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CERMET RESISTOR

3414 Series

High Gauge Factor

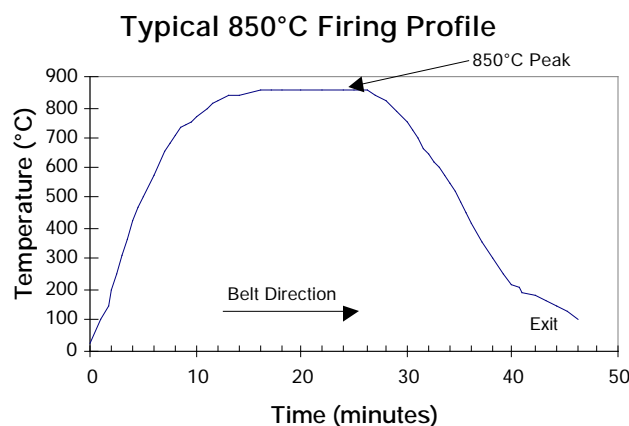
ESL 3414 Series high gauge factor resistor pastes are specifically designed for piezo-resistive applications on alumina or other ceramic membranes or substrates.

PASTE DATA:

VISCOSITY: (Brookfield RVT, ABZ spindle, 10 RPM, 25.5°C±0.5°C)	225±25 Pa·s
THINNER:	ESL 401
SHELF LIFE: (25°C)	6 months

PROCESSING:

SUBSTRATE OF CALIBRATION:	96% alumina
SCREEN MESH/EMULSION:	200 /12.5 µm
LEVELING AT ROOM TEMPERATURE:	5-10 minutes
DRYING AT 125°C:	10-12 minutes
FIRING PROFILE:	850°C for 10-12 minutes
FIRING ATMOSPHERE:	air



3414-A&B 0012-F

ESL Affiliates

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See Caution and Disclaimer on other side.

TYPICAL PROPERTIES:

FIRED RESISTOR THICKNESS: $11 \pm 1 \mu\text{m}$
RESISTOR TERMINATIONS: (Pre-fired) ESL 8836

	<u>3414-B-LBM</u>	<u>3414-B-HBM</u>	<u>3414-A</u>	<u>3414-B</u>
SHEET RESISTIVITY: ¹ (k /sq.)	1.0-1.5	2.5-3.0	7.2-8.8	3.6-4.4
TCR: (in ppm/°C)	± 150	± 150	± 100	± 100
NOISE INDEX: ¹	0 dB	3 dB	1 dB	6 dB
TYPICAL GAUGE FACTOR: ²				
Longitudinal:	15-16	17-18	14-15	18-19
Transverse:	8-9	10-11	8-10	10-12
Nonlinearity:	1%	1%	1%	3%
Hysteresis:	1%	1%	1%	3%

NOTES:

1. 1.25 mm x 1.25 mm geometry
2. 1.00 mm x 1.00 mm geometry
3. Designing resistors with an active length greater than 1.25 mm may minimize the ESD sensitivity.

3414-A&B 0012-F

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.

DISCLAIMER: The product information and recommendations contained herein are based on data obtained by tests we believe to be accurate, but the accuracy and completeness thereof is not guaranteed. No warranty is expressed or implied regarding the accuracy of these data, the results obtained from the use hereof, or that any such use will not infringe any patent. Electro-Science assumes no liability for any injury, loss, or damage, direct or consequential arising out of its use by others. This information is furnished upon the condition that the person receiving it shall make their own tests to determine the suitability thereof for their particular use, before using it. User assumes all risk and liability whatsoever in connection with their intended use. Electro-Science's only obligation shall be to replace such quantity of the product proved defective.
