

RF/Microwave PTFE-Substrates



9255	9260	9270	9294	9300	9320	9294	9300	9320	9338	9348	9350	9410	9450
NX SERIES						NH SERIES							
2.55±.04	2.60±.04	2.70±.04	2.94±.04	3.00±.04	3.20±.04	2.94±.07	3.00±.07	3.20±.07	3.38±.10	3.48±.10	3.50±.10	4.10±.10	4.50±.10
0.0018	0.0019	0.0020	0.0022	0.0023	0.0024	0.0022	0.0023	0.0024	0.0025	0.0030	0.0030	0.0030	0.0030
		Yes							Yes				
		-155 dBc							-155 dBc				
		50kV							45kV				
		10 ⁹ MΩ/cm							10 ⁹ MΩ/cm				
		10 ⁷ MΩ							10 ⁷ MΩ				
		180 sec.							180 sec.				
		82.7 MPa							158.6 MPa				
		68.9 MPa							131.0 MPa				
		2.33 kN / m							2.33 kN / m				
		2.31 kN / m							2.31 kN / m				
		0.02%							0.08%				
		2.23 g / cm ³							2.459 g / cm ³				
		0.272 W / m / K							0.230 W / m / K				
		25 ppm / °C							9 ppm / °C				
		35 ppm / °C							12 ppm / °C				
		260 ppm / °C							71 ppm / °C				
		V-0							V-0				

Nelco's RF and Microwave Materials

N4350-13 RF	Controlled Dk/Df Modified Epoxy Dk 3.50 / Df 0.0065 at 10 GHz
N4380-13 RF	Controlled Dk/Df Modified Epoxy Dk 3.80 / Df 0.0070 at 10 GHz
NH9000	Woven, Glass / Ceramic Loaded PTFE Dk 2.94 - 4.50 / Df 0.0022 - 0.0030
NX9000	Woven Glass Reinforced PTFE Dk 2.40 - 3.20 / Df 0.0016 - 0.0024
NY9000	Woven Glass Reinforced PTFE Dk 2.08 - 2.33 / Df 0.0006 - 0.0011
	Above values at 10 GHz

Ordering Information

Please specify the product and / or Dk, material thickness, copper thickness, copper type, and panel size. Request Passive Intermodulation Formulation when necessary for antenna applications.

Example: 9220, .010" thick, 1 oz two sides, ED copper, 12"x18" or Dk=2.20, .010" thick, 1 oz copper two sides, ED copper, 12"x18". For Passive Intermodulation Formulation material, add the IM suffix, i.e.: 9220IM.

Cladding - Copper Foil

Foil Weight	Foil Thickness		Copper Type Electro-Deposited (ED)
	Microns	inches	
.50 oz	18	0.00067	RH*
1 oz	35	0.00134	R1*
2 oz	70	0.00268	R2*

* Reverse treated ultra low profile copper

Cladding - Heavy Backed Metal

Plate Thickness		Plate Material		
mm	inches	Aluminum	Copper	Brass
0.800	0.032	■	■	■
1.000	0.039	■	■	■
1.200	0.047	■	■	■
1.500	0.059	■	■	■
1.575	0.062	■	■	■
2.000	0.079	■	■	■
2.362	0.093	■	■	■
2.500	0.098	■	■	■
3.000	0.118	■	■	■
3.175	0.125	■	■	■
4.000	0.157	■	■	■
4.750	0.187	■	■	■
5.000	0.197	■	■	■
6.000	0.236	■	■	■
6.350	0.250	■	■	■
7.000	0.276	■	■	■
8.000	0.315	■	■	■