Final Product/Process Change Notification

Document #:FPCN23279XC
Issue Date:15 Nov 2021

Title of Change:	Capacity expansion of Assembly and Test operations of former Fairchild SOT23 Transistor and Diode to JCET, Chuzhou , China , wafer fab change from Phenetic, Japan to onsemi ISMF Malaysia and onsemi Niigata ,Japan ,wire change from Au/Cu wire to Au/PCC wire
Proposed First Ship date:	07 Mar 2022 or earlier if approved by customer
Contact Information:	Contact your local onsemi Sales Office or Andy.Tao@onsemi.com
PCN Samples Contact:	Contact your local onsemi Sales Office or <PCN.samples@onsemi.com>. 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.
Additional Reliability Data:	Contact your local onsemi Sales Office or ChangKit.Mok@onsemi.com
Type of Notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 90 days prior to implementation of the change. onsemi will consider this change accepted, unless an inquiry is made in writing within 30 days of delivery of this notice. To do so, contact PCN.Support@onsemi.com
Marking of Parts/ Traceability of Change:	Customer may receive the parts from JCET, Chuzhou month of Mar 2021 onwards once FPCN expire. Parts from JCET Chuzhou, China can be identified through product marking which follow onsemi marking format.
Change Category:	Test Change, Assembly Change, Wafer Fab Change
Change Sub-Category(s):	Material Change, Manufacturing Site Transfer

Sites Affected:

onsemi Sites	**External Foundry/Subcon Sites**
Leshan Phoenix Semiconductor, China	AUK, Dalian, China
onsemi Cebu, Philippines	JCET, China
onsemi Niigata, Japan	Phenitec Semiconductor, Japan
onsemi Seremban, Malaysia	

Description and Purpose:

This Final Notification announces to customers of its plans to :

- Transfer Assembly and Test operations sites of formerly Fairchild SOT23 package from existing external manufacturing facility to dual source site onsemi Leshan, China (FPCN23279X/XA) and JCET, Chuzhou , China
- Wafer FAB from Phenitec Japan to onsemi ISMF ,Malaysia
- Backmetal change from TiNiAgSn Backmetal to Au backmetal
- Small Signal Transistors/Diode will be converted from Gold wire to Pd-Coated Cu wire(PCC wire) as part of the process Standardization in JCET, Chuzhou , China (as per table in List of affected parts).
- Mold compound from Panasonic CK5000A/Edale ELER-8 100HFE to Hysol GR640HV

	Current Site Information	Expansion Site Information
Lead Frame	Ag plated LF	Cu/Ag plated LF
Mold Compound	CK5000A EDALE ELER-8-100HFE Sumitomo G600FB	Hysol GR640 HV EDALE ELER-8-100HFE
Bond wire	0.8mil Au wire/0.8mil Cu wire	0.8mil PCC wire /0.8 mil Cu wire/0.8mil Au wire
Assembly/Test Site	onsemi Cebu, Philippines onsemi Leshan,China AUK Dalian JCET(Chuzhou),China	onsemi Leshan, China JCET(Chuzhou),China
Wafer FAB /BG/BM Site	Phenitec, Japan	ISMF, Malaysia

Reliability Data Summary:

QV DEVICE NAME: BAV23S
RMS: 63413
PACKAGE: SOT-23

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs	0/320
HTSL	JESD22-A103	Ta= 150°C	2016 hrs	0/320
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	30,000 cyc	0/320
TC	JESD22-A104	Ta= -65°C to + 150°C	1000 cyc	0/320
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs	0/320
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	92 hrs	0/320
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		
RSH	JESD22- B106	Ta = 265C, 10 sec		0/40
SD	JSTD002	Ta = 245C, 5 sec		0/60

QV DEVICE NAME: FJV42MTF –NPN
RMS: 63765, 70382
PACKAGE: SOT-23

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs	0/240
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/240
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15,000 cyc	0/240
TC	JESD22-A104	Ta= -65°C to + 150°C	1000 cyc	0/240

HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs	0/240
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	92 hrs	0/240
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		
RSH	JESD22- B106	Ta = 265C, 10 sec		0/30
SD	JSTD002	Ta = 245C, 5 sec		0/45

QV DEVICE NAME: BSR16 - PNP
RMS: 63773, 70838
PACKAGE: SOT-23

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs	0/240
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15,000 cyc	0/240
H3TRB	JESD22-A110	85°C, 85% RH, bias	2016 hrs	0/240
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		

Electrical Characteristics Summary:

The temperature characterization and ESD performance meet datasheet specification. Detail of Electrical characterization result is available upon request.

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
BAV23S	BAV23S
BCV26	BSR16
BCW71	FJV42MTF
BCV71	FJV42MTF
BSR16	BSR16
BSR14	FJV42MTF
MMBD4148CC	BAV23S
FJV42MTF	FJV42MTF
BCV27	FJV42MTF
MMBD4148CA	BAV23S
KST10MTF	FJV42MTF

MMBD4148CC-F169	BAV23S
MMBD4148SE	BAV23S
MMBD1405A	BAV23S