



<b>Title of Change:</b>	Trench 6 Technology Capacity Expansion by Qualification of Aizu Fujitsu Semiconductor Manufacturing, Japan.
<b>Proposed Changed Material First Ship Date:</b>	27 April 2018 <i>or earlier upon customer approval.</i>
<b>Current Material Last Order Date:</b>	N/A
<b>Current Material Last Delivery Date:</b>	N/A
<b>Product Category:</b>	Active components – Discrete components
<b>Contact information</b>	Contact your local ON Semiconductor Sales.
<b>Samples</b>	Contact your local ON Semiconductor Sales Office or <Cheryl.Nudo@onsemi.com> Sample requests are to be submitted no later than 45 days after publication of this change notification.
<b>Sample Availability Date:</b>	1 June 2017
<b>PPAP Availability Date:</b>	27 May 2017
<b>Additional Reliability Data</b>	Contact your local ON Semiconductor Sales Office or <Don.Knudsen@onsemi.com>
<b>Type of Notification</b>	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 12 months prior to implementation of the change or earlier upon customer approval. ON Semiconductor will consider this proposed change and it's conditions acceptable, unless an inquiry is made in writing within 45 days of delivery of this notice. To do so, contact <PCN.Support@onsemi.com>.
<b>Change Category:</b>	<b>Type of Change</b>
Process – Wafer Production	Move of all or part of wafer fab to a different location/site/subcontractor
Process – Wafer Production	Process integrity: tuning within specification
Equipment	Production from a new equipment/tool which uses the same basic technology (replacement equipment or extension of existing equipment pool) without change of process.
<b>Description and Purpose:</b>  This is a final change notification to customers on the qualification of additional wafer fabrication capacity of 40V and 60V Trench (T6) MOSFET technology in Aizu Fujitsu Semiconductor Manufacturing (AFSM) located in Aizu, Japan. At the expiration of this notification, all products listed here will be dual sourced from its current ON Semiconductor wafer fab in Gresham and AFSM.	
<b>Reason / Motivation for Change:</b>	Change benefits for customer: FAB capacity expansion to meet customer demand Quality improvement: No change Risk for late release for customer: Failure to approve will expose the possible risk of not getting all the required products or cause an extended lead time to receive the products
<b>Anticipated impact on fit, form, function, reliability, product safety or manufacturability</b>	The device has been qualified and validated based on the same Product Specification. The device has successfully passed the qualification tests. Potential impacts can be identified, but due to testing performed by ON Semiconductor in relation to the PCN, associated risks are verified and excluded.  No anticipated impacts.
<b>Sites Affected:</b>  <input type="checkbox"/> All site(s) <input type="checkbox"/> not applicable <input type="checkbox"/> ON Semiconductor site(s) : <input checked="" type="checkbox"/> External Foundry/Subcon site(s) <span style="margin-left: 600px;">FUJITSU SEMICONDUCTOR LTD.</span>	

**Marking of Parts/  
Traceability of Change:**

Affected products will be identified with date code.

**Reliability Data Summary:****NVMFS5C604NLT1G (60V LL)****Package: S08FL HEFET**

Test	Specification	Condition	Interval	Sample Size	Results
HTRB	MILSTD750-1 method M1038A	Ta = 175°C, 100% max rated Bvdss	1008 hrs	84pcs/3 lots	0/252
HTGB	JESD22 A108	Ta = 175°C, 100% rated Vgss	1008 hrs	84pcs/3 lots	0/252
HTSL	JESD22-A103	Ta=175°C	2016 hrs	84pc/3 lots	0/252
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	30000 cyc	84pc/3 lots	0/252
TC	JESD22-A104	Ta=-55°C to +150°C	1000 cyc	84pc/3 lots	0/252
HAST	JESD22-A110	130°C, 85% RH, 80% Vds, 18.8psig	192 hrs	84pc/3 lots	0/252
Uhast	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	192 hrs	84pc/3 lots	0/252

**NVMFS5C404NT1G (40V SG)****Package: S08FL HEFET**

Test	Specification	Condition	Interval	Sample Size	Results
HTGB	JESD22-A108	Ta=175°C, 100% max rated Vgss	1008 hrs	84pc/3 lots	0/252

