



Final Product/Process Change Notification

Document #:FPCN23483XE

Issue Date: 24 Nov 2022

Title of Change:	Good-Ark Assembly/Test Site Qualification for Zener SMA, SMB package and bare copper clip Qualification for Alloy Zener
Proposed First Ship date:	03 Mar 2023 or earlier if approved by customer
Contact Information:	Contact your local onsemi Sales Office or TP.Phung@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.
Additional Reliability Data:	Contact your local onsemi Sales Office or MohtAzizi.Azman@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:	Products from Good-Ark will be marked with site code "g" prior to date code
Change Category:	Assembly Change, Test Change
Change Sub-Category(s):	Manufacturing Site Addition, Material Change

Sites Affected:

onsemi Sites	External Foundry/Subcon Sites
onsemi Seremban, Malaysia	Good-Ark, China
onsemi Vietnam	

Description and Purpose:

This Final Product Change Notification (FPCN) is to announce the qualification of Good-Ark, China Assembly/Test Site for Zener SMA, SMB package as alternative source and bare copper clip Qualification for Alloy Zener.

The products in SMA, SMB packages are currently being assembled and tested at onsemi Vietnam and onsemi Seremban, Malaysia.

Upon expiration of this FPCN, these products can be processed at Good-Ark location using its Bill of Materials.

	From		To		
Assembly/Test Site	onsemi Vietnam	onsemi Seremban, Malaysia	onsemi Vietnam	onsemi Seremban, Malaysia	Good-Ark China
Clip	Bare copper clip Ni plated copper clip	Bare copper clip Ni plated copper clip	Bare copper clip	No change	Bare copper clip
LeadFrame	Copper leadframe thickness: 10mils	Copper leadframe thickness: 10mils	No change	No change	Copper leadframe thickness: 8mils
Die Attach	SN5AG2.5PB92.5 Indium SMQ75	SN5AG2.5PB92.5 Indium SMQ75	No change	No change	SN5AG2.5PB92.5 Indium 9.15
Mold Compound	MC NITTO GE-200HH	MC NITTO GE-200HH	No change	No change	HYSOL GR530



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Assembly Plant Code Marking	From	To
SMA	VN (onsemi Vietnam) R (onsemi Seremban, Malaysia)	VN (onsemi Vietnam) R (onsemi Seremban, Malaysia) g (Good-Ark China)
SMB	V (onsemi Vietnam) R (onsemi Seremban, Malaysia)	V (onsemi Vietnam) R (onsemi Seremban, Malaysia) g (Good-Ark China)

Reliability Data Summary:

QV DEVICE NAME: SZ1SMA5945BT3G

RMS: 84080, 85379

PACKAGE: SMA

Test	Specification	Condition	Interval	Results
SSOP	AEC-Q101, Mil-Std-750 M1038 Cond B	Ta=150°C, Iz max, Ta = Tj	1008 hrs	0/231
HTSL	JESD22-A103	Ta=150°C	1008 hrs	0/231
LTSL	JESD22-A119	Ta=-40°C	168 hrs	0/75
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc	0/231
TC	JESD22-A104	Ta= -55°C to +150°C, mounted on board	1000 cyc	0/231
H3TRB	JESD22-A101	85°C, 85% RH, reverse bias	1008 hrs	0/231
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 260°C		0/924
RSH	JESD22- B106	Ta = 265C, 10 sec		0/90
SD	JSTD002	Ta = 245C, 5 sec		0/45

QV DEVICE NAME: SZ1SMB5924BT3G

RMS: 84079, 85378

PACKAGE: SMB

Test	Specification	Condition	Interval	Results
SSOP	AEC-Q101, Mil-Std-750 M1038 Cond B	Ta=150°C, Iz max, Ta = Tj	1008 hrs	0/231
HTSL	JESD22-A103	Ta=150°C	1008 hrs	0/231
LTSL	JESD22-A119	Ta=-40°C	168 hrs	0/75
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc	0/231
TC	JESD22-A104	Ta= -55°C to +150°C, mounted on board	1000 cyc	0/231
H3TRB	JESD22-A101	85°C, 85% RH, reverse bias	1008 hrs	0/231
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 260°C		0/924
RSH	JESD22- B106	Ta = 265C, 10 sec		0/90
SD	JSTD002	Ta = 245C, 5 sec		0/45



