PCN	l Num	ber:	20220727000.2					ı	PCN Date:	July 28	, 2022
Title	::	Qualification	of New Sub	ostra	te Core M	aterial	for Select [	Devi	ces		
<b>Customer Contact:</b>			PCN Manag	PCN Manager Dept: Qua			Quality Se	y Services			
Prop	posed	1 <sup>st</sup> Ship Date	e: Jan 28, 2023			Sample requests accepted until:			Aug 28, 2022	2*	
*Sa	mple r	equests receiv	ed after (A	lug 2	8, 2022)	will not	t be support	ed.			
Cha	nge T								ı		
		mbly Site		H	Design			<u> </u>	Wafer Bum	•	
		mbly Process mbly Materials		H	Data Sho		hange	<u> </u>	Wafer Bum		
		nanical Specific		H	Part nur Test Site		larige	+	Wafer Bum Wafer Fab	•	5
		ing/Shipping/L		H	Test Pro			ᅟ	Wafer Fab		
	Tuck	<u></u>	abemig		1 030 110				Wafer Fab		
					PCN D	)eta il	s				
Des	cription	on of Change	:								
		ruments is ple vices listed in t	he "Produc				ion of a nev	w su	bstrate core	material	for
		Wha	at		(	Curre	nt		New		
Substrate Core mate			re materia	al	F679FGI	3/F67	9FGB(M) HL832NX(A-HS			-HS)	
					L07 31 G	3, LO7	or ap(iii)		HL832NX(A	110)	]
Reas	son fo	or Change:			207 51 61	3, 207	JI GB(M)		HL832NX(A	110)	
					207 31 01	5, 207	31 GB(1-1)		HL832NX(A		
Cont	inuity	or Change: of supply ed impact on	Form, Fit	, Fur		-					e):
Cont	inuity i <b>cipat</b> e	of supply	Form, Fit	, Fur		-					e):
Cont Anti None	tinuity i <b>cipat</b> e	of supply				-					e):
Continue Anti	cinuity icipate e act o	of supply  ed impact on  n Environment  oxes indicate to below boxes a	ntal Rating the status are checked	<b>gs</b> of en	nction, Quantities	uality tal rati	or Reliabil	ity ng in	(positive /	negativ on of this	
Anti None Imp	cinuity icipato e eact or cked b	of supply ed impact on n Environmen oxes indicate to below boxes a	ntal Rating the status are checked	gs of en d, the	nction, Quantities of the control of	tal rati	or Reliabil	ity ng in	(positive /	negativon of this nmental	
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Char Char Char Proc	cinuity icipato e pact or cked b nge. If No C nges f e duct A	of supply  ed impact on  n Environment  oxes indicate in below boxes and  RoHS inhange  to product identification	the status are checked	gs of end, the REAC nange	nction, Quantities of the control of	cal rati	or Reliabil  ngs followinges to the associated by the second state of the second state	ity  g in	(positive /	negativon of this nmental	
Chachar Chachar Procedure AM:	cinuity cipate e cked b nge. If No C nges t e duct A	of supply ed impact on  n Environment oxes indicate to below boxes at the self to product identification of	the status are checked No Chentification	gs of end, the REAC hange	nction, Quantification, Quanti	al ratichang	or Reliabil  ngs followinges to the associated to the associated to the associated to the second to	ity  g in sssoc	(positive /	negative on of this namental of 62474 hange	
Char Char None Anti None Checchar Char Anti Anti M43	cinuity icipato e e cked b nge. If No C nges t e duct A 3358BG	of supply ed impact on n Environmen oxes indicate in below boxes and RoHS hange to product ide  Affected: GCZA80EP	the status are checked No Chentification	gs of end, the nange on re	nction, Quantition, Quantition	tal ratichang	or Reliabil  Ings following the stothe as the stothe as the second control of the second	ity  g in sssoc	nplementation iated environ No Cl	negativ on of this nmental c 62474 hange	
Char Char Char Char Mone Proc AM: M4: M4:	cinuity cipato e cked b nge. If No C nges t e duct A 335886 30F543	of supply ed impact on  n Environment oxes indicate to below boxes at the self to product identification of	The status are checked No Checked	gs of end, the REAC hange on re	nction, Quantities of the control of	tal ratichang  TMS5 TMS5 V62/1	or Reliabil  Ings following to the associated to	ity  g in sssoc	positive / inplementation iated environ IEC  No Cl  V62/136 V62/156 V62/186	negative on of this namental c 62474 hange	

# **Qualification Report**

Approve Date 17-May-2017

# **Qualification Results**

Data Displayed as: Number of lots / Total sample size / Total failed

Туре	Test Name / Condition	Duration	Qual Device: F761516ZAV	QBS Device: D771586ZKB
ТНВ	Temperature Humidity Bias, 85C/85%RH	1000 Hours	QBS Device	3/231/0
UHA ST	Unbiased HAST 110C/85%RH	264 Hours	3/230/0	N/A
тс	Temperature Cycle, -55/125C	1000 Cycles	3/231/0	N/A
CDM	ESD - CDM	250 V	1/3/0	N/A