**NVMFS5C410NLT1G (40V LL)****Package: S08FL**

Test	Specification	Condition	Interval	Sample Size	Results
HTRB	MILSTD750-1 method M1038A	Ta = 175°C, 100% max rated Bvdss	1008 hrs	84pcs/3 lots	0/252
HTGB	JESD22 A108	Ta = 175°C, 100% rated Vgss	1008 hrs	84pcs/3 lots	0/252
HTSL	JESD22-A103	Ta=175°C	1008 hrs	84pc/3 lots	0/252
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc	84pc/3 lots	0/252
TC	JESD22-A104	Ta=-55°C to +150°C	1000 cyc	84pc/3 lots	0/252
HAST	JESD22-A110	130°C, 85% RH, 80% Vds, 18.8psig	96 hrs	84pc/3 lots	0/252
Uhast	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	84pc/3 lots	0/252



**Note: AEC-1pager is attached.**

To access file attachments on pdf copy of PCN, please be guided by the steps below:

1. Download pdf copy of the PCN to your computer
2. Open the downloaded pdf copy of the PCN
3. Click on the paper clip icon available on the menu provided in the left/bottom portion of the screen to reveal the Attachment field
4. Then click on the attached file/

#### Electrical Characteristic Summary:

Electrical characteristics are not impacted.

#### List of Affected Standard Parts

Current Part Number	Qualification Vehicle
NVMF55C604NLT1G	NVMF55C604NLT1G
NVMF55C604NLT3G	
NVMF55C604NLWFT1G	
NVMF55C604NLWFT3G	
NVMF55C612NLT1G	
NVMF55C612NLT3G	
NVMF55C612NLWFT1G	
NVMF55C612NLWFT3G	
NVMF55C628NLT1G	
NVMF55C628NLT3G	
NVMF55C628NLWFT1G	
NVMF55C628NLWFT3G	
NVMF55C645NLT1G	
NVMF55C645NLT3G	
NVMF55C645NLWFT1G	
NVMF55C645NLWFT3G	
NVMF55C646NLT1G	
NVMF55C646NLT3G	
NVMF55C646NLWFT1G	
NVMF55C646NLWFT3G	
NVMF55C670NLT1G	
NVMF55C670NLT3G	
NVMF55C670NLWFT1G	
NVMF55C670NLWFT3G	
NVMF55C673NLT1G	
NVMF55C673NLT3G	
NVMF55C673NLWFT1G	
NVMF55C673NLWFT3G	
NVMF55C682NLT1G	



NVMF55C682NLT3G	
NVMF55C682NLWFT1G	
NVMF55C682NLWFT3G	
NVMF55C404NLT1G	NVMF55C604NLT1G NVMF55C410NLT1G
NVMF55C404NLT3G	
NVMF55C404NLWFT1G	
NVMF55C404NLWFT3G	
NVMF55C410NLT1G	
NVMF55C410NLT3G	
NVMF55C410NLWFT1G	
NVMF55C410NLWFT3G	
NVMF55C423NLT1G	
NVMF55C423NLT3G	
NVMF55C423NLWFT1G	
NVMF55C423NLWFT3G	
NVMF55C430NLT1G	
NVMF55C430NLT3G	
NVMF55C430NLWFT1G	
NVMF55C430NLWFT3G	
NVMF55C442NLT1G	
NVMF55C442NLT3G	
NVMF55C442NLWFT1G	
NVMF55C442NLWFT3G	
NVMF55C450NLT1G	
NVMF55C450NLT3G	
NVMF55C450NLWFT1G	
NVMF55C450NLWFT3G	
NVMF55C456NLT1G	
NVMF55C456NLT3G	
NVMF55C456NLWFT1G	
NVMF55C456NLWFT3G	
NVMF55C460NLT1G	
NVMF55C460NLT3G	
NVMF55C460NLWFT1G	
NVMF55C460NLWFT3G	
NVMF55C468NLT1G	
NVMF55C468NLT3G	
NVMF55C468NLWFT1G	
NVMF55C468NLWFT3G	



