Issued: 2019/06/21
New : 2021/07/30

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ELECTRONIC MATERIALS DIVISION.
COPPER CLAD LAMINATE DEPARTMENT
NO. 201. TUNG HWA N. ROAD, TAIPEI, TAIWAN.

NP-535

■ FEATURES

- Low dielectric constant and low dissipation factor at high frequency range
- Greater design flexibility by allowing the same impedance
- Excellent dimensional stability
- Suit for Antenna、PA and LNB application

■ PERFORMANCE LIST

Characteristics		Unit	Conditioning	Typical Values	SPEC	Test Method
Permittivity	Process	-	10GHz/23℃	3.50	-	2.5.5.5
	Design			3.30		Differential phase length
Loss Tangent		-	10GHz/23℃	0.0034	-	2.5.5.5
				0.0033		SPDR
Volume resistivity		MΩ-cm	C-96/35/90	5x 10^8~6 x 10^9	10^6 ↑	2.5.17
Surface resistivity		MΩ	C-96/35/90	6 x 10^7~6 x 10^8	10^4 ↑	2.5.17
Arc resistance		SEC	D-48/50+D-0.5/23	450↑	60 ↑	2.5.1
Dielectric breakdown		KV	D-48/50	60 ↑	40 ↑	2.5.6
Moisture absorption		%	D-24/23	0.01~0.02	0.35 ↓	2.6.2.1
Flammability		-	C-48/23/50	94V0	94V0	UL94
Peel strength 1 oz		lb/in	288℃x10" solder floating	5~7	-	2.4.8
Thermal stress		SEC	288℃ dipping	300 ↑	10 ↑	2.4.13.1
Pressure cooker 2 hr (2 atm 121℃)		SEC	288℃ dipping	300 ↑	N/A	-
Dimensional stability X-Y axis		%	E-0.5/170	0.010-0.030	0.050 ↓	2.4.39
Coefficient of thermal expansion Z-axis before Tg		ppm/℃	TMA	50-80	N/A	2.4.24
Glass transition temp		℃	DMA	180	N/A	2.4.25
Td (5% weight loss)		℃	TGA, 10℃/min	370	325 ↑	-
PIM		dBc	--	<-153	-	-

Data shown are nominal values for reference only.

NOTE:
The average value in the table refers to samples of .030" 1/1.
Test method per IPC-TM-650

■ PRODUCT SIZE & THICKNESS

THICKNESS INCH (mm)	**THICKNESS TOLERANCE**	COPPER CLADDING OZ (μm)	SIZE INCH	SIZE mm
0.010"(0.254)	±0.0010"(0.025)	0.5 (17) HTE,RTF	49 x 37	1245 x 0940
0.020"(0.508)	±0.0020"(0.050)	1.0 (35) HTE,RTF	49 x 41.1	1245 x 1045
0.030"(0.762)	±0.0020"(0.050)	2.0 (70) HTE,RTF	49 x 43	1245 x 1092
0.040"(1.016)	±0.0030"(0.076)			
0.050"(1.27)	±0.0050"(0.127)			
0.060"(1.524)	±0.0050"(0.127)			