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TRANSFER TAPE

41110-T

Lead-Free Ceramic Transfer Tape with Dielectric Constant ~ 4 for Use with 96% Alumina Substrates

A flexible cast film of inorganic dielectric powder dispersed in an organic matrix, designed to be laminated to and fired on an alumina substrate. A pressure/temperature combination of 1.7-6.9 MPa and 70°C works well for laminating this tape. After lamination, the parts can be fired in a belt furnace at 580°C peak/50 minute cycle burnout followed by an 850°C peak/45 minute cycle for sintering. Multilayer parts can be formed by metallizing laminated and fired sheets progressively. This tape is useful when low dielectric constant and low loss are desired. Transfer tape is provided on a silicone-coated polyester film to minimize environmental contamination, to protect it from mechanical damage, and to aid in handling.

Properties when laminated and fired on 96% Al₂O₃ *

DIELECTRIC CONSTANT: (1 MHz) (using 803)		4.0-5.0
DISSIPATION FACTOR: (1 MHz)		≤ 0.4%
INSULATION RESISTANCE:		> 10 ¹² Ω/sq.
THERMAL CONDUCTIVITY:		2.5-3.0 W/m°C
BREAKDOWN VOLTAGE:		> 1200 V/25 μm
PRESSURE COOKER: (Insulation Resistance after 15 minutes at 2 atmospheres)		>10 ¹² Ω/sq.
FIRED SHRINKAGE:	X and Y	0
	Z	45%-55%
FIRED DENSITY: (theoretical)		2.26 g/cm ³
TAPE THICKNESS:		115-135 μm
COLOR:		Light blue
SHELF LIFE: (when stored in dry N ₂)		6 months
RECOMMENDED CONDUCTORS:		ESL 903-A, 903-C, 902, 803, 963

* See US Patent # 4,645,55

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ESL Affiliates

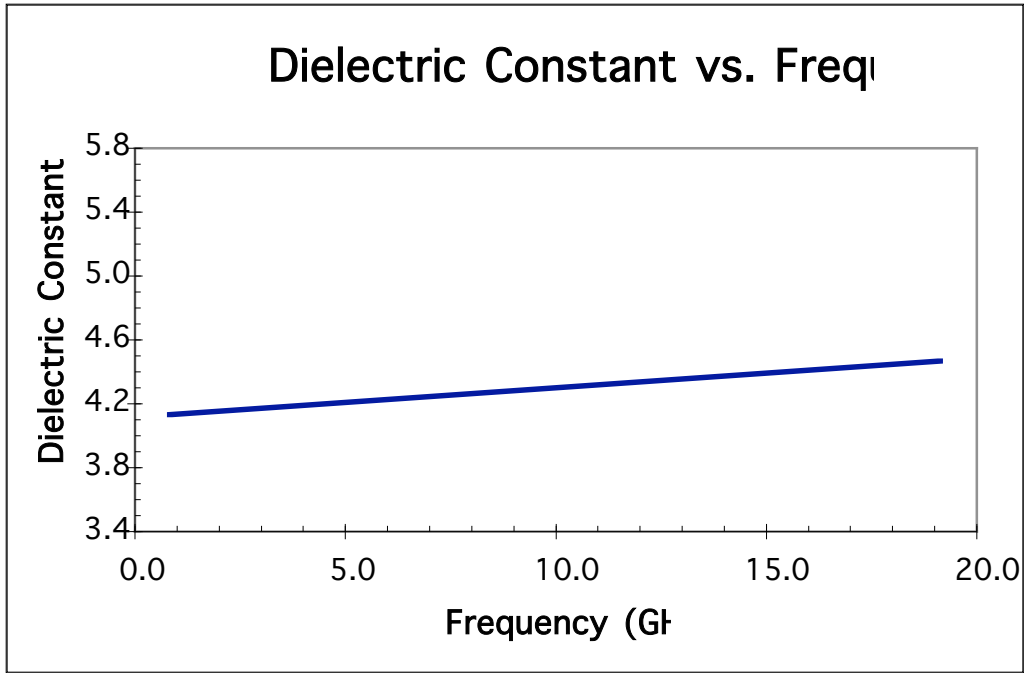
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See Caution and Disclaimer on other side

MICROWAVE PROPERTIES



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CAUTION: Proper industrial safety precautions should be exercised in using these products. Use with adequate ventilation. Avoid prolonged contact with skin or inhalation of any vapors emitted during use or heating of these compositions. The use of safety eye goggles, gloves or hand protection creams is recommended. Wash hands or skin thoroughly with soap and water after using these products. Do not eat or smoke in areas where these materials are used. Refer to appropriate MSDS sheet.

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