NVMFS5C404NT1G	NVMFS5C604NLT1G NVMFS5C404NT1G
NVMFS5C404NT3G	
NVMFS5C404NWFT1G	
NVMFS5C404NWFT3G	
NVMFS5C410NT1G	
NVMFS5C410NT3G	
NVMFS5C410NWFT1G	
NVMFS5C410NWFT3G	
NVMFS5C426NT1G	
NVMFS5C426NT3G	
NVMFS5C426NWFT1G	
NVMFS5C426NWFT3G	
NVMFS5C430NT1G	
NVMFS5C430NT3G	
NVMFS5C430NWFT1G	
NVMFS5C430NWFT3G	
NVMFS5C442NT1G	
NVMFS5C442NT3G	
NVMFS5C442NWFT1G	
NVMFS5C442NWFT3G	
NVMFS5C450NT1G	
NVMFS5C450NT3G	
NVMFS5C450NWFT1G	
NVMFS5C450NWFT3G	

## AEC Q101 Discrete Device Semiconductor Component Qualification Summary

AEC Q101 Rev D

**Supplier:** ON Semiconductor  
**Supplier PN:** NVMFS5C410NLT1G  
**Product Description:** 40V N-Ch LL Power MOSFET  
**Supplier Fab info:** AFSM, Japan  
**Supplier Assy info:** Assy Seremban, Malaysia  
**Reason for Qual:** Qual Vehicle S08FL

**Customer PN:**  
**General Specification:** AEC - Q101  
 Q006  
**Reliability Report Date:** Jan-17  
**Family Type:** Power MOSFET, S08FL

ON Semiconductor®



#	Test	Stress Name	Reference	Test Conditions	Comments	# Lots	S.S.	Results Fail/Total	Comments/ Test Results
1	TEST	Pre and post stress electrical test	Device specification			All	All	0 Fails	
2	PC	Preconditioning	JEDS22 A113	Performed on surface mount devices prior to TC, AC, H3TRB or HAST, and IOL.	MSL1 @ 260°C temp	3	336	0 Fails	
3	EV	External Visual	JEDS22 B101	Device construction, marking, and workmanship		3	77	0 Fails	
4	PV	Parametric Verification	Device specification	Tested to device specification requirements		3	25	0 Fails	
5	HTRB	High Temperature Reverse Bias	MILSTD750-1 method M1038A	Tj= max, V=100% rated V, 1008 Hrs		3	84	0 Fails	JESD22 A108
5a	ACBV	AC Blocking Voltage	MILSTD750-1 M1040 A	Tj=max, AC blocking V = max, 1000 Hrs		3	84		Thyristors only
5b	HTFB	High Temperature forward Bias	JESD22 A108	Ta= , V=100% rated forward V, 1000 Hrs		3	84		LEDs Only
5c	SSOP	Steady State Operational Life	MILSTD750-1 method M1038B	Tj= max, V=100% rated IZ max, 1000 Hrs		3	84		Zeners only
6	HTGB	High Temperature Gate Bias	JESD22 A108	Ta= max, Vgs=100%, 1008 Hrs		3	84	0 Fails	
	HTSL	High Temperature Storage Life	JESD22 A103	Ta= max, 1000 Hrs, 1008 Hrs	Q006 - NVMFS5C604NLT1G	3	84	0 Fails	Cross section 1X and 2X Complete/Pass.
7	TC	Temperature Cycling	JESD22 A104; Q101 appendix 6	-55°C to +150°C, t(dwell)>15 min, 1000 Cycles	Board mounted Q006 - NVMFS5C604NLT1G	3	84	0 Fails	SAT, Wire pull, cross section, ball shear post stress - Complete/PASS
7a	TCHT	Temperature Cycling Hot Test	JESD22 A104; Q101 appendix 6	125°C Hot Test after TC, followed by wire pull on all wires from 5 part		3	84		Hermetic Packages only
7a alt	TCDT	Temperature Cycling Delamination Test	JESD22 A104; Q101 appendix 6 J STD 035	100% C-SAM inspection after TC, follwed by decap, inspection or wire pull on all wires from 5 parts for 5 highest delaminated parts.		3	84	0 Fails	
