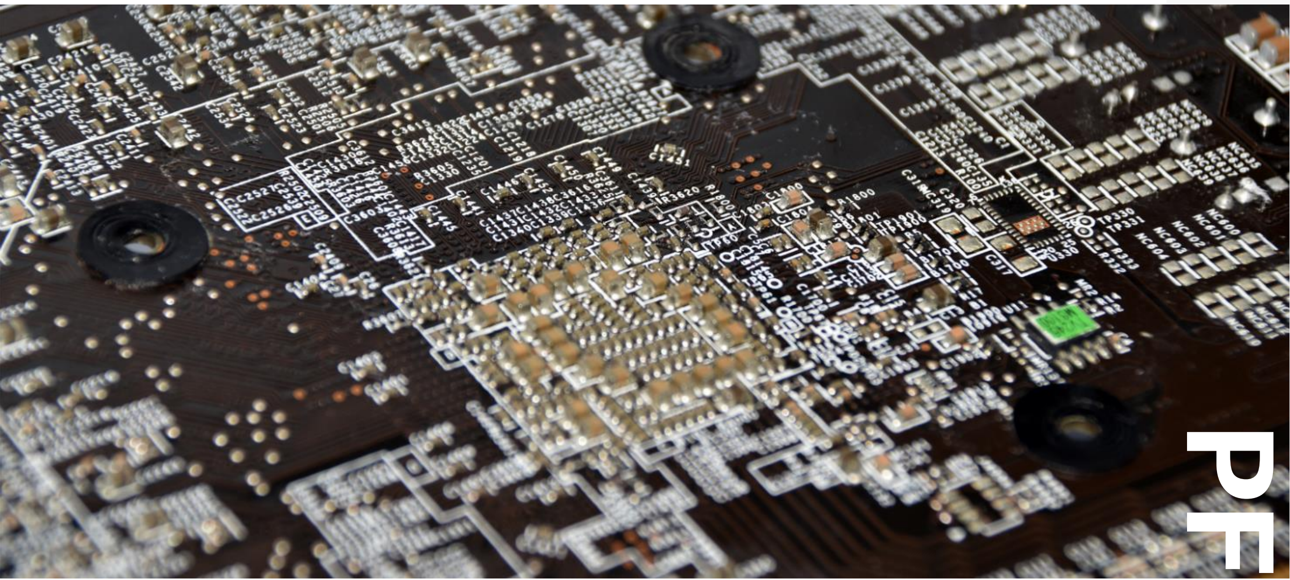
Nihon Handa Co.,Ltd. Head Office : 16F ARCA CENTRAL 2-1 Kinshi 1-Chome, Sumida-ku, Tokyo 130-0013, JAPAN Tel.+81-3-3624-5771 Fax.+81-3-3624-5775

SAC305 Solder Paste for Power Module Application

PF305-156HO

Low void・Prevent dislocation of chip

- Effective low void for both under chip and DBC regardless of soldering area
- Prevent dislocation of parts on pad during reflow
- Applicable with versatile cleaning agent against flux residues



Lead free Solder Paste for Power Module

PF305-156HO

General Characteristics

Item		Representative value	Test method
Alloy Composition		Sn-3.0Ag-0.5Cu	―
Particle Size		25 to 45μm	―
Flux Content		10 wt%	JIS Z 3197
Halide Content		0.03%	JIS Z 3197
Flux Type		ROH1	IPC J-STD-004
Copper Plate Corrosion Test		No Corrosion	JIS Z 3197
Silver Chromate Paper Test		No Change	JIS Z 3197
Insulation Resistance Test	40℃90%RH after 168H	1.0×10^{11} Ω or more	JIS Z 3197
	85℃85%RH after 168H	5.0×10^{8} Ω or more	JIS Z 3197
Tack time at 100gf or more		8 hours	JIS Z 3284
Fluid Characteristics	Viscosity	220 Pa・s	JIS Z 3284
	Ti-value	0.50	JIS Z 3284

The above figures are representative values, not guaranteed specification. Available customization for alloy composition, particle size and flux content.
Please ask our sales staff for more details.

NihonHanda™

Nihon Handa Co.,Ltd. Head Office : 16F ARCA CENTRAL 2-1 Kinshi 1-Chome, Sumida-ku, Tokyo 130-0013, JAPAN Tel.+81-3-3624-5771 Fax.+81-3-3624-5775

SAC305 Solder Paste for Power Module Application

PF305-156HO

Low void · Prevent dislocation of chip

Lead free Solder Paste for Power Module PF305-156HO

Optimized characteristics for soldering power modules

Low void characteristics applicable to versatile soldering area

Chip

PF305-156HO

Void rate : 0.3%

Conventional product

Void rate : 0.7%

Ni-Au plated Si-chip（4mm2）

Chip

DBC

Heat spreader

【Test condition】
Ni-plated copper substrate, 40mm2
Stencil : t=0.2mm
Reflow : Peak 250℃, O_2 500ppm or less
Decompression time 40sec,
Ultimate vacuum 2kPa

DBC

PF305-156HO

Void rate : 1.7%

Conventional product

Void rate : 4.0%

Ni plated board（40mm2）

Prevent dislocation of chip

Reduce heat slump & fluidity at preheating and prevent dislocation of part on pad during reflow

Before heating

After heating

PF305-156HO

No heat slump nor no dislocation of part on pad even at 0.6mm thickness of stencil

Conventional product

Heating at 150deg.C for 60sec

3mm

6mm

Part moves from soldering area due to heat slump

【Test condition】 Heating at 150deg. C Cu-plate（40mm2） Thickness of stencil : t=0.6mm

High cleaning performance against flux residues

Good detergency with versatile cleaning liquid

SEM

EDX

PF305-156HO

Before cleaning

After cleaning

Not detected Carbon derived from flux residues

Conventional product

Before cleaning

After cleaning

Detected Carbon derived from flux residues

【Test condition】
Preheating : 150deg.C for 90sec. Peak temp. : 260deg.C Substrate : JIS Ⅱ Interdigital substrate
Detergent : Glycol ether / Stirring 180sec at 60deg. C of detergent / Rinsed in DI water

ニホンハンダ株式会社 本社:〒130-0013 東京都墨田区錦糸1-2-1 アルカセントラル16F TEL:03-3624-5771(代表) FAX:03-3624-5775