ATP1 LEAD FREE BACKWARD COMPATIBILITY
Matte Tin (ST380)

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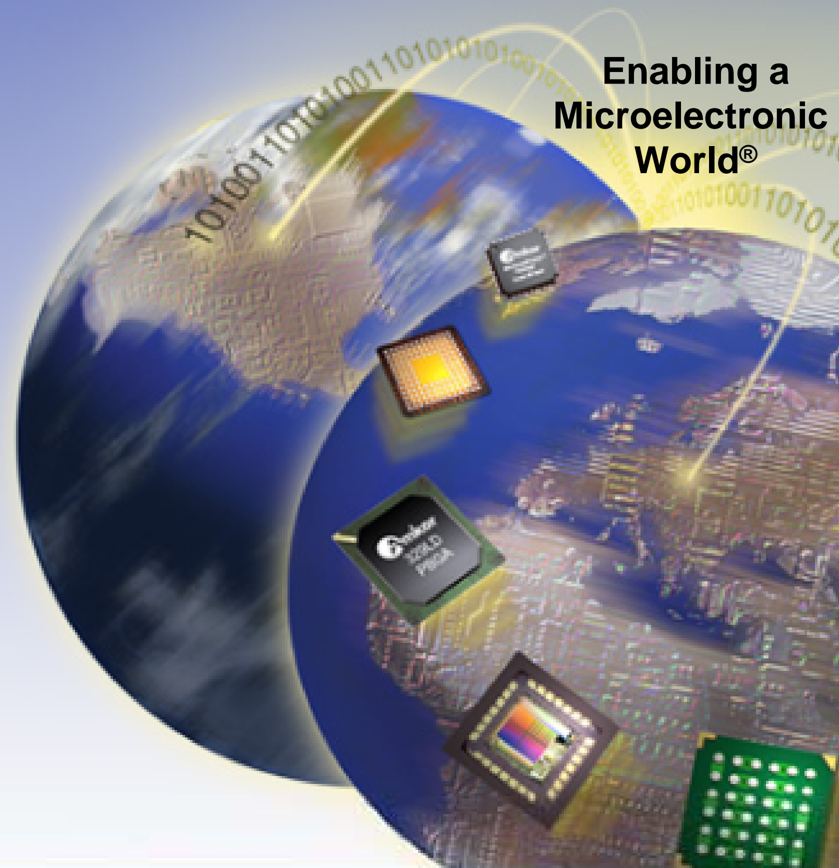

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PbFREE BACKWARD COMPATIBILITY

MATTE TIN – (ST380)

OBJECTIVE

To check solderability performance of SnPb solder and testing conditions per JESD22-B102E.

- Solder Pot : SnPb 63/37
- Pot Temperature : 215 deg C
- Solder Immersion time : 5+/- 0.5s
- Pre-Condition : 8Hrs Steam Aging
- Flux : ROL1
- Flux Immersion time : 5-10s

METHODOLOGY

1. Process simulated dummies at machine using normal flow:

   Plating >> Post Plate Bake >> Form / Singulation

2. Subject samples to solderability testing

   Sample size : 5 units

   Frequency : 2x/wk, using any pkg type

   Duration : 12 weeks

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SUMMARY OF RESULTS

Total of 990/990 samples tested PASSED solderability testing for ST 380 Chemistry.

RESULT DETAILS

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ST 380 Chemistry

1. Solution Concentration Range

Solution	Component	Specs Limit	Actual Control Limit
Plating	Tin	65 - 85g/L	70 - 80g/L
	Acid	255 - 285 ml/L	260 - 280 ml/L
	Primary	60 - 90 ml/L	65 - 85 ml/L
	Secondary	2 - 6 ml/L	3 - 4 ml/L

2. Actual Plating Thickness

- **Range : 502-585 microinches for other pkgs**
  393- 522 microinches for MLF

3. Solderability Test Results

CHEMISTRY	PKG	NO. of UNITS TESTED	RESULTS (Passed/SS)
Matte Tin- St 380	PDIP	150	150/150 PASSED
	PSOP	145	145/145 PASSED
	PLCC	150	150/150 PASSED
	MLF	150	150/150 PASSED
	TSSOP	120	120/120 PASSED
	MQFP	90	90/90 PASSED
	SOIC	100	100/100 PASSED
	TQFP	85	85/85 PASSED

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SAMPLE PHOTOS

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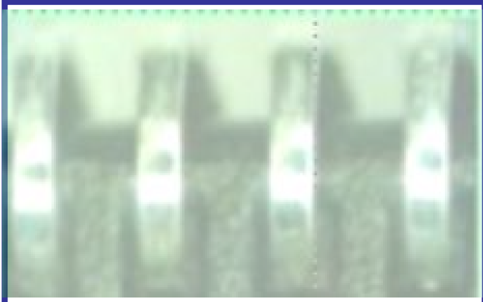
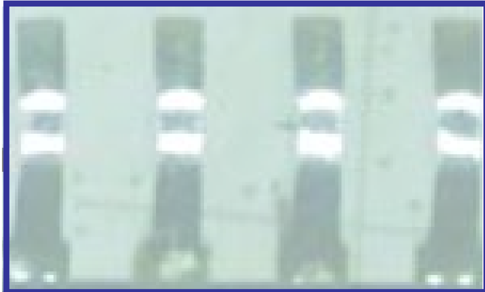
ST 380 Chemistry


PLCC

PDIP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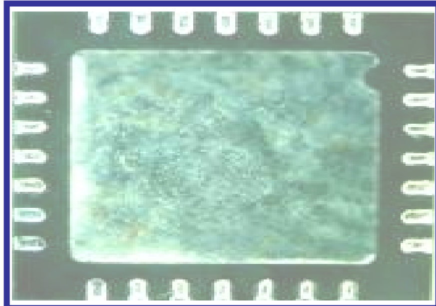
MLF

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