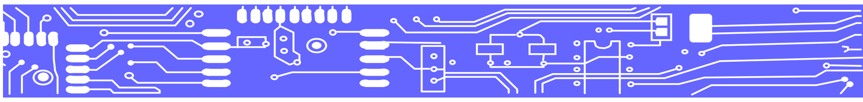


Hi-performance Lead Free Solder Paste

S3X58-M406 series

■ Features

1) Ensures **OUTSTANDING** continual **PRINTABILITY** with super fine pitch (0.4mm/16mil) and CSP (>0.25mm dia.) applications and long stencil idle time.
2) **PERFECT MELTING** and wetting at super fine pitch (<0.4mm pitch) and micro components (<0.25mm dia CSP, 0603 chip).
3) Specially formulated flux chemistry ensures extremely **LOW VOIDING** with CSPs and broad contact area components.
4) **POWERFUL WETTING** with various metals, such as Alloy42 and Nickel.

■ Specifications

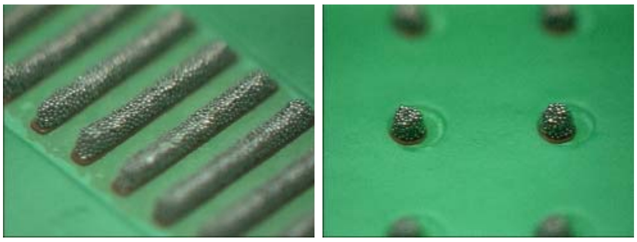
Application			Printing - Stencil		
Product			**S3X58-M406L**	**S3X58-M406**	**S3X58-M406H**
Alloy	Composition (%)		Sn96.5, Ag3.0, Cu0.5		
	Melting point (°C)		217 - 218		
	Shape		Spherical		
	Particle size (µm)		20 - 38		
Flux	Halide content (%)		0.0		
	Surface insulation resistance *[1]	Initial value (Ω)	> 1 × 10^{13}		
		After humidification (Ω)	> 1 × 10^{12}		
	Aqueous solution resistivity*[2] (Ω cm)		> 5 × 10^{4}		
	Flux type		ROL0		
Product	Flux content (%)		11.5	11.3	11.5
	Viscosity*[3] (Ps.S)		170	210	230
	Copper plate corrosion*[4]		Passed		
	Solder spread factor (%)		> 85		
	Tack time		> 72 hours		
	Shelf life (below 10°C)		6 months		
	Other alloy options		**TS58-** : SnAg3.5 **SX58-** : SnAg3.5Cu0.7 **SXA58-** : SnAg3.5Cu0.5Sb0.2		

1. SIR ....40°C×90%RH×96Hr
2. Aqueous solution resistivity.......................In accordance with MIL specifications.
3. Viscosity..Malcom spiral type viscometer, PCU-205 at 25°C 10rpm
4. Copper plate corrosion...............................In accordance with JIS.

*Performances by S3X58-M406

■ Printability

(Continual printing at 50mm/sec. stencil 130µm laser cut)

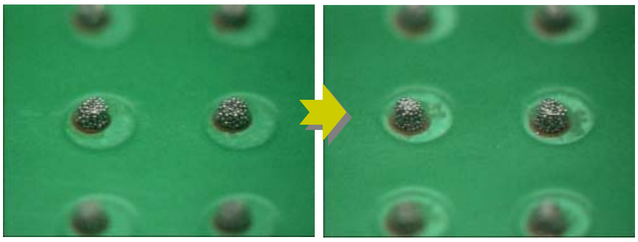


0.4mm pitch
(10th print; parallel)

0.25 mm diameter
(10th print; CSP pattern)

■ Intermittent printability

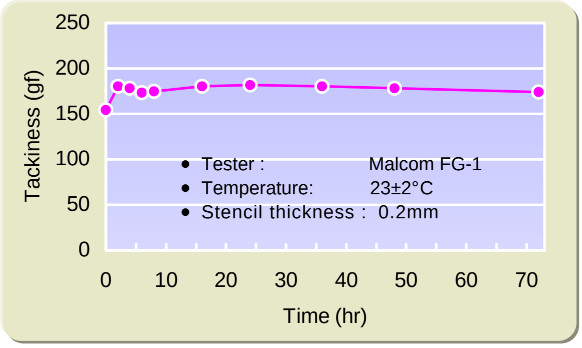
(0.25mm diameter CSP pattern)



