

Micromax™ 5907

Electronic Inks & Pastes

PRODUCT DESCRIPTION

Pt/Ag Conductor

Micromax™ 5907 is a high silver content platinum/silver thick film composition for use as:

- All purpose conductor on single layer hybrids.
- Termination conductor for Micromax™ 00X0 network and chip resistor series.
- Electrode for Micromax™ thick film capacitor compositions.

Product benefits

- High conductivity
- Cost effective
- Excellent adhesion and solder acceptance with 10/88/2 solder
- Excellent 1 and 2 mil gold wire bondability

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

PRODUCT INFORMATION

General Properties	Value Unit
Application	Resistor termination
Solvent or thinner	Micromax™ 4553

TECHNICAL DATA

Rheological Properties	Value Unit
Viscosity ¹	150 to 210 Pa.s

Application Technique	Value Unit
Mask mesh	325
Mask emulsion	15 µm

Application Technique	Value	Unit
Drying time	10	min
Drying temperature	150	°C
Theoretical coverage ²	95	cm ² /g
Recommended film thickness	10	µm
Print resolution ³	125	µm
Print resolution ⁴	125	µm
Leveling time	10 to 15	min
Specific Application Suitability	Value	Unit
Solder leach resistance ⁵	≥7	cycles
Solder acceptance ⁶	≥95	%
Electrical Properties	Value	Unit
Resistivity ⁷	≤4	mOhm per square
Storage and Stability	Value	Unit
Shelf life ⁸	6	months

¹Brookfield HBT, SC4-14/6R spindle, 10 rpm, 25°C

²based on an average fired thickness of 10µm for pads

³125/125 µm pattern

⁴125/125 µm pattern

⁵Dip, 10 sec/dip, 10Sn/88Pb/2Ag at 330°C, dip/µm fired thickness.

⁶Dip, 5 sec, 10Sn/88Pb/2Ag at 330°C.

⁷at 15µm fired thickness

⁸in unopened containers, from date of shipment, stable environment at room temperature between 5°C - 30°C

PROCESSING GUIDELINES

Substrates

Properties are based on tests using 96% alumina substrates. Substrates of other compositions and from various manufacturers may result in variations in performance properties.

Printing

A 325-mesh stainless steel screen with a 15µm (0.6mil) emulsion to obtain a minimum of 10µm fired thickness is recommended. Printing speeds up to 20cm/s (8in/s) can be used.

Drying

Allow the wet print to level for 10-15 minutes at room temperature. Dry for 10 minutes at 150°C.

Firing

Dried parts should be fired in a belt furnace. A total cycle time of 30 minutes and a peak temperature of 850°C for 10 minutes is recommended.

Typical Fired Properties

Test	
Migration Resistance (Water Drop Test) 508/508µm lines/space pattern 20VDC	3-5 seconds
Solder Acceptance: Dip (5sec)	>95 (10Sn/88Pb/2Ag, 330°C)
Solder Leach Resistance: Dip (10 sec/dip)	>7 dips (10Sn/88Pb/2Ag, 330°C) dip/µm fired thickness
Initial Adhesion	20-25 (2.5-3.0 kg)
Aged Adhesion 150°C, 1,000 hrs	>20 N (2.5-3.0 kg)

All values reported here are results of experiments in our laboratories intended to illustrate product performance potential with a given experimental design. They are not intended to represent the product's specifications.

Storage and shelf life

Containers should be stored, tightly sealed, in a clean, stable environment at room temperature between 5°C - 30°C. Shelf life of material in unopened containers is 6 months from date of shipment. Some settling of solids may occur and compositions should be thoroughly mixed prior to use.

Storage conditions on the product data sheets are intended to represent long-term material storage recommendations and not a shipping or temperature-at-receipt requirement.

Transportation: Under normal shipping conditions, without temperature control, Micromax™ products are not expected to exhibit a change in quality or fitness for use. Should extraordinary events result in extended transportation periods, Micromax™ recommends customers confirm products remain suitable for the intended application.

Safety and handling

For safety and handling information pertaining to this product, read Safety Data Sheet (SDS).

SAFETY & WARNING

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use.

Safety Data Sheets are available.

WASTE TREATMENT

Prior to using any recommendations or suggestions for waste treatment, the user is required to know the appropriate local/state/federal regulations for on-site or off-site treatment which may require permits. If there is any conflict regarding our recommendations, local/state/federal regulations take precedence.

CONTACT INFORMATION

www.macdermidalpha.com

North America	Europe	Asia
470 Research Drive Wilmington, DE, USA 855.622.7813	Bristol & Bath Science Park Dirac Crescent, Emersons Green, Bristol, BS16 7FR, United Kingdom 44.117.4769148	No. 45 Hsing-Point Road Taoyuan City, 330457 Taiwan 886.3.3773588

Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE. Emergency safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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