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QV DEVICE NAME: SZ1SMA5924BT3G

RMS: 83412, 85377

PACKAGE: SMA

Test	Specification	Condition	Interval	Results
SSOP	AEC-Q101, Mil-Std-750 M1038 Cond B	Ta=150°C, Iz max, Ta = Tj	1008 hrs	0/231
HTSL	JESD22-A103	Ta=150°C	1008 hrs	0/231
LTSL	JESD22-A119	Ta=-40°C	168 hrs	0/75
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc	0/231
TC	JESD22-A104	Ta= -55°C to +150°C, mounted on board	1000 cyc	0/231
H3TRB	JESD22-A101	85°C, 85% RH, reverse bias	1008 hrs	0/231
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 260°C		0/924
RSH	JESD22- B106	Ta = 265C, 10 sec		0/90
SD	JSTD002	Ta = 245C, 5 sec		0/45

QV DEVICE NAME: SZ1SMB5956BT3G

RMS: 84082, 85380

PACKAGE: SMB

Test	Specification	Condition	Interval	Results
SSOP	AEC-Q101, Mil-Std-750 M1038 Cond B	Ta=150°C, Iz max, Ta = Tj	1008 hrs	0/231
HTSL	JESD22-A103	Ta=150°C	1008 hrs	0/231
LTSL	JESD22-A119	Ta=-40°C	168 hrs	0/75
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc	0/231
TC	JESD22-A104	Ta= -55°C to +150°C, mounted on board	1000 cyc	0/231
H3TRB	JESD22-A101	85°C, 85% RH, reverse bias	1008 hrs	0/231
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 260°C		0/924
RSH	JESD22- B106	Ta = 265C, 10 sec		0/90
SD	JSTD002	Ta = 245C, 5 sec		0/45

Electrical Characteristics Summary:

Electrical characteristics are not impacted.



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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
BZG03C15G	SZ1SMA5945BT3G
BZG03C150G	SZ1SMA5945BT3G
1SMB5956BT3G	SZ1SMB5956BT3G
1SMB5955BT3G	SZ1SMB5956BT3G
1SMB5954BT3G	SZ1SMB5956BT3G
1SMB5953BT3G	SZ1SMB5956BT3G
1SMB5952BT3G	SZ1SMB5956BT3G
1SMB5951BT3G	SZ1SMB5956BT3G
1SMB5949BT3G	SZ1SMB5956BT3G
1SMB5948BT3G	SZ1SMB5956BT3G
1SMB5947BT3G	SZ1SMB5956BT3G
1SMB5946BT3G	SZ1SMB5956BT3G
1SMB5945BT3G	SZ1SMB5956BT3G
1SMB5944BT3G	SZ1SMB5956BT3G
1SMB5943BT3G	SZ1SMB5956BT3G
1SMB5942BT3G	SZ1SMB5956BT3G
1SMB5941BT3G	SZ1SMB5956BT3G
1SMB5940BT3G	SZ1SMB5956BT3G
1SMB5939BT3G	SZ1SMB5956BT3G
1SMB5938BT3G	SZ1SMB5956BT3G
1SMB5937BT3G	SZ1SMB5956BT3G
1SMB5936BT3G	SZ1SMB5956BT3G
1SMB5935BT3G	SZ1SMB5956BT3G
1SMB5934BT3G	SZ1SMB5956BT3G
1SMB5933BT3G	SZ1SMB5956BT3G
1SMB5932BT3G	SZ1SMB5956BT3G
1SMB5931BT3G	SZ1SMB5956BT3G
1SMB5930BT3G	SZ1SMB5956BT3G
1SMB5929BT3G	SZ1SMB5956BT3G



