



**PRODUCT/PROCESS
CHANGE NOTIFICATION**

PCN13841 – Additional information

ASE KaoHsiung (Taiwan) LQFP7x7, LQFP10x10, LQFP14x14 and LQFP20x20 package copper palladium bonding wire introduction on STM32F2/F4/F7x, STM32G0/G4x, STM32L4/L5x and STM32H5/H7x listed products.

MDG – General Purpose Microcontrollers Division (GPM)

What are the changes?

Changes described in table below:

	Existing back-end line	Added back-end line
Assembly site	ASE KaoHsiung (Taiwan)	
Wire	Gold 0.8mil	CuPd 0.8mil
GLUE	Sumitomo CRM 1076WA	HITACHI EN4900G ⁽¹⁾
Marking composition	Without 2D	With 2D Marking

⁽¹⁾ Sumitomo CRM 1076WA and HITACHI EN4900G glues were used during qualification phase however production will be on HITACHI EN4900G.



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How can the change be seen?

Package top view Marking will display the 2D marking

Examples in below table

	Existing line	Added Line
LQFP100		
LQFP48		

Y WW : Year Week (manufacturing date)

Please refer to product [DataSheet](#) or Technical Note **TN1433** for package marking details.



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How to order samples?

For all samples request linked to this PCN, please:

- place a **Non-standard** sample order (choose Sample Non Std Type from pull down menu).
- insert the PCN number "**PCN13841**" into the NPO Electronic Sheet/**Regional Sheet**.
- request sample(s) through Notice tool, indicating a single Commercial Product for each request.

Partial Ship: 01 Price Pol: 05 Status: 01 Canc:

Sample Type: Sample Non Std Type

Closing Type: Sample Std Type
Sample Non Std Type
Sample Non Std w Spl Tests

Lab Sheet:

SO | NPO Sample

Header
SO Nr: 0018502433 Customer: 99778200 01 ST-TOKYO SO Type: 30 Sample Order Cost Center: JT3129 SAMPLES /SALES J

PD Nr: Carrier Code: 0001 Price Policy: 05 Currency: 02 U.S. DOLLAR Req Name:

Notes: Status: 01 All items pending. Issuing Date: 25-JUN-2018 Ord Val: 0.0000 Sample Req Date: 25-Jun-2018

Sch I Nr	PO I. Nr	Finished Good	Comm Qty	Open Qty	Plant Open Qty	Reqd Qty	Unit Price	RD	CD	EDD	St
1.1.10	000001	STM32F429NIH6	30	30	30	30	0.0000	25-Jun-18	01-Mar-59	01-Mar-59	01

Final Cust:
PO Item: 000001 Comm Prod: STM32F429NIH6 Qty: 30 RD: 25-Jun-18 Unit Price: 0.0000 Final Cust: 0000367006 SANSHIN/NPC

Cust Part Nr: Finished Good: Partial Ship: 01 Price Pol: 05 Status: 01 Canc:

Notes: TAM K Pieces: 0 Our Share%: 0 Sample Type: Sample Non Std Type

Project Name: Closing Date: Closing Type:

Regional Sheet: **PCN13841** Lab Sheet:



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RER-GPM-2304 ASE LQFP7x7 to LQ20x20 CuPd wire Qualification

Reliability Evaluation Plan

17-Feb 2023

MDG GPM Q&R

GPM-RER2304

ASE LQFP7x7 to LQFP20x20 CuPd wire Package Test Vehicles

Package line	Assembly Line	Package	Device (RawLine Code)	Diffusion Process Plant	Number of Qualification Lots	Construction analysis and Reliability
LQFP	LQFP7x7	32	5V*466	N90EF	1	CA
	LQFP7x7	48	5B*466	N90EF	1	Full reliability+CA
	LQFP 10x10	64	5W*460	N90EF	1	CA
	LQFP 14*14	100L	1L*419	M10 TSMC	1	Full reliability+CA
	LQFP 14*14	100L	1L*435	90nm TSMC	1	Full reliability+CA
	LQFP 14*14	100L	1L*472	N90EF	1	Full reliability+CA
	LQFP 20x20	144L	1A*483	M40 Crolles	1	Full reliability+CA
	LQFP 20x20	144L	1A*411	M10 Crolles	1	Full reliability+CA
	LQFP 20x20	144L	1A*451	M10	1	Full reliability+CA

GPM-RER2304

ASE LQFP7x7 to LQFP20x20 CuPd wire

Reliability plan

Reliability Trial & Standard		Test Conditions	Pass Criteria	Unit per Lot	Number of Lot
PC	Pre Conditioning: Moisture Sensitivity Jedec Level 3 J-STD-020/ JESD22-A113	Bake (125°C / 24 hrs) Soak (30°C / 60% RH / 192 hrs) for level 3 Convection reflow: 3 passes	3 passes MSL3	308	7
Uhast(*)	UnBiased Highly Accelerated Temperature and Humidity Stress JESD22 A118	130°C, 85%RH, 2.3 atm	96h	77	7
TC(*)	Thermal Cycling JESD22 A104	-65°C +150°C	500cy	77	7
THB(*)	Biased temperature & humidity stress JESD22 A101	85°C, 85% RH bias	1000h	77	7
HTSL(*)	High Temperature Storage Life JESD22 A103	150°C- no bias	1000h	77	7
Construction analysis	JESD 22B102 JESDB100/B108	Ball shear, pull test, IMC inspection , internal analysis	NA	50	9
ESD	ESD Charge Device Model JS-002	Aligned with device datasheet	Aligned with device datasheet	3	7

(*) tests performed after preconditioning

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