

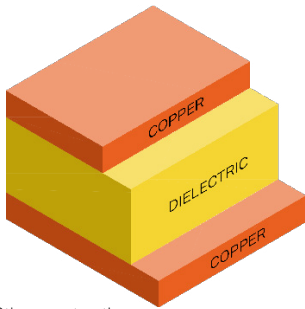
FR4 FR95 Mid-Tg

Low CTE & Lead Free Compatible

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STANDARD CONSTRUCTIONS



ED copper
thickness μm (in)
18 (1/2 oz)/35 (1oz) /
70 (2oz) / 105 (3oz)

Dielectric
thickness mm
0.1-3.2

ED copper
thickness μm (in)
35 (1oz) / 70 (2oz)
/ 105 (3oz)

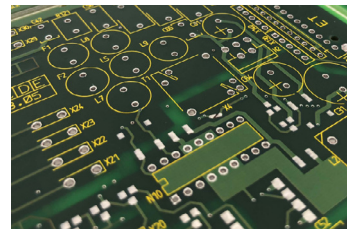
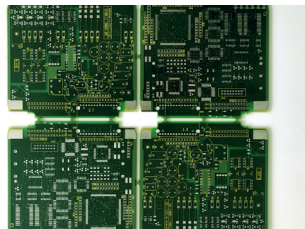
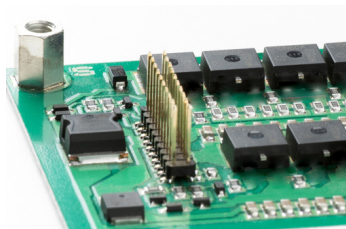
*Other constructions
available upon request

DESCRIPTION

Tg 155°C Lead-free Compatible
Excellent Peel Strength
Low Z-axis CTE
Low Water Absorption
Excellent Dimension Stability

Applications:

Automotive
Consumer Electronics
Communications



UL Approved QMST2 File: E47820
ANSI Grade FR-4 (type L99)
IPC 4101



RoHS 3 / REACH
Last updated compliance directive



PROPERTY	ITEM	IPC-TM-650	TEST CONDITION	UNIT	TYPICAL VALUE		
THERMAL	Tg	2.4.25	DSC	°C	155		
		2.4.24	TMA	°C	145		
		2.4.24.4	DMA	°C	\		
	X/Y-axis	2.4.24.5	<Tg,TMA	PPM/°C	13\14		
	Z-axis	2.4.24	<Tg,TMA	PPM/°C	40		
			>Tg,TMA	PPM/°C	245		
	Td	2.4.24	50~260°C	%	3		
T288	2.4.24.1	2.4.24.6	TGA(5%W.L)	°C	350		
			Clad	Min	30		
ELECTRICAL	Dk(R/C:55/70%)	2.5.5.9	C-24/23/50	-	1MHz	4.30\3.90	
					1GHz	4.25\3.85	
					10GHz	\	
	Df(R/C:55/70%)	2.5.5.9	C-24/23/50	-	-	1MHz	0.0147\0.0158
						1GHz	0.0158\0.0170
						10GHz	\
	Volume Resistivity	2.5.17.1	C-96/35/90		MΩ-cm	6.0×10 ⁸	
Surface Resistivity	MΩ				3.3×10 ⁷		
PHYSICAL	Water Absorption	2.6.2.1	E-1/105+D-24/23	%	0.12		
	Peel Strength (HTE)	2.4.8	As Received	N/mm	1oz	1.39	
	Peel Strength (RTF)				1oz	\	
	Peel Strength (HVLP)				1oz	\	
	Flexural Strength	2.4.4	As Received	N/mm ²	Warp	515	
					Fill	405	
Flame Resistance	UL-94	A&E-4/125		-	V-0		

FR4 FR95 Mid-Tg Low CTE & Lead Free Compatible

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AVAILABILITY	
STANDARD SHEET SIZES	940 x 1252 mm and 1092 x 1252 mm Also available cut to size panels.
Squareness	3 mm max., as differential between diagonal measurement

Specification column corresponds to guaranteed values. Typical values are average values of current production and are based on reliable analytical methods, they have to be used only as guideline and not give rise to any rights under warranty terms. Aismalibar reserves the right to future changes.

Notes:

- (1) Other level upon agreement
- (2) Influenced by build-up (% of resin)
- (3) As agreed upon between user and supplied.

IEC Specifications (IEC 61249-2-7) and Test Methods (IEC 61189-2): IEC specifications and test methods are in most of cases equivalent to IPC standards. They can be used as reference upon specific agreement between customer and supplied.