7b	WBI	Wire Bond Integrity	MILSTD750 Method 2037	post 500 cyc		3	5	0 Fails	
8	UHAST	Unbiased HAST	JESD22 A118	Ta=130°C, 85% RH, no bias, 96 hrs		3	84	0 Fails	
8 alt	AC	Autoclave	JESD22 A102	Ta = 121°C, P= 15 PSIG, RH = 100%, 96 Hours		3	84		uHAST performed
9	HAST	Highly Accelerated Stress Test	JESD22 A110	130C/85%RH, 80% rated V or 42V max, 96 hours	Q006 - NVMFS5C604NLT1G	3	84	0 Fails	SAT, Wire pull, cross section, ball shear post stress - Complete/PASS
9 alt	H3TRB	High Humidity, High Temperature Revers	JEDS22 A101	85°C, 85% RH, V=80% rated V or 100V max. 1000 Hours		3	84		HAST performed
9a	HTHHB	High Temperature High Humidity Bias	JESD22 A101	85°C, 85% RH, FORWARD BIAS V=80% rated V or 100V max. 1000 Hours		3	84		LEDs Only
10	IOL	Intermittent Operational Life	MIL-STD-750 Method 1037	Ta=25°C DeltaTj=100°C, t(on)=(off)= 2 min, 15K Cycles	Q006 - NVMFS5C604NLT1G	3	84	0 Fails	
(alt)	PTC	Power and Temperature Cycle	JESD22 A105	Performed if IOL cannot be achieved		3	84		IOL performed
11	ESD	ESD - CDM/HBM	AEC Q101-001/005	Prefer CDM and HBM.		3	30	0 Fails	
12	DPA	DPA	AEC Q101-004 Section 4	Post H3TRB or HAST and TC		3	2	0 Fails	
13	PD	Physical Dimension	JESD22 B100	Verify physical dimensions to specifications		1	30	0 Fails	
14	TS	Terminal Strength	MIL-STD-750 Method 2036	Evaluate lead integrity on leaded parts only		1	30		through hole parts only
15	RTS	Resistance to Solvents	JESD22 B107	Verify marking permanency. Not required for laser marking		1	30		Not for laser marked parts
16	CA	Constant Acceleration	MIL-STD-750 Method 2006	Y1 plane, 15Kg force		1	30		For Cavity package only
17	VVF	Vibration Variable Frequency	JESD22 B103	displacement 0.06" 20Hz to 100Hz and 50g peak acceleration 100Hz to 2KHz		1	30		For Cavity package only
18	MS	Mechanical Shock	JESD22 B104	1500g's for 0.5ms, 5 blows, 3 orientations		1	30		For Cavity package only
19	HER	Hermeticity	JESD22 A109	Fine and gross leak		1	30		For Hermetic pkgs only
20	RSH	Resistance to Solder Heat	JESD22 B106	per AEC - Q101		3	30	0 Fails	
21	SD	Solderability	J-STD-002 , B102	50X		3	10	0 Fails	
22	TR	Thermal Resistance	appropriate	per device specification, pre & post process change					Per datasheet
23	WBS	Wire Bond Strength	MIL-STD-750 Method 2037	Pre & post process change		3	10	0 Fails	
24	BS	Bond Shear	AEC Q101-003			3	10	0 Fails	
25	DS	Die Shear	MIL-STD-750 Method 2017			3	5	0 Fails	
26	UIS	Unclamped Inductive Switching	AEC Q101-004 Section 2			3	5	0 Fails	
27	DI	Dielectric Integrity	AEC Q101-004 Section 3			3	5	0 Fails	
28	SCR	Short Circuit Reliability Characterization	AEC Q101 - 006			3	10		For Smart Power parts only
29	LF	Lead Free	AEC Q005	For all related solderability, solder heat resistance and whisker requirements		3	3	0 Fails	JESD201 Class 2