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1SMB5928BT3G	SZ1SMB5956BT3G
1SMB5927BT3G	SZ1SMB5956BT3G
1SMB5926BT3G	SZ1SMB5956BT3G
1SMB5925BT3G	SZ1SMB5956BT3G
1SMB5924BT3G	SZ1SMB5924BT3G
1SMB5923BT3G	SZ1SMB5924BT3G
1SMB5922BT3G	SZ1SMB5924BT3G
1SMB5921BT3G	SZ1SMB5924BT3G
1SMB5920BT3G	SZ1SMB5924BT3G
1SMB5919BT3G	SZ1SMB5924BT3G
1SMB5918BT3G	SZ1SMB5924BT3G
1SMB5917BT3G	SZ1SMB5924BT3G
1SMB5916BT3G	SZ1SMB5924BT3G
1SMB5915BT3G	SZ1SMB5924BT3G
1SMB5914BT3G	SZ1SMB5924BT3G
1SMB5913BT3G	SZ1SMB5924BT3G
1SMA5945BT3G	SZ1SMA5945BT3G
1SMA5943BT3G	SZ1SMA5945BT3G
1SMA5942BT3G	SZ1SMA5945BT3G
1SMA5941BT3G	SZ1SMA5945BT3G
1SMA5940BT3G	SZ1SMA5945BT3G
1SMA5939BT3G	SZ1SMA5945BT3G
1SMA5938BT3G	SZ1SMA5945BT3G
1SMA5937BT3G	SZ1SMA5945BT3G
1SMA5936BT3G	SZ1SMA5945BT3G
1SMA5935BT3G	SZ1SMA5945BT3G
1SMA5934BT3G	SZ1SMA5945BT3G
1SMA5933BT3G	SZ1SMA5945BT3G
1SMA5932BT3G	SZ1SMA5945BT3G
1SMA5931BT3G	SZ1SMA5945BT3G
1SMA5930BT3G	SZ1SMA5945BT3G
1SMA5929BT3G	SZ1SMA5945BT3G
1SMA5928BT3G	SZ1SMA5945BT3G
1SMA5927BT3G	SZ1SMA5945BT3G



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1SMA5926BT3G	SZ1SMA5945BT3G
1SMA5925BT3G	SZ1SMA5945BT3G
1SMA5924BT3G	SZ1SMA5924BT3G
1SMA5923BT3G	SZ1SMA5924BT3G
1SMA5922BT3G	SZ1SMA5924BT3G
1SMA5921BT3G	SZ1SMA5924BT3G
1SMA5920BT3G	SZ1SMA5924BT3G
1SMA5919BT3G	SZ1SMA5924BT3G
1SMA5918BT3G	SZ1SMA5924BT3G
1SMA5917BT3G	SZ1SMA5924BT3G
1SMA5916BT3G	SZ1SMA5924BT3G
1SMA5915BT3G	SZ1SMA5924BT3G
1SMA5914BT3G	SZ1SMA5924BT3G
1SMA5913BT3G	SZ1SMA5924BT3G

Appendix A: Changed Products

DIKG: DIGI-KEY (page 1 of 2)

