Issued: 2020/04/06
New : 2021/08/02

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

NP-536HC

■ FEATURES

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

■ PERFORMANCE LIST

Characteristics		Unit	Conditioning	Typical Values	SPEC	Test Method
Permittivity	Process	-	10GHz/23℃	3.76	-	2.5.5.5
	Design		-	3.66		Differential phase length
Loss Tangent		-	10GHz/23℃	0.0029	-	2.5.5.5
				0.0030		SPDR
Volume resistivity		MΩ-cm	C-96/35/90	$4x\ 10^8$~$5 x\ 10^9$	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	0.008~0.015	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	0.008-0.018	0.050 ↓	2.4.39
Coefficient of thermal expansion Z-axis before Tg		ppm/℃	TMA	30-60	N/A	2.4.24
Td (5% weight loss)		℃	TGA, 10℃/min	410	325 ↑	-
Thermal conductivity		W/m.k	E-0.5/120	0.70	N/A	ASTM D5470

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
0.0057"(0.145)	±0.0007"(0.018)	0.5 (17) HTE,RTF 1.0 (35) HTE,RTF	49 x 37 49 x 41.1 49 x 43	1245 x 0940 1245 x 1045 1245 x 1092
0.0107"(0.272)	±0.0015"(0.025)			
0.020"(0.508)	±0.0020"(0.050)			
0.030"(0.762)	±0.0020"(0.050)			
0.040"(1.016)	±0.0030"(0.076)			
0.047"(1.194)	±0.0030"(0.076)			
0.060"(1.524)	±0.0050"(0.127)			

*Use resin coating copper, need to plasma after desmear process.