Notes:

NOT Recommended for Military, Medical or Aerospace

Summarized from NVMFS5C410NL S32572, NVMFS5C604NL S32577 (Q006)

## AEC Q101 Discrete Device Semiconductor Component Qualification Summary

AEC Q101 Rev D

**Supplier:** ON Semiconductor  
**Supplier PN:** NVMFS5C404NT1G  
**Product Description:** 40V N-Ch SG Power MOSFET  
**Supplier Fab info:** AFSM, Japan  
**Supplier Assy info:** Assy Seremban, Malaysia  
**Reason for Qual:** Qual Vehicle S08FL HE

**Customer PN:**  
**General Specification:** AEC - Q101  
 Q006  
**Reliability Report Date:** Jan-17  
**Family Type:** Power MOSFET, S08FL HE

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#	Test	Stress Name	Reference	Test Conditions	Comments	# Lots	S.S.	Results Fail/Total	Comments/ Test Results
1	TEST	Pre and post stress electrical test	Device specification			All	All	0 Fails	
2	PC	Preconditioning	JEDS22 A113	Performed on surface mount devices prior to TC, AC, H3TRB or HAST, and IOL.	MSL1 @ 260°C temp	3	336	0 Fails	
3	EV	External Visual	JEDS22 B101	Device construction, marking, and workmanship		3	77	0 Fails	
4	PV	Parametric Verification	Device specification	Tested to device specification requirements		3	25	0 Fails	
5	HTRB	High Temperature Reverse Bias	MILSTD750-1 method M1038A	Tj= max, V=100% rated V, 1008 Hrs		3	84	0 Fails	JESD22 A108
5a	ACBV	AC Blocking Voltage	MILSTD750-1 M1040 A	Tj=max, AC blocking V = max, 1000 Hrs		3	84		Thyristors only
5b	HTFB	High Temperature forward Bias	JESD22 A108	Ta= , V=100% rated forward V, 1000 Hrs		3	84		LEDs Only
5c	SSOP	Steady State Operational Life	MILSTD750-1 method M1038B	Tj= max, V=100% rated IZ max, 1000 Hrs		3	84		Zeners only
6	HTGB	High Temperature Gate Bias	JESD22 A108	Ta= max, Vgs=100%, 1008 Hrs		3	84	0 Fails	
	HTSL	High Temperature Storage Life	JESD22 A103	Ta= max, 1000 Hrs, 2016 Hrs	Q006	3	84	0 Fails	Cross section 1X and 2X Complete/Pass.
7	TC	Temperature Cycling	JESD22 A104; Q101 appendix 6	-55°C to +150°C, t(dwell)>15 min, 1000 Cycles	Board mounted Q006	3	84	0 Fails	SAT, Wire pull, cross section, ball shear post stress - Complete/PASS
7a	TCHT	Temperature Cycling Hot Test	JESD22 A104; Q101 appendix 6	125°C Hot Test after TC, followed by wire pull on all wires from 5 part		3	84		Hermetic Packages only
7a alt	TCDT	Temperature Cycling Delamination Test	JESD22 A104; Q101 appendix 6 J STD 035	100% C-SAM inspection after TC, followed by decap, inspection or wire pull on all wires from 5 parts for 5 highest delaminated parts.		3	84	0 Fails	
7b	WBI	Wire Bond Integrity	MILSTD750 Method 2037	post 500 cyc		3	5	0 Fails	
8	UHASt	Unbiased HAST	JESD22 A118	Ta=130°C, 85% RH, no bias, 192 hrs		3	84	0 Fails	
8 alt	AC	Autoclave	JESD22 A102	Ta = 121°C, P= 15 PSIG, RH = 100%, 96 Hours		3	84		uHAST performed
9	HAST	Highly Accelerated Stress Test	JESD22 A110	130C/85%RH, 80% rated V or 42V max, 192 hours	Q006	3	84	0 Fails	SAT, Wire pull, cross section, ball shear post stress - Complete/PASS
9 alt	H3TRB	High Humidity, High Temperature Reverse Bias	JEDS22 A101	85°C, 85% RH, V=80% rated V or 100V max. 1000 Hours		3	84		HAST performed
9a	HTHHB	High Temperature High Humidity Bias	JESD22 A101	85°C, 85% RH, FORWARD BIAS V=80% rated V or 100V max. 1000 Hours		3	84		LEDs Only
10	IOL	Intermittent Operational Life	MIL-STD-750 Method 1037	Ta=25°C DeltaTj=100°C, t(on)=t(off)= 2 min, 30K Cycles	Q006	3	84	0 Fails	
(alt)	PTC	Power and Temperature Cycle	JESD22 A105	Performed if IOL cannot be achieved		3	84		IOL performed
11	ESD	ESD - CDM/HBM	AEC Q101-001/005	Prefer CDM and HBM.		3	30	0 Fails	
12	DPA	DPA	AEC Q101-004 Section 4	Post H3TRB or HAST and TC		3	2	0 Fails	
13	PD	Physical Dimension	JESD22 B100	Verify physical dimensions to specifications		1	30	0 Fails	
14	TS	Terminal Strength	MIL-STD-750 Method 2036	Evaluate lead integrity on leaded parts only		1	30		through hole parts only
15	RTS	Resistance to Solvents	JESD22 B107	Verify marking permanency. Not required for laser marking		1	30		Not for laser marked parts
16	CA	Constant Acceleration	MIL-STD-750 Method 2006	Y1 plane, 15Kg force		1	30		For Cavity package only
17	VVF	Vibration Variable Frequency	JESD22 B103	displacement 0.06" 20Hz to 100Hz and 50g peak acceleration 100Hz to 2KHz		1	30		For Cavity package only
18	MS	Mechanical Shock	JESD22 B104	1500g's for 0.5ms, 5 blows, 3 orientations		1	30		For Cavity package only
19	HER	Hermeticity	JESD22 A109	Fine and gross leak		1	30		For Hermetic pkgs only
20	RSH	Resistance to Solder Heat	JESD22 B106	per AEC - Q101		3	30	0 Fails	
21	SD	Solderability	J-STD-002 , B102	50X		3	10	0 Fails	
22	TR	Thermal Resistance	appropriate	per device specification, pre & post process change					Per datasheet
23	WBS	Wire Bond Strength	MIL-STD-750 Method 2037	Pre & post process change		3	10	0 Fails	
24	BS	Bond Shear	AEC Q101-003			3	10	0 Fails	
25	DS	Die Shear	MIL-STD-750 Method 2017			3	5	0 Fails	
26	UIS	Unclamped Inductive Switching	AEC Q101-004 Section 2			3	5	0 Fails	
27	DI	Dielectric Integrity	AEC Q101-004 Section 3			3	5	0 Fails	
28	SCR	Short Circuit Reliability Characterization	AEC Q101 - 006			3	10		For Smart Power parts only
29	LF	Lead Free	AEC Q005	For all related solderability, solder heat resistance and whisker requirements		3	3	0 Fails	JESD201 Class 2

