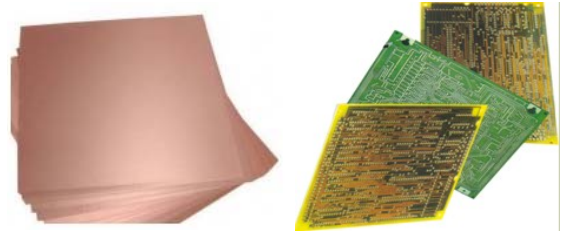


ZD-90(XPC), ZD-90F(FR-1)

COPPER-CLAD LAMINATED SHEETS

ZD-90(XPC), ZD-90F(FR-1) Copper-clad laminated sheets are produced by steps below:
 bleached kraft paper are impregnated in phenolic resin,
 then prepreg made by drying
 and then hot pressed with copper foils. Possessing the characteristics of excellent dimensional stability, super heat retardant and outstanding electrical property, the products are suitable for automatic component insertion, high density mounting and surface adhesion. The products are used for acoustics, color TV sets, telephones, and electronics calculations and toys.



1.Type

Type	Equivalent type				Main usage
	NEMA	JIS	UL-94	GB	
ZD-90	XPC	PP-7	94HB	CPFCP-04	Electronics toys, telephone and so on.
ZD-90F	FR-1	PP-7F	94V-0	CPFCP-09F	Color TV and other household appliances.

2.Specification

Nominal thickness	0.8	1.0	1.2	1.6	2.0
Single point error	±0.09	±0.11	±0.12	±0.14	±0.15
Area	1200(+20~0)X1000(+20~0)		1000(+20~0)X1000(+20~0)		

Note: Special sizes requirements will be negotiated by the supplier and the customer.

3.Main technical performance

No.	Item	Unit	Index	
			ZD-90(XPC)	ZD-90F(FR-1)
1	Surface resistance after damp heat and recovery \geq	M Ω	1000	100
2	Volume resistivity after damp heat and recovery \geq	M $\Omega \cdot m$	100	
3	Pulling strength \geq	N	50	
4	Peel strength after exposure to solvent vapour	N/mm	1.0	
5	Blistering after 10S heat shock	/	No blistering or delamination	
6	Punching processability	/	Cold	Hot
7	Flexural strength \geq	MPa	80	90
8	Flammability (Vertical burning test)	/	/	FV ₀ or FV ₁
9	Solderability (Wetting test)	S	/	2
10	Warpage \leq	mm	27	
			14	

Note: 1.The data shown above is an example of single-sided copper-clad laminates with its thickness of 1.6mm and 0.035mm copper foil.

2.Test methods are in accordance with GB/T4722-92.

ZD-9(G-10), ZD-9F(FR-4)

COPPER-CLAD LAMINATED SHEETS

ZD-9(G-10), ZD-9F(FR-4) Copper-clad laminated sheets are produced by steps below: alkali woven glass fabric are impregnated in epoxy resin, then prepreg made by drying and then hot pressed with copper foils. The products possess the characteristic of high mechanical strength, out standing electrical property and high precise size.

1.Type

Type	Equivalent type		Main usage
	NEMA	GB	
ZD-9	G-10	CEPGC-31	For middle and low grade industrial electronics and meters
ZD-9F	FR-4	CEPGC-32F	Computer and high grade industrial articles

2.Specification

Nominal thickness		0.8	1.0	1.2	1.5	1.6	2.0
Single point error	Accurate grade	±0.09	±0.11	±0.12	±0.14	±0.14	±0.15
	Rough grade	±0.15	±0.17	±0.18	±0.20	±0.20	±0.23
Area		1200(+20~0)X1000(+20~0)		1000(+20~0)X1000(+20~0)			

Note: Special sizes requirements will be negotiated by the supplier and the customer.

3.Main technical performance

No.	Item	Unit	Index	
			ZD-9(G-10)	ZD-9F(FR-4)
1	Surface resistance after damp heat and recovery \geq	M Ω	50000	
2	Volume resistivity after damp heat and recovery \geq	M $\Omega \cdot m$	10000	
3	Permittivity after damp heat and recovery \leq	/	5.5	
4	Dissipation factor after damp heat and recovery \leq	/	0.035	
5	Pulling strength \geq	N	60	
6	Peel strength after exposure to solvent vapor \geq	N/mm	1.4	
7	Blistering after 20S heat shock	/	No blistering or delamination	
8	Solderability (Wetting test)	S	2	
9	Flexural strength \geq	MPa	300	
10	Flammability (Vertical burning test)	/	/	FV ₀ or FV ₁
11	Water absorption \leq	mg	20	
12	Measling	/	No measling or blistering or delamination	
13	Warpage \leq	mm	18	
			20	

Note: 1.The data shown above is an example of single-sided copper-clad laminates with its thickness of 1.6mm and 0.035mm copper foil.

2.Test methods are in accordance with GB/T4722-92.

ZD-68(G)F, ZD-95(G)F/CEM-1

COPPER-CLAD LAMINATED SHEETS

ZD-68(G)F, ZD-95(G)F/CEM-1 Copper-clad laminated sheets are produced by steps below: cotton fibre paper are impregnated in epoxy phenolic resin, then prepreg made by drying and then hot pressed with double sides glass cloth and copper foils. They possess the characteristics of high mechanical strength, good flame retardant, outstanding electrical property, excellent dimensional stability and low warpage. The products are mainly used for monochrome TV sets, recorders, calculations, monitors and so on.

1.Type

Type	Equivalent type		Main usage
	NEMA	GB	
ZD-68(G)F	/	CEPCP-22F	VCD-player, acoustics, monochrome TV etc.
ZD-95(G)F	CEM-1	CEPCP(G)-23F	Hihg-grade acoustics and monitor etc.

2.Specification

Nominal thickness		0.8	1.0	1.2	1.5	2.0
Single point error	Accurate grade	±0.09	±0.11	±0.12	±0.14	±0.15
	Rough grade	±0.15	±0.17	±0.18	±0.20	±0.23
Area		1200(+20~0)X1000(+20~0)		1000(+20~0)X1000(+20~0)		

Note: Special sizes requirements will be negotiated by the supplier and the customer.

3.Main technical performance

No.	Item	Unit	Index	
			ZD-68(G)F	ZD-95(G)F/CEM-1
1	Surface resistance after damp heat and recovery \geq	M Ω	20000	30000
2	Volume resistivity after damp heat and recovery \geq	M $\Omega \cdot m$	2000	5000
3	Permittivity after damp heat and recovery \leq	/	5.0	5.2
4	Dissipation factor after damp heat and recovery \leq	/	0.050	0.045
5	Pulling strength \geq	N	30	60
6	Peel strength after exposure to solvent vapor \geq	N/mm	1.2	
7	Blistering after 10S heat shock	/	No blistering or delamination	
8	Solderability (Wetting test)	S	2	
9	Flexural strength \geq	MPa	110	200
10	Flammability (Vertical burning test)	/	FV ₀ or FV ₁	FV ₀
11	Water absorption \leq	mg	40	20
12	Warpage \leq	mm	27	
			14	13

Note: 1.The data shown above is an example of single-sided copper-clad laminates with its thickness of 1.6mm and 0.035mm copper foil.

2.Test methods are in accordance with GB/T4722-92.

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