

IEC 60317(GB/T6109)

我司线材规格参数主要采用国际单位制，规格一般使用的单位为：毫米(mm)，如使用美国线规(AWG)及英国线规(SWG)请参考对照表，最特殊尺寸可按客户要求定制

The Tech & Specification parameters of our company's wires are in international unit system, with the unit of millimeter (mm). If use American Wire Gauge (AWG) and British Standard Wire Gauge (SWG) , the following table is a comparison table for your reference.

The most special dimension can be customized as per the requirements of customers.

COMPARISON OF DIFFERENT METAL CONDUCTORS'S TECH& SPECIFICATION

METAL	Copper	Aluminium Al 99.5	CCA10% Copper Clad Aluminum	CCA15% Copper Clad Aluminum	CCA20% Copper Clad Aluminum
Diameters available [mm] Min - Max	0.03mm-2.50mm	0.10mm-5.50mm	0.05mm-8.00mm	0.05mm-8.00mm	0.05mm-8.00mm
Density [g/cm ³] Nom	8.93	2.70	3.30	3.63	4.00
Conductivity[S/m * 10 ⁶]	58.5	35.85	36.46	37.37	39.64
IACS[%] Nom	101	62	62	65	69
Temperature-Coefficient[10 ⁻⁶ /K] Min - Max of electrical resistance	3800 - 4100	3800 - 4200	3700 - 4200	3700 - 4100	3700 - 4100
Elongation (1)[%] Nom	25	20	15	16	17
Tensile strength (1)[N/mm ²] Nom	260	110	130	150	160
Flex Life (2)[%] Nom 100% = Cu	100	20	50	80	
Outer metal by volume[%] Nom	-	-	8-12	13-17	18-22
Outer metal by weight[%] Nom	-	-	28-32	36-40	47-52
Weldability/Solderability[--]	++/++	+/--	++/++	++/++	++/++

<p>Properties</p>	<p>Very high conductivity, good tensile strength, high elongation, excellent windability, good weldability and solderability</p>	<p>Very low density allows high weight reduction, fast heat dissipation, low conductivity</p>	<p>CCA combines the advantages of Aluminum and Copper. Low density allows weight reduction, elevated conductivity and tensile strength compared to Aluminum, good weldability and solderability, recommended for diameter 0.10mm and above</p>	<p>CCA combines the advantages of Aluminum and Copper. Lower density allows weight reduction, elevated conductivity and tensile strength compared to Aluminum, good weldability and solderability, recommended for very fine sizes down to 0.10mm</p>	<p>CCA combines the advantages of Aluminum and Copper. Lower density allows weight reduction, elevated conductivity and tensile strength compared to Aluminum, good weldability and solderability, recommended for very fine sizes down to 0.10mm</p>
<p>Application</p>	<p>General coil winding for electrical application, HF litz wire. For use in industrial, automotive, appliance, consumer electronics</p>	<p>Different electrical application with low weight requirement, HF litz wire. For use in industrial, automotive, appliance, consumer electronics</p>	<p>Loudspeaker, headphone and earphone, HDD, induction heating with the need of good termination</p>	<p>Loudspeaker, headphone and earphone, HDD, induction heating with the need of good termination, HF litz wire</p>	<p>Loudspeaker, headphone and earphone, HDD, induction heating with the need of good termination, HF litz wire</p>

Enameled Copper Clad Aluminum Wire Specification

Nominal diameter (mm)	Conductor tolerance (mm)	G1		G2		Minimum breakdown voltage (V)		Minimum elongation (%)
		Minimum film thickness	Complete Maximum outer diameter (mm)	Minimum film thickness	Complete Maximum outer diameter (mm)	G1	G2	
0.10	0.003	0.005	0.115	0.009	0.124	1200	2200	11
0.12	0.003	0.006	0.137	0.01	0.146	1600	2900	11
0.15	0.003	0.0065	0.17	0.0115	0.181	1800	3200	15
0.17	0.003	0.007	0.193	0.0125	0.204	1800	3300	15

0.19	0.003	0.008	0.215	0.0135	0.227	1900	3500	15
0.2	0.003	0.008	0.225	0.0135	0.238	2000	3600	15
0.21	0.003	0.008	0.237	0.014	0.25	2000	3700	15
0.23	0.003	0.009	0.257	0.016	0.271	2100	3800	15
0.25	0.004	0.009	0.28	0.016	0.296	2300	4000	15
0.27	0.004	0.009	0.3	0.0165	0.318	2300	4000	15
0.28	0.004	0.009	0.31	0.0165	0.328	2400	4100	15
0.30	0.004	0.01	0.332	0.0175	0.35	2400	4100	16
0.32	0.004	0.01	0.355	0.0185	0.371	2400	4200	16

0.33	0.004	0.01	0.365	0.019	0.381	2500	4300	16
0.35	0.004	0.01	0.385	0.019	0.401	2600	4400	16
0.37	0.004	0.011	0.407	0.02	0.425	2600	4400	17
0.38	0.004	0.011	0.417	0.02	0.435	2700	4400	17
0.40	0.005	0.0115	0.437	0.02	0.455	2800	4500	17
0.45	0.005	0.0115	0.488	0.021	0.507	2800	4500	17
0.50	0.005	0.0125	0.54	0.0225	0.559	3000	4600	19
0.55	0.005	0.0125	0.59	0.0235	0.617	3000	4700	19
0.57	0.005	0.013	0.61	0.024	0.637	3000	4800	19

0.60	0.006	0.0135	0.642	0.025	0.669	3100	4900	20
0.65	0.006	0.014	0.692	0.0265	0.723	3100	4900	20
0.70	0.007	0.015	0.745	0.0265	0.775	3100	5000	20
0.75	0.007	0.015	0.796	0.028	0.829	3100	5000	20
0.80	0.008	0.015	0.849	0.03	0.881	3200	5000	20
0.85	0.008	0.016	0.902	0.03	0.933	3200	5100	20
0.90	0.009	0.016	0.954	0.03	0.985	3300	5200	20
0.95	0.009	0.017	1.006	0.0315	1.037	3400	5200	20
1.0	0.01	0.0175	1.06	0.0315	1.094	3500	5200	20

1.05	0.01	0.0175	1.111	0.032	1.145	3500	5200	20
1.1	0.01	0.0175	1.162	0.0325	1.196	3500	5200	20
1.2	0.012	0.0175	1.264	0.0335	1.298	3500	5200	20
1.3	0.012	0.018	1.365	0.034	1.4	3500	5200	20
1.4	0.015	0.018	1.465	0.0345	1.5	3500	5200	20
1.48	0.015	0.019	1.546	0.0355	1.585	3500	5200	20
1.5	0.015	0.019	1.566	0.0355	1.605	3500	5200	20
1.6	0.015	0.019	1.666	0.0355	1.705	3500	5200	20
1.7	0.018	0.02	1.768	0.0365	1.808	3500	5200	20

1.8	0.018	0.02	1.868	0.0365	1.908	3500	5200	20
1.9	0.018	0.021	1.97	0.0375	2.011	3500	5200	20
2.0	0.02	0.021	2.07	0.04	2.113	3500	5200	20
2.5	0.025	0.0225	2.575	0.0425	2.62	3500	5200	20