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
1SMA5913BT3G		SZ1SMA5924BT3G	NA	
1SMA5915BT3G		SZ1SMA5924BT3G	NA	
1SMA5916BT3G		SZ1SMA5924BT3G	NA	
1SMA5917BT3G		SZ1SMA5924BT3G	NA	
1SMA5918BT3G		SZ1SMA5924BT3G	NA	
1SMA5919BT3G		SZ1SMA5924BT3G	NA	
1SMA5920BT3G		SZ1SMA5924BT3G	NA	
1SMA5921BT3G		SZ1SMA5924BT3G	NA	
1SMA5922BT3G		SZ1SMA5924BT3G	NA	
1SMA5923BT3G		SZ1SMA5924BT3G	NA	
1SMA5924BT3G		SZ1SMA5924BT3G	NA	
1SMA5925BT3G		SZ1SMA5945BT3G	NA	
1SMA5926BT3G		SZ1SMA5945BT3G	NA	
1SMA5927BT3G		SZ1SMA5945BT3G	NA	
1SMA5914BT3G		SZ1SMA5924BT3G	NA	
1SMA5929BT3G		SZ1SMA5945BT3G	NA	
1SMA5930BT3G		SZ1SMA5945BT3G	NA	
1SMA5928BT3G		SZ1SMA5945BT3G	NA	
1SMA5932BT3G		SZ1SMA5945BT3G	NA	
1SMA5931BT3G		SZ1SMA5945BT3G	NA	
1SMA5933BT3G		SZ1SMA5945BT3G	NA	
1SMA5934BT3G		SZ1SMA5945BT3G	NA	
1SMA5936BT3G		SZ1SMA5945BT3G	NA	
1SMA5935BT3G		SZ1SMA5945BT3G	NA	
1SMA5938BT3G		SZ1SMA5945BT3G	NA	
1SMA5939BT3G		SZ1SMA5945BT3G	NA	
1SMA5937BT3G		SZ1SMA5945BT3G	NA	
1SMA5941BT3G		SZ1SMA5945BT3G	NA	
1SMA5940BT3G		SZ1SMA5945BT3G	NA	
1SMA5943BT3G		SZ1SMA5945BT3G	NA	
1SMA5942BT3G		SZ1SMA5945BT3G	NA	
1SMB5913BT3G		SZ1SMB5924BT3G	NA	
1SMA5945BT3G		SZ1SMA5945BT3G	NA	
1SMB5915BT3G		SZ1SMB5924BT3G	NA	
1SMB5914BT3G		SZ1SMB5924BT3G	NA	
1SMB5917BT3G		SZ1SMB5924BT3G	NA	
1SMB5916BT3G		SZ1SMB5924BT3G	NA	
1SMB5919BT3G		SZ1SMB5924BT3G	NA	
1SMB5918BT3G		SZ1SMB5924BT3G	NA	
1SMB5921BT3G		SZ1SMB5924BT3G	NA	
1SMB5920BT3G		SZ1SMB5924BT3G	NA	
1SMB5922BT3G		SZ1SMB5924BT3G	NA	
1SMB5924BT3G		SZ1SMB5924BT3G	NA	
1SMB5923BT3G		SZ1SMB5924BT3G	NA	
1SMB5926BT3G		SZ1SMB5956BT3G	NA	
1SMB5925BT3G		SZ1SMB5956BT3G	NA	
1SMB5928BT3G		SZ1SMB5956BT3G	NA	
1SMB5927BT3G		SZ1SMB5956BT3G	NA	
1SMB5930BT3G		SZ1SMB5956BT3G	NA	
1SMB5929BT3G		SZ1SMB5956BT3G	NA	
1SMB5932BT3G		SZ1SMB5956BT3G	NA	
1SMB5931BT3G		SZ1SMB5956BT3G	NA	
1SMB5934BT3G		SZ1SMB5956BT3G	NA	
1SMB5933BT3G		SZ1SMB5956BT3G	NA	
1SMB5936BT3G		SZ1SMB5956BT3G	NA	
1SMB5935BT3G		SZ1SMB5956BT3G	NA	
1SMB5938BT3G		SZ1SMB5956BT3G	NA	
1SMB5937BT3G		SZ1SMB5956BT3G	NA	
1SMB5940BT3G		SZ1SMB5956BT3G	NA	
1SMB5939BT3G		SZ1SMB5956BT3G	NA	

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Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
1SMB5942BT3G		SZ1SMB5956BT3G	NA	
1SMB5941BT3G		SZ1SMB5956BT3G	NA	
1SMB5944BT3G		SZ1SMB5956BT3G	NA	
1SMB5943BT3G		SZ1SMB5956BT3G	NA	
1SMB5946BT3G		SZ1SMB5956BT3G	NA	
1SMB5945BT3G		SZ1SMB5956BT3G	NA	
1SMB5947BT3G		SZ1SMB5956BT3G	NA	
1SMB5949BT3G		SZ1SMB5956BT3G	NA	
1SMB5948BT3G		SZ1SMB5956BT3G	NA	
BZG03C15G		SZ1SMA5945BT3G	NA	
1SMB5956BT3G		SZ1SMB5956BT3G	NA	
BZG03C150G		SZ1SMA5945BT3G	NA	
1SMB5954BT3G		SZ1SMB5956BT3G	NA	
1SMB5955BT3G		SZ1SMB5956BT3G	NA	
1SMB5952BT3G		SZ1SMB5956BT3G	NA	
1SMB5953BT3G		SZ1SMB5956BT3G	NA	
1SMB5951BT3G		SZ1SMB5956BT3G	NA	