Notes:

NOT Recommended for Military, Medical or Aerospace

Summarized from NVMFS5C404N S32575, NVMFS5C604NL S32577

## AEC Q101 Discrete Device Semiconductor Component Qualification Summary

AEC Q101 Rev D

**Supplier:** ON Semiconductor  
**Supplier PN:** NVMF55C604NLT1G  
**Product Description:** 40V & 60V N-Ch LL Power MOSFET  
**Supplier Fab info:** AFSM, Japan  
**Supplier Assy info:** Assy Seremban, Malaysia

**Customer PN:**  
**General Specification:** AEC - Q101  
 Q006  
**Reliability Report Date:** Jan-17  
**Family Type:** Power MOSFET, S08FL HE

ON Semiconductor®



Reason for Qual: Qual Vehicle S08FL HE

#	Test	Stress Name	Reference	Test Conditions	Comments	# Lots	S.S.	Results Fail/Total	Comments/ Test Results
1	TEST	Pre and post stress electrical test	Device specification			All	All	0 Fails	
2	PC	Preconditioning	JEDS22 A113	Performed on surface mount devices prior to TC, AC, H3TRB or HAST, and IOL.	MSL1 @ 260°C temp	3	336	0 Fails	
3	EV	External Visual	JEDS22 B101	Device construction, marking, and workmanship		3	77	0 Fails	
4	PV	Parametric Verification	Device specification	Tested to device specification requirements		3	25	0 Fails	
5	HTRB	High Temperature Reverse Bias	MILSTD750-1 method M1038A	Tj= max, V=100% rated V, 1008 Hrs		3	84	0 Fails	JESD22 A108
5a	ACBV	AC Blocking Voltage	MILSTD750-1 M1040 A	Tj=max, AC blocking V = max, 1000 Hrs		3	84		Thyristors only
5b	HTFB	High Temperature forward Bias	JESD22 A108	Ta= , V=100% rated forward V, 1000 Hrs		3	84		LEDs Only
5c	SSOP	Steady State Operational Life	MILSTD750-1 method M1038B	Tj= max, V=100% rated IZ max, 1000 Hrs		3	84		Zeners only
6	HTGB	High Temperature Gate Bias	JESD22 A108	Ta= max, Vgs=100%, 1008 Hrs		3	84	0 Fails	
	HTSL	High Temperature Storage Life	JESD22 A103	Ta= max, 1000 Hrs, 2016 Hrs	Q006	3	84	0 Fails	Cross section 1X and 2X Complete/Pass.
7	TC	Temperature Cycling	JESD22 A104; Q101 appendix 6	-55°C to +150°C, t(dwell)>15 min, 1000 Cycles	Board mounted Q006	3	84	0 Fails	SAT, Wire pull, cross section, ball shear post stress - Complete/PASS
7a	TCHT	Temperature Cycling Hot Test	JESD22 A104; Q101 appendix 6	125°C Hot Test after TC, followed by wire pull on all wires from 5 part		3	84		Hermetic Packages only
7a alt	TCDT	Temperature Cycling Delamination Test	JESD22 A104; Q101 appendix 6 J STD 035	100% C-SAM inspection after TC, followed by decap, inspection or wire pull on all wires from 5 parts for 5 highest delaminated parts.		3	84	0 Fails	
7b	WBI	Wire Bond Integrity	MILSTD750 Method 2037	post 500 cyc		3	5	0 Fails	
8	UHAIST	Unbiased HAST	JESD22 A118	Ta=130°C, 85% RH, no bias, 192 hrs		3	84	0 Fails	
