

Высокотехнологичные ВЧ и СВЧ материалы печатных плат

Компания AGC Nelco разрабатывает и производит высокотехнологичные ВЧ и СВЧ материалы для производства печатных плат, предназначенных главным образом для рынка телекоммуникаций, передачи данных, интернет-инфраструктуры, автомобильной промышленности и рынка высокопроизводительных вычислений. Производственные мощности компании расположены в Сингапуре, Франции, Аризоне (США) и Калифорнии (США).

Компания также имеет исследовательские центры в Аризоне (США) и Сингапуре. Компания AGC Nelco предлагает полный ассортимент материалов для производства печатных плат (препреги и ламинаты), обеспечивающих превосходные тепловые, механические и электрические характеристики в сложных конструкциях с большим количеством слоев.



FR-4 Substrates	Description	High Temp Lead-Free ² Assembly Compatible	CAF ³ Resistant	Tg °C (DSC)	Dielectric ¹ Constant (Dk)		Dissipation ¹ Factor (Df) 1 MHz
					1 MHz	1 GHz	
N4000-6	High Tg Multifunctional Epoxy	-	-	175	4.3	4.1	0.023
N4000-6 FC	Fast-Cure, High Tg Multifunctional Epoxy	-	-	175	4.3	4.1	0.023
N4000-7	Low CTE Multifunctional Epoxy	Yes	Yes	155	4.5	4.0	0.018
N4000-7 SI®	Low CTE Multifunctional Epoxy	Yes	Yes	155	4.0	3.6	0.016
N4000-29	Lead Free, High Tg Multifunctional Epoxy	Yes	Yes	185	4.5	4.3	0.018

High Performance					1 GHz	10 GHz	10 GHz
Mercurywave® 9350	Microwave Performance, Very Low Loss, Modified Epoxy	Yes	-	200 (DMA)	-	3.5	0.004
Meteorwave® 1000	Very Low Loss, Very High Reliability	Yes	Yes	240 (DMA)	-	3.4	0.0047
Meteorwave® 2000	Ultra Low Loss, Very High Reliability	Yes	Yes	240 (DMA)	-	3.2	0.0034
Meteorwave® 3000	Very Low Loss, Very High Reliability	Yes	Yes	200 (DMA)	-	3.6	0.0039
Meteorwave® 4000	Ultra Low Loss, Very High Reliability	Yes	Yes	200 (DMA)	-	3.4	0.0024

¹ Dk and Df numbers provided are typical values. RF/Microwave material Dk and Df values are based on actual constructions.

² High-temperature lead free assembly compatibility is based on Td, T260 and 245°C / 260°C reflow testing. Actual results will vary based on assembly and board construction conditions.

³ CAF resistance testing is based on specific coupon design and test protocols. All test data provided are typical values and not intended to be specification values. For review of critical specification tolerances, please contact a company representative directly.



Your Dreams, Our Challenge



High Performance	Description	High Temp Lead-Free ² Assembly Compatible		CAF ³ Resistant	Tg °C (DSC)	Dielectric ¹ Constant (Dk)		Dissipation ¹ Factor (Df) 1 MHz
		1 MHz	1 GHz			1 MHz	1 GHz	
Meteorwave® 3350	High Speed, Ultra Low Loss, Controlled Dk	Yes	Yes	Yes	200 (DMA)	-	3.5	0.0038
Meteorwave® 8000	Extreme Low Loss, Very High Reliability	Yes	Yes	Yes	185 (DMA)	-	3.28	0.0016
Meteorwave® 8350	Extreme Low Loss, Very High Reliability, Controlled Dk	Yes	Yes	Yes	185 (DMA)	-	3.5	0.0018
M-Ply™	Ultra Low Loss Bonding Ply	Yes	Yes	Yes	200 (DMA)	-	3.38	0.0020
N4000-12	High Speed, Low Loss, Modified Epoxy	Yes	Yes	Yes	190	3.7	3.6	0.008
N4000-12 SI®	High Speed, Low Loss, Modified Epoxy	Yes	Yes	Yes	190	3.4	3.3	0.007
N4000-13	High Speed, Low Loss, Modified Epoxy	Yes	Yes	Yes	210	3.7	3.6	0.008
N4000-13 SI®	High Speed, Low Loss, Modified Epoxy	Yes	Yes	Yes	210	3.4	3.2	0.007
N4000-13 EP™	High Speed, Low Loss, Modified Epoxy	Yes	Yes	Yes	210	3.7	3.6	0.008
N4000-13 EP SI®	High Speed, Low Loss, Modified Epoxy	Yes	Yes	Yes	210	3.4	3.2	0.007
N4350-13 RF	Microwave Performance, Modified Epoxy	Yes	-	-	210	-	3.5	0.008
N4380-13 RF	Microwave Performance, Modified Epoxy	Yes	-	-	210	-	3.8	0.008
N4800-20	Thermally Robust, High Speed, Low Loss, Mod. Epoxy	Yes	Yes	Yes	200	-	3.5	0.0074
N4800-20 SI®	Thermally Robust, High Speed, Low Loss, Mod. Epoxy	Yes	Yes	Yes	200	-	3.24	0.0064
N5000	BT Epoxy	Yes	Yes	Yes	185	3.6	3.6	0.010
N5000-30 & 32	Chip Packaging BT Epoxy (not available in Asia)	Yes	-	-	205 (DMA)	-	-	-
N7000-1	non-MDA Polyimide	Yes	-	-	260	3.9	3.8	0.0095
N7000-2 HT / -3	non-MDA Toughened Polyimide	Yes	-	-	260	3.5	3.5	0.009
N7000-2 V0	UL 94 V-0 Toughened Polyimide	Yes	-	-	250	3.8	3.8	0.010
N7000-3	UL 94 V-1 Toughened Polyimide	Yes	-	-	260	3.7	3.5	0.009
N8000	Cyanate Ester	Yes	-	-	250	3.6	3.5	0.007
N8000Q	Cyanate Ester with Quartz Fabric	Yes	-	-	250	3.3	3.2	0.006
N9000-13 RF	PTFE Blended Laminate	Yes	-	-	220	-	3.00-3.50	0.0040-0.0055
NH9000	Woven, Glass / Ceramic Loaded PTFE	Yes	-	-	-	-	2.94-4.50	0.0022-0.0030
NL9000	Woven, Glass-Reinforced PTFE	Yes	-	-	-	-	2.94-3.50	0.0017
NX9000	Woven, Glass-Reinforced PTFE	Yes	-	-	-	-	2.40-3.20	0.0016-0.0024
NY9000	Woven, Glass-Reinforced PTFE	Yes	-	-	-	-	2.08-2.33	0.0006-0.0011
No Flow Prepregs		Lead-Free ² Compatible	Tg °C (DSC)	Dk 1 GHz	Dk 10 GHz	Df 1 GHz	Df 10 GHz	
N4000-6NF	Fast-Cure, High Tg Multifunctional Epoxy No Flow	-	175	4.1	-	-	-	
N4000-29NF	Lead Free, High Tg Multifunctional Epoxy No Flow	Yes	185	4.3	4.0	-	0.017	
Meteorwave 1000NF	Very Low Loss, Very High Reliability No Flow	Yes	240 (DMA)	-	3.4	-	0.0047	

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