



**MultiClad® HF -- The Green Microwave/HF Alternative**

Arlon’s MultiClad HF is a new halogen-free low-loss system that represents the next generation in low-loss multilayerable thermoset laminate and prepreg systems for microwave and high-frequency printed circuit boards. This new multi-purpose PWB material technology combines a ceramic-filled low-loss, high reliability thermoset resin system with bromine-free flame retardant system to create a material that is unmatched in terms of environmental standards, electrical performance, mechanical stability, thermal reliability and cost.

**Key Product Features include:**

- Low Loss for High Performance/High Frequency Applications
- Halogen-Free to Address Environmental Standards
- Lead-Free Solder Temperatures / Thermally Robust
- High Tg and Low Z-Direction Expansion for PTH Reliability
- Low TCER for Phase Stability over Temperature
- Low Moisture Absorption
- Good Thermal Conductivity
- Competitive Dk and Df Values
- Stable Loss Values through Thermal Oxidative Aging

**Important Product Properties:**

Property	Units	Value
Dk / Df @ 10 GHz	--	3.7 / 0.0045
Tg (TMA)	°C	190
Decomposition Temp	°C (5%)	432
T300	Minutes	>60
CTE (X/Y)	ppm/°C	14-16
CTE(Z)	ppm/°C below Tg	20
	ppm/°C above Tg	150
Total Thermal Expansion	% (50 to 260°C)	1.2%
Copper Peel	lb/in (1 Ounce Foil)	8
Water Absorption	% (24 hour immersion)	0.15
Thermal Conductivity, Tc	W/m-K	0.64
Flammability	UL-94	Meets V0

MultiClad HF is designed for High-Speed Backplanes and Server boards, Power Amplifiers, Satellite receivers, LNB converters, as well as Semiconductor burn-in-boards and other high speed, high reliability applications.