ALPHA® OM-372

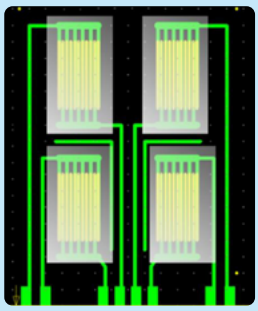
High Electrochemical Reliability, Ultra-Fine Feature No-Clean Solder Paste

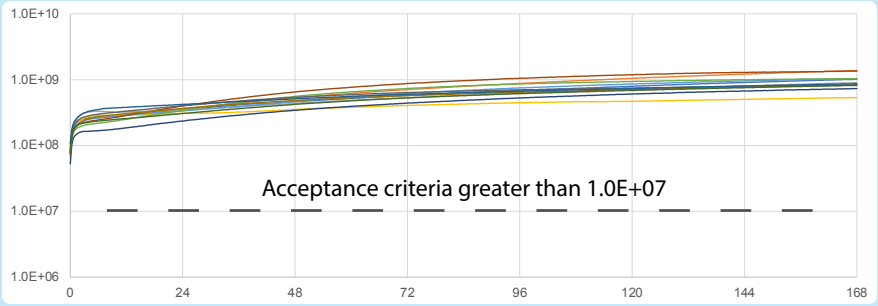
Innovative Solder Paste Enabling Next Generation High Density Assembly Designs

ALPHA OM-372 is designed for superior performance on assemblies with ultra-fine pitch components requiring excellent stencil transfer efficiency and high electrical reliability, such as those found in mobile and wearables, computing, and medical devices.

- Best-in-class electrochemical reliability on fine pitched low standoff packages.
- Ultra-fine feature printing and reflow capability down to 008004 components.
- Minimum post reflow residue provides high reliability performance for fine pitch, high density designs when flux is entrapped under devices
- Excellent HiP/NWO Performance on high I/O count packages.
- No-Clean, Zero-Halogen

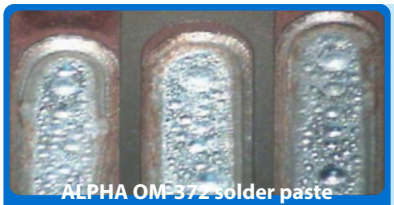
ALPHA OM-372 Covered Glass SIR 100um gap (85°C/85%RH/10VDC Bias)





ALPHA OM-372 shows excellent results in advanced Surface Insulation Resistance (SIR) glass slide testing.

Standard no clean solder paste showing problematic denditric growth



ALPHA OM-372 solder paste no denditric growth

Extreme miniaturization in mobile and computing lead to development of proprietary SIR testing utilizing glass slides to entrap flux residues.

ALPHA OM-372 demonstrates excellent electrochemical reliability and no denditric growth on low standoff components.

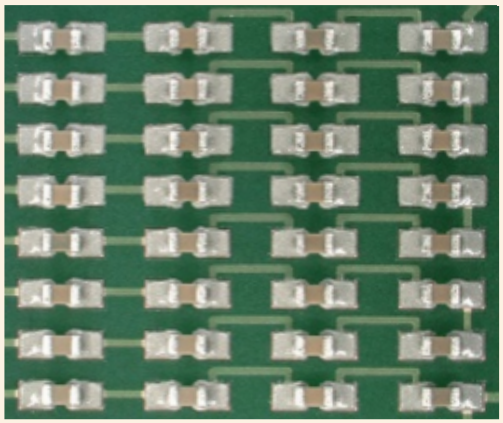
alpha

ALPHA® OM-372

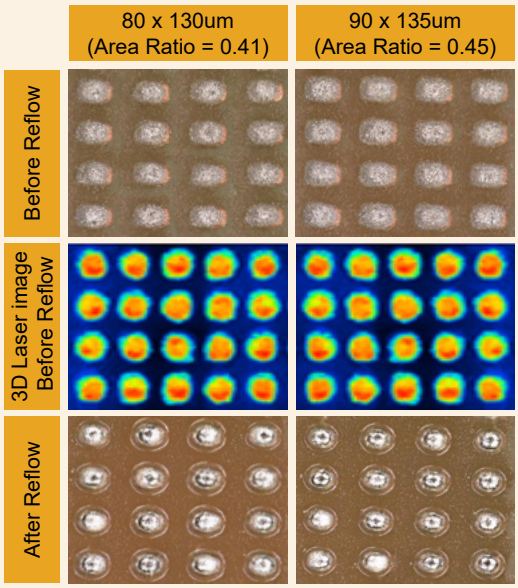
High Electrochemical Reliability, Ultra-Fine Feature No-Clean Solder Paste

Ultra-Fine Feature to Coalescence – Stencil T60um, SAC305 88.2-6-M10, Powder T6

ALPHA OM-372 SAC305 T6 coalescences down to 80 x130 aperture size with no evidence of graping.



008004(M0201) Capacitor



PERFORMANCE SUMMARY

PROCESS BENEFITS	PROPERTIES	PERFORMANCE CAPABILITIES
Print Process Window	Ultra-Fine Feature Print Definition	80um x 130um pads (008004 component, Area Ratio = 0.41)
	Stencil Life	> 8 Hour consistent transfer efficiency
	Print Speed Range	25 - 100 mm/s (1-4 in/s)
Reflow Process Yield	Reflow Environment	Nitrogen Required (<1000ppm O2 recommended)
	Resistance to Voids	Meets IPC 7095 Class III requirements on BGA/LGA
	Random Solder Balls	Preferred IPC J-STD-005A Criteria
	Head-in-Pillow / Non Wet Open	High Resistance to HIP / NWO Defects
	Coalescence	Excellent coalescence down to 80um x 130um (60um stencil thickness)
	Flux Residue Characteristics	Clear & light amber residue
Electrical Reliability	Advanced SIR	≥10^7 Ohms for 7 days on 100µm spaced, glass covered combs to ensure electrical reliability & functionality of fine-pitch low standoff packages
	IPC/JIS SIR	Passes SIR per IPC J-STD-004B / JIS Z 3197
	Electromigration	Passes IPC-TM-650 Method 2.6.14.1
	Classification	ROL0 as per J-STD-004B
Environmental	Halogen Content	Zero-halogen, no halogen intentionally added

MacDermid Alpha ELECTRONICS SOLUTIONS

SCAN THE CODE to know more

macdermidalpha.com
January 2022

Alpha is a product brand of MacDermid Alpha Electronics Solutions.

For more information, contact us at Assembly@MacDermidAlpha.com