

R-1566W and R-1551W

Multifunctional Epoxy Resin System, Halogen-Free, and Low Flow Option

Panasonic's **R-1566W** laminate system is Halogen-free and Antimony-free. It meets Lead-free assembly requirements and its applications include Cellular Phones, Personal Devices and Automotive Components. It has excellent heat resistance (Td 350°C) and meets IPC classification 4101B /94 /95, surface classification "C" and thickness is Class "C".

R-1566W

R-1566W Laminate Constructions					
Thickness (inches)	Thickness (mm)	Laminate Construction	Dielectric Constant (Dk) @ 1GHz	Typical Df @ 1GHz	Typical Resin Content (%)
.0020	0.051	1-1067	4.2	0.012	65
.0024	0.060	1-1067	4.1	0.012	71
.0030	0.076	1-1080	4.4	0.011	63
.0040	0.102	1-2116	4.6	0.010	48
.0050	0.127	1-1504	4.5	0.011	43
.0060	0.152	1-1080, 1-2116	4.6	0.010	50
.0060	0.152	1-3313, 1-1080	4.5	0.011	54
.0060	0.152	1506	4.6	0.010	45
.0070	0.178	1-7628	4.6	0.010	42
.0080	0.203	1-7628	4.6	0.010	46
.0080	0.203	2-2116	4.6	0.010	45
.0100	0.254	1-2116, 1-1506	4.6	0.010	46
.0120	0.305	2-1506	4.6	0.010	45
.0120	0.304	3-2116	4.6	0.010	48
.0140	0.370	2-7628	4.7	0.010	42
.0150	0.380	2-7628	4.6	0.010	46
.0160	0.394	2-7628	4.6	0.010	46
.0180	0.457	2-7628, 1-2116	4.6	0.010	46
.0200	0.510	1-1506, 2-2-7628	4.7	0.010	43
.0210	0.533	3-7628	4.6	0.010	46
.0240	0.610	1-1080, 3-7628	4.7	0.010	44
.0240	0.610	3-7628	4.6	0.010	46
.0280	0.711	4-7628	4.6	0.010	46
.0310	0.800	1-1080, 4-7628	4.7	0.010	43
.0390	0.100	1-2116, 5-7328	4.7	0.010	43
.0440	1.180	6-7628	4.7	0.010	44
.0590	1.500	8-7628	4.7	0.010	44

R-1551LW (Prepreg - Low Flow)				
Glass Style	Typical Thickness (inches)	Typical Dk @ 1 Ghz	Typical Df @ 1 Ghz	Typical Resin Content (%)
106	0.0021	4.1	0.012	73
1080	0.0028	4.3	0.011	63
1080	0.0037	4.1	0.012	71
2116	0.0052	4.4	0.011	57

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R-1551W Prepreg Specifications				
Glass Style	Typical Thickness (inches)	Typical Dk @ 1 Ghz	Typical Df @ 1 Ghz	Typical Resin Content (%)
106	0.0020	4.1	0.012	72
1037	0.0025	4.0	0.013	78
1080	0.0030	4.2	0.012	65
1080	0.0036	4.1	0.012	70
3313	0.0036	4.5	0.011	53
3313	0.0041	4.4	0.011	57
2116	0.0045	4.5	0.010	52
2116	0.0052	4.4	0.011	57
1506	0.0062	4.6	0.010	46
1506	0.0069	4.6	0.010	50
7628	0.0081	4.5	0.010	44
7628	0.0087	4.6	0.010	50

1566W Engineering Specifications					
	Property	Units	Test Method	Condition	Value
THERMAL	Glass Transition Temp	°C	DSC	As received	145
	Glass Transition Temp	°C	TMA	As received	
	Thermal Decomposition Temp	°C	TGA	As received	350
	CTE (α_1) Z-axis	ppm/°C	IPC-TM-650 2.4.41 (TMA)	As received	40
	Time to Delam (T260)	min	IPC TM-650 2.4.24.1	As received	110
	Time to Delam (T288)	min	IPC TM-650 2.4.24.1	As received	3
ELECTRICAL	Volume Resistivity	MΩ-cm	IPC TM-650 2.5.17.1	C-95/35/90	1x10 ⁹
	Surface Resistivity	MΩ	IPC TM-650 2.5.17.1	C-95/35/90	1x10 ⁸
	Dielectric Constant (Dk)	@ 1 MHz	IPC TM-650 2.5.5.3	C-24/23/50	4.6
	Dissipation Factor (Df)	@ 1 MHz	IPC TM-650 2.5.5.3	C-40/23/50	0.010
PHYSICAL	Moisture Absorption	%	IPC TM-650 2.6.2.1	D-24/23	0.14
	Peel Strength 1 oz (35 μm)	kN/m	IPC TM-650 2.4.8	As Received	1.80
	Flammability	UL94	IPC TM-650 2.4.39	C-48/23/50	V-0