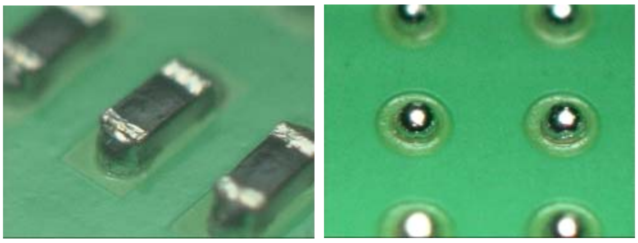
Initial print

1st print after 30min. idle time

■ Tack time



■ Super fine pattern solderability

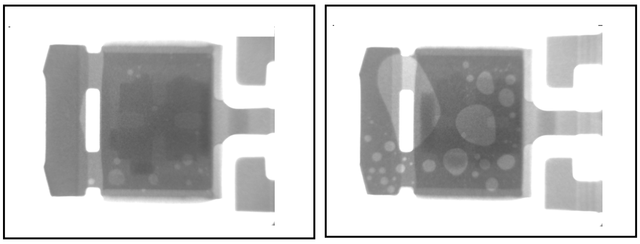


0603 chip (100Sn)

0.25 mm dia. CSP pad

■ Voiding

(6330 resister, power transistor ; reflowed in air)

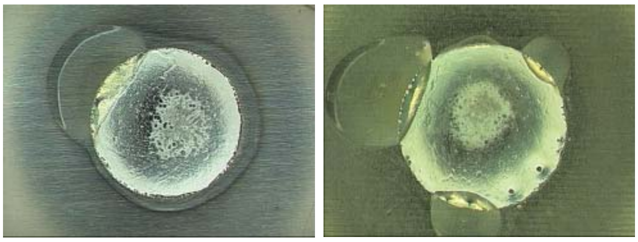


S3X58-M406

Conventional solder paste

■ Solder spreading

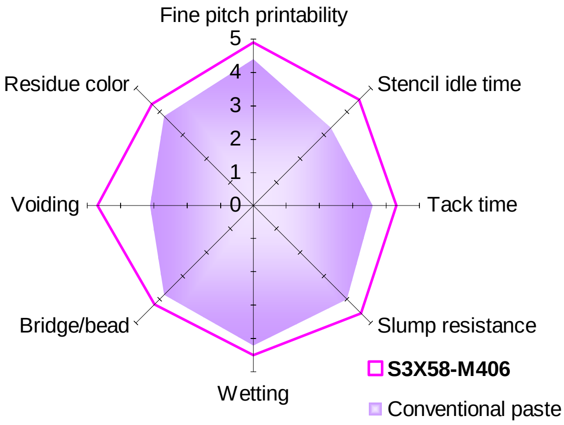
(Hot plate-150ºC×60sec.+Solder bath 240±2ºC for 5sec.)



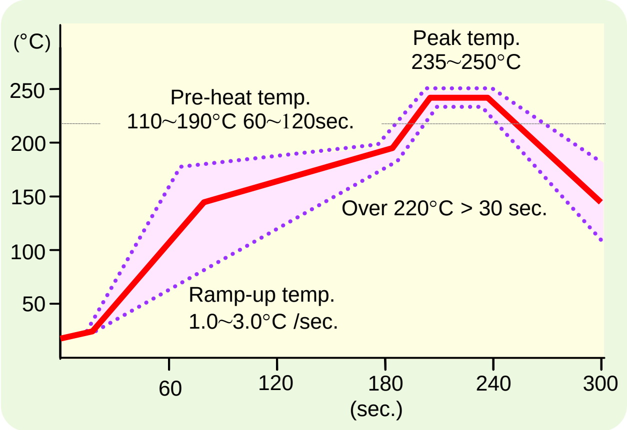
Alloy 42

Nickel

■ Features comparison *(0: Bad → 5: Good)*



■ Recommended reflow profile



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