

**ULTRA LOW LOSS DIELECTRIC THERMOSETTING RESIN COMPOSITIONS
AND HIGH PERFORMANCE LAMINATES MANUFACTURED THEREFROM**

ABSTRACT

A ultra low loss dielectric thermosetting resin composition has at least one cyanate ester
 5 component (A) and at least one reactive intermediate component (B) that is capable of
 copolymerization with said component (A). The invention is a cyanate ester resin of the form:
 $T_n-[W-(Z)_f(H)_{1-f}-W]_{n-1}-[W-(Z)_f(H)_{1-f}-(OCN)_f(R)_{1-f}]_{n+2}$, wherein T is a 1, 3, 5-substituted-
 triazine moiety (C_3N_3); W is a linking atom between triazine and either component A or
 component B; Z is component (A); H is component (B); OCN is a cyanate ester end group; R is
 10 a reactive end group of component B; n is an integer greater than or equal to 1; and f is a weight
 or mole fraction of component A. The composition exhibits excellent dielectric properties and
 yields a high performance laminate for use in high layer count, multilayer printed circuit board
 (PCB), prepregs, resin coated copper (RCC), film adhesives, high frequency radomes, radio
 frequency (RF) laminates and various composites.

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(No suitable figure)