Abstracts

Microscopic observation of the temperature coefficient distribution of dielectric material for microwave application using scanning photothermal dielectric microscope

Y. Cho, T. Kasahara and K. Fukuda. "Microscopic observation of the temperature coefficient distribution of dielectric material for microwave application using scanning photothermal dielectric microscope." 1997 MTT-S International Microwave Symposium Digest 3. (1997 Vol. III [MWSYM]): 1647-1650.

Two dimensional images of the temperature coefficient of the distribution of the dielectric constant of a two phases composite ceramics composed of TiO/sub 2/ and Bi/sub 2/Ti/sub 4/O/sub 11/ are observed using scanning photothermal dielectric microscope. The obtained images clearly show that the each grain of TiO/sub 2/ and Bi/sub 2/Ti/sub 4/O/sub 11/ in the ceramics has a negative and a positive temperature coefficient, respectively and that the macroscopic averaged temperature coefficient of the ceramics is relatively low due to the cancellation of the coefficients with the opposite signs.

❑ Return to main document.