0.125
36	0.1266	25.00	13608	0.1813	36.00	0.0152	0.0060	0.00119	0.0250	0.0500	0.0750	0.100
37	0.1026	20.25	16801	0.1538	30.25	0.0140	0.0055	0.000977	0.0203	0.0405	0.0608	0.0810
38	0.08107	16.00	21266	0.1207	24.01	0.0124	0.0049	0.000773	0.0160	0.0320	0.0480	0.0640
39	0.06207	12.25	27775	0.0932	18.49	0.0109	0.0043	0.000593	0.0123	0.0245	0.0368	0.0490
40	0.04869	9.61	35400	0.0723	14.44	0.0096	0.0038	0.000464	0.00961	0.0192	0.0288	0.0384
41	0.03972	7.84	43405	0.0584	11.56	0.00863	0.0034	0.000379	0.00785	0.0157	0.0236	0.0314
42	0.03166	6.25	54429	0.04558	9.00	0.00762	0.0030	0.000299	0.00625	0.0125	0.0188	0.0250
43	0.02452	4.84	70308	0.03683	7.29	0.00685	0.0027	0.000233	0.00484	0.00968	0.0145	0.0194
44	0.0202	4.00	85072	0.03165	6.25	0.00635	0.0025	0.000195	0.00400	0.00800	0.0120	0.0160

■ Winding Data

Core Size	Window Area ^a		Wire Length / Turn				Wound Dimension ^c OD×HT(Max)	
	Cir-Mils	cm ²	100%(unity) ^b		0%		inch	mm
			ft	cm	ft	cm		
035	3,600	0.018	0.0229	0.698	0.0195	0.594	0.195×0.108	4.95×2.74
039	6,080	0.0308	0.0344	1.049	0.0293	0.894	0.227×0.187	5.77×4.75
046	5,780	0.029	0.0375	1.143	0.0324	0.988	0.262×0.195	6.65×4.94
063	8,100	0.0412	0.0442	1.348	0.0379	1.156	0.347×0.212	8.81×5.38
066	8,100	0.0412	0.0435	1.327	0.0371	1.132	0.359×0.202	9.12×5.13
067	7,570	0.0384	0.0575	1.754	0.0531	1.620	0.361×0.292	9.17×7.42
068	18,500	0.0934	0.0586	1.786	0.0512	1.561	0.378×0.394	9.60×10.01
078	18,200	0.0922	0.0524	1.598	0.0417	1.272	0.433×0.265	11.0×6.73
096	28,200	0.1429	0.0588	1.793	0.0448	1.366	0.526×0.293	13.4×7.44
097	28,200	0.1429	0.0632	1.928	0.0498	1.519	0.526×0.323	13.4×8.20
102	32,400	0.164	0.0651	1.986	0.0504	1.537	0.554×0.333	14.1×8.46
112	53,800	0.273	0.0720	2.195	0.0507	1.545	0.618×0.353	15.7×9.0
127	75,600	0.383	0.0815	2.49	0.0574	1.751	0.717×0.451	18.2×11.5
166	140,600	0.713	0.1057	3.22	0.0721	2.20	0.932×0.599	23.7×15.2
172	126,000	0.638	0.1204	3.67	0.0763	2.33	0.980×0.641	24.9×16.3
203	225,600	1.14	0.1204	3.67	0.0763	2.33	1.148×0.684	29.2×17.4
229	277,700	1.41	0.1405	4.29	0.0886	2.70	1.283×0.778	32.6×19.8
234	293,800	1.49	0.1473	4.49	0.0982	3.00	1.319×0.843	33.5×21.4
270	308,000	1.56	0.1714	5.23	0.1233	3.76	1.468×0.944	37.3×24.0
330	577,600	2.93	0.1943	5.93	0.1238	3.78	1.840×1.103	46.7×28.0
343	788,500	4.01	0.1923	5.87	0.1059	3.23	1.974×1.142	50.1×29.0
358	719,100	3.64	0.204	6.22	0.1238	3.78	2.01×1.165	51.1×29.6
400	842,700	4.27	0.242	7.38	0.1578	4.81	2.22×1.385	56.4×35.2
467	842,700	4.27	0.284	8.66	0.204	6.22	2.51×1.525	63.8×38.7
468	1,206,000	6.11	0.273	8.34	0.1706	5.20	2.61×1.568	66.3×39.8
508	1,484,000	7.50	0.279	8.51	0.1623	4.95	2.85×1.600	72.4×40.6
571	1,014,049	5.14	0.296	9.02	0.212	6.46	2.98×1.34	75.7×34.0
572	1,871,000	9.48	0.306	9.33	0.1739	5.30	3.20×1.748	81.3×44.4
777	3,550,000	17.99	0.340	10.40	0.193	5.90	4.40×2.14	112.0×54.3

※ a : Window Area (= π/4×ID²: Core inside diameter), b : Winding Factor (k= Usable window area/Total window area), c : 100% Winding Assumed

■ Single Layer Winding Capacity

Core Size	046	063 066	068 078	096 097	102	112	127	166	172	203	229	234	270	330	343	358	400 467	468	508	571	572	610	777
ID(mm)	1.93	2.29	3.45	4.27	4.57	5.89	6.99	9.53	9.02	12.07	13.39	13.77	14.10	19.30	22.60	21.50	23.30	27.90	30.90	25.60	34.70	31.37	48.00
Wire Wire No. Dia	Turns / Single Layer																						
10 2.67																		26	30	26	37	35	53
11 2.38																		30	33	30	42	39	60
12 2.13								10	9	13	15	15	16	23	27	25	22	34	38	34	48	44	67
13 1.90								11	10	15	17	17	18	26	30	29	25	38	43	39	54	50	76
14 1.71								13	12	17	19	20	20	29	34	32	28	43	48	43	60	56	84
15 1.53							10	15	14	19	22	22	23	32	38	37	31	48	54	49	68	63	95
16 1.37						9	11	17	16	22	25	25	26	37	43	41	35	54	60	55	76	71	106
17 1.22						11	13	19	18	25	28	29	29	41	49	46	40	61	68	62	85	80	119
18 1.09					9	12	15	21	20	28	31	32	33	46	55	52	45	68	76	70	96	90	134
19 0.98				9	10	14	17	24	23	32	35	36	37	52	61	58	50	77	85	78	108	101	150
20 0.88				11	12	16	19	27	26	35	40	41	42	58	69	65	57	86	95	88	120	113	168
22 0.70			11	14	15	21	25	35	33	45	50	52	53	74	87	82	71	108	120	111	152	143	211
24 0.56		8	14	18	20	26	31	44	41	56	63	65	66	92	108	103	90	134	149	138	189		
26 0.45	9	11	18	23	25	33	40	55	52	71	79	81	83	115	135	129	112	168	186	174	237		
28 0.36	12	14	23	29	32	42	50	69	65	89	99	101	104	143	168	160	140						
30 0.29	15	19	29	37	40	52	63																
32 0.24	19	23	36	46	49	64	77																
34 0.19	25	30	46	58	62																		
36 0.15	31	38	58	73																			