8 alt	AC	Autoclave	JESD22 A102	Ta = 121°C, P= 15 PSIG, RH = 100%, 96 Hours		3	84		uHAST performed
9	HAST	Highly Accelerated Stress Test	JESD22 A110	130C/85%RH, 80% rated V or 42V max, 192 hours	Q006	3	84	0 Fails	SAT, Wire pull, cross section, ball shear post stress - Complete/PASS
9 alt	H3TRB	High Humidity, High Temperature Reverse Bias	JEDS22 A101	85°C, 85% RH, V=80% rated V or 100V max. 1000 Hours		3	84		HAST performed
9a	HTHHB	High Temperature High Humidity Bias	JESD22 A101	85°C, 85% RH, FORWARD BIAS V=80% rated V or 100V max. 1000 Hours		3	84		LEDs Only
10	IOL	Intermittent Operational Life	MIL-STD-750 Method 1037	Ta=25°C DeltaTj=100°C, t(on)=t(off)= 2 min, 30K Cycles	Q006	3	84	0 Fails	
(alt)	PTC	Power and Temperature Cycle	JESD22 A105	Performed if IOL cannot be achieved		3	84		IOL performed
11	ESD	ESD - CDM/HBM	AEC Q101-001/005	Prefer CDM and HBM.		3	30	0 Fails	
12	DPA	DPA	AEC Q101-004 Section 4	Post H3TRB or HAST and TC		3	2	0 Fails	
13	PD	Physical Dimension	JESD22 B100	Verify physical dimensions to specifications		1	30	0 Fails	
14	TS	Terminal Strength	MIL-STD-750 Method 2036	Evaluate lead integrity on leaded parts only		1	30		through hole parts only
15	RTS	Resistance to Solvents	JESD22 B107	Verify marking permanency. Not required for laser marking		1	30		Not for laser marked parts
16	CA	Constant Acceleration	MIL-STD-750 Method 2006	Y1 plane, 15Kg force		1	30		For Cavity package only
17	VVF	Vibration Variable Frequency	JESD22 B103	displacement 0.06" 20Hz to 100Hz and 50g peak acceleration 100Hz to 2KHz		1	30		For Cavity package only
18	MS	Mechanical Shock	JESD22 B104	1500g's for 0.5ms, 5 blows, 3 orientations		1	30		For Cavity package only
19	HER	Hermeticity	JESD22 A109	Fine and gross leak		1	30		For Hermetic pkgs only
20	RSH	Resistance to Solder Heat	JESD22 B106	per AEC - Q101		3	30	0 Fails	
21	SD	Solderability	J-STD-002 , B102	50X		3	10	0 Fails	
22	TR	Thermal Resistance	appropriate	per device specification, pre & post process change					Per datasheet
23	WBS	Wire Bond Strength	MIL-STD-750 Method 2037	Pre & post process change		3	10	0 Fails	
24	BS	Bond Shear	AEC Q101-003			3	10	0 Fails	
25	DS	Die Shear	MIL-STD-750 Method 2017			3	5	0 Fails	
26	UIS	Unclamped Inductive Switching	AEC Q101-004 Section 2			3	5	0 Fails	
27	DI	Dielectric Integrity	AEC Q101-004 Section 3			3	5	0 Fails	
28	SCR	Short Circuit Reliability Characterization	AEC Q101 - 006			3	10		For Smart Power parts only
29	LF	Lead Free	AEC Q005	For all related solderability, solder heat resistance and whisker requirements		3	3	0 Fails	JESD201 Class 2

Notes:

NOT Recommended for Military, Medical or Aerospace

Summarized from NVMF55C604NLT S32577