



Initial Product/Process Change Notification

Document #: IPCN25344X

Issue Date: 17 May 2023

Title of Change:	Au to PCC wire conversion SOT23 package
Proposed First Ship date:	30 Nov 2023 or earlier if approved by customer
Contact Information:	Contact your local onsemi Sales Office or Ernesto.Villamor@onsemi.com or Joseph.Mendoza@onsemi.com
PCN Samples Contact:	Contact your local onsemi Sales Office. Sample requests are to be submitted no later than 30 days from the date of first notification, Initial PCN or Final PCN, for this change. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.
Type of Notification:	This is an Initial Product/Process Change Notification (IPCN) sent to customers. An IPCN is an advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan. The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN). This IPCN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 90 days prior to implementation of the change. In case of questions, contact < PCN.Support@onsemi.com >
Marking of Parts/ Traceability of Change:	Identification through date code cut off.
Change Category:	Assembly Change
Change Sub-Category(s):	Material Change

Sites Affected:

onsemi Sites	External Foundry/Subcon Sites
onsemi Cebu, Philippines	None

Description and Purpose:

Those affected OPNs change bonding wire from Gold to Palladium Coated Copper (PCC) wire interconnect.

This is to standardize the bonding wire uses across all packages.

	From	To
Bond wire	0.8 mil Au wire	1.0 mil PCC wire

“There are no product material changes as a result of this change”

“There is no product marking change as a result of this change”



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Qualification Plan:

QV DEVICE NAME: 2N7002

RMS: 90395

PACKAGE: F900 | SOT23 3L CU SNGL HPBF G6

Test	Specification	Condition	Interval
High Temperature Reverse Bias	JESD22-A108	Ta= 150°C, 80% max rated V	1008 hrs
High Temperature Gate Bias	JESD22-A108	Ta=150°C, 100% max rated Vgss	1008 hrs
High Temperature Storage Life	JESD22-A103	Ta= 150°C	1008 hrs
Preconditioning	J-STD-020 JESD-A113	MSL 1 @ 260 °C	
Intermittent Operating Life	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = __ min	15,000 cyc
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C	1000 cyc
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs
Resistance to Solder Heat	JESD22- B106	Ta = 265°C, 10 sec Required for through hole devices only	
Solderability	JSTD002	Ta = 245°C, 5 sec	
Physical Dimension	JESD22-B120		

QV DEVICE NAME: BSS123

RMS: 90400

PACKAGE: F900 | SOT23 3L CU SNGL HPBF G6

Test	Specification	Condition	Interval
High Temperature Reverse Bias	JESD22-A108	Ta= 150°C, 80% max rated V	1008 hrs
High Temperature Gate Bias	JESD22-A108	Ta=150°C, 100% max rated Vgss	1008 hrs
High Temperature Storage Life	JESD22-A103	Ta= 150°C	1008 hrs
Preconditioning	J-STD-020 JESD-A113	MSL 1 @ 260 °C	
Intermittent Operating Life	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = __ min	15,000 cyc
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C	1000 cyc
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs
Resistance to Solder Heat	JESD22- B106	Ta = 265°C, 10 sec Required for through hole devices only	
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Physical Dimension	JESD22-B120		

Estimated date for qualification completion: **11 July 2023**



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List of Affected Parts:

Note: Only the standard (off the shelf) part numbers are listed in the parts list. Any custom parts affected by this PCN are shown in the customer specific PCN addendum in the PCN email notification, or on the [**PCN Customized Portal**](#).

Part Number	Qualification Vehicle
2N7002	2N7002
FDV301N	2N7002
FDV304P	2N7002
NDS0610-G	BSS123
FDV305N	BSS123
NDS0610	BSS123
NDS0605	BSS123
BSS84	BSS123
BSS123	BSS123
NDS7002A	2N7002
FDV303N	2N7002
9V49-NB9V004	2N7002
MMBF170	2N7002

Appendix A: Changed Products

PCN#: IPCN25344X
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DIKG: DIGI-KEY

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
2N7002	2N7002NTR-ND	2N7002	NA	
FDV301N		2N7002	NA	
FDV304P		2N7002	NA	
NDS0610-G		BSS123	NA	
FDV305N		BSS123	NA	
NDS0610		BSS123	NA	
NDS0605		BSS123	NA	
BSS84		BSS123	NA	
BSS123		BSS123	NA	
FDV303N		2N7002	NA	
MMBF170		2N7002	NA	
NDS7002A	NDS7002ATR-ND	2N7002	NA	