ESL ELECTROSCIENCE
CERAMIC TAPES & THICK-FILM MATERIALS
416 EAST CHURCH ROAD
KING OF PRUSSIA, PA 19406-2625 USA
T: 610.272.8000
F: 610.272.6759
www.electroscience.com

PARTIALLY STABILIZED ZIRCONIA TAPE 42013-A

RoHS compliant* high temperature PSZ tape for use in planar sensors

ESL 42013-A is a flexible cast film of partially stabilized zirconia (PSZ) powder dispersed in an organic matrix. This material is designed to be sintered in the temperature range of 1450°C-1550°C to yield a dense white-colored ceramic. ESL 42013-A tape is provided on a silicone-coated polyester film to protect the tape from mechanical damage and aid in handling.

This tape is generally used with Pt inks (ESL 5570 Series) that can be co-fired for use in planar sensors.

TYPICAL PROPERTIES:

TAPE THICKNESS: 125 µm ± 10%
(custom thicknesses available)

PROCESSING: Parts are formed by blanking sheets of the tape to the required green size prior to sintering. The burnout cycle depends on the part configuration and size.

TYPICAL PEAK SINTERING TEMPERATURE FOR PARTS: 1500°C for 3 hours

STABILIZING AGENT: Y_2O_3

STABILIZER CONTENT: 5.0 mol %

FIRED SHRINKAGE: X: 17.3 ± 1.0 %
(12-layer bar fired at 1500°C for 3 hours) Y: 18.3 ± 1.0 %

FIRED DENSITY: ≥ 97% of theoretical
(1500°C for 3 hours)

ESL Affiliates
ESL China • Rm#1707, Tower A • City Center of Shanghai • 100 Zunyi Road • Shanghai, China 200051Tel: (011-86)-21-62370336 • Fax: (011-86)-21-62370338 • eslchina@eslshanghai.net
ESL Europe • 8 Commercial Road • Reading, Berkshire, England RG2 0QZ • Tel: (011-44)-118-918-2400 • Fax: (011-44)-118-986-7331 • Sales@ESLEurope.co.uk
ESL Nippon • Sukegawa Bldg • 6th floor • 3-4 Yanagibashi 1-chome • Taito-ku • Tokyo 111, Japan • Tel: (011-81)-3-3864-8521 • Fax: (011-81)-3-3864-9270 • Sales@ESL-Nippon.co.jp
See Caution and Disclaimer on other side.

PAGE BLANK

***None of the six substances referred to in the RoHS Directive (2002/95/EC) are used in the formulation of this product.**

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.