- QBS: Qualification By Similarity
- Qual Device F761516ZAV and QBS Device D771586ZKB are qualified at LEVEL3-260C
- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable
- The following are equivalent HTOL options based on an activation energy of 0.7eV: 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours
- The following are equivalent HTSL options based on an activation energy of 0.7eV: 150C/1k Hours, and 170C/420 Hours
- The following are equivalent Temp Cycle options per JESD47: -55C/125C/700 Cycles and -65C/150C/500 Cycles Quality and Environmental data is available at Tl's external Web site: http://www.ti.com/

#### Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

# **Qualification Report**

Approve Date 08-June-2015

### **Qualification Results**

Data Displayed as: Number of lots / Total sample size / Total failed

Туре	Test Name / Condition	Duration	Qual Device: TNETV1061ZWC	QBS Package Reference: TMS320C6748BZWTA3E
HTOL	Life Test, 125C	1000 hours	3/231/0	-
HTSL	High Temp Storage Bake 150C	1000 hours	3/179/0	3/231/0
PD	Physical Dimensions	(per mechanical drawing)	1/10/0	-
TC	Temperature Cycle, -55/125C	1000 cycles	3/231/0	3/231/0
THB	Biased Temperature and Humidity, 85C/85%RH	1000 hours	QBS device	3/77/0
UHA ST	Unbiased HAST 110C/85%RH	264 hours	3/231/0	3/231/0
WBP	Bond Strength	76 ball bonds, min. 3 units	3/228/0	3/228/0

- QBS: Qual By Similarity
- Qual Device TNETV1061ZWC is qualified at LEVEL4-260C

Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable

The following are equivalent HTOL options based on an activation energy of 0.7eV: 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240

Hours

- The following are equivalent HTSL options based on an activation energy of 0.7eV: 150C/1k Hours, and 170C/420 Hours
- The following are equivalent Temp Cycle options per JESD47: -55C/125C/700 Cycles and -65C/150C/500 Cycles Quality and Environmental data is available at TI's external Web site: http://www.ti.com/ Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

**Qualification Report**Automotive New Product Qualification Summary (As per AEC-Q100 and JEDEC Guidelines)

Approve Date 10-Jan-2019

# **Qualification Results**

Data Displayed as: Number of lots / Total sample size / Total failed

Туре	Data Displayed as: Number of lots / Total sample size / Total failed							
Type			Min		TestName/	Duratio	Qual Device:	Process QBS:
. 760	#	Test Spec	Lot	SS/Lot	Condition	n	CODMIOAZWCR	
			Qty				CODWITOAZWCR	TPS2543QRTERQ1
Test	t Gro	up A – Accelera	ated Env	ironment	Stress Tests			
		JEDEC J-						
PC	Α	STD-020	3	77	Preconditioning	Level 2-	No Faile	No Faile
PC	1	JESD22-	3	77	Preconditioning	260C	No Fails	No Fails
		A113						
		JEDEC			_			
HAST	Α	JESD22-	3	77	Biased HAST,	96	-	3/231/0
1	2	A110			130C/85%RH	Hours		6/201/6
		JEDEC						
AC	Α	JESD22-	3	77	Autoclave 121C	96	1/77/0	3/231/0
AC	3		3	11	Autociave 1210	Hours	1/11/0	3/231/0
		A102						
		JEDEC						
TC	Α	JESD22-	3	77	Temperature	500	1/77/0	3/231/0
	4	A104 and			Cycle, -65/150C	Cycles		
		Appendix 3						
TC-BP	Α	MIL-STD883	1	5	Post Temp	Wires	1/5/0	1/5/0
100	4	Method 2011			Cycle Bond Pull	********	170/0	170/0
	۸	JEDEC			Pow er	4000		
PTC	A	JESD22-	1	45	Temperature	1000	-	1/45/0
	5	A105			Cycle	Cycles		
		JEDEC			High Temp			
HTSL	Α	JESD22-	1	45	Storage Bake	1000	1/77/0	3/231/0
	6	A103			150C	Hours		
Test	t Gro	up B – Accelera	ated Life	time Simu				
		JEDEC						
HTOL	В		_			4000		
IIIOL		JEST27-		77	Life Test 125C	1000	1/77/0	3/231/0
	1	JESD22- Δ108	3	77	Life Test 125C	Hours	1/77/0	3/231/0
	1	A108	3	77			1/77/0	3/231/0
FLED	1 B				Early Life		1/77/0	
ELFR	·	A108	3	800	Early Life Failure Rate,	Hours	1/77/0 -	3/231/0 3/2400/0
ELFR	В	A108 AEC Q100-			Early Life Failure Rate, 125C	Hours 24	1/77/0 -	
ELFR	В	A108 AEC Q100-			Early Life Failure Rate, 125 C NV M	Hours 24	1/77/0 -	
	B 2	A108 AEC Q100- 008	3	800	Early Life Failure Rate, 125C NV M Endurance,	Hours 24 Hours	1/77/0 -	
ELFR	B 2	A108 AEC Q100- 008 AEC Q100-			Early Life Failure Rate, 125C NV M Endurance, Data Retention,	Hours 24 Hours	1/77/0 - -	
	B 2	A108 AEC Q100- 008	3	800	Early Life Failure Rate, 125C NV M Endurance, Data Retention, and Operational	Hours 24 Hours	1/77/0 - -	
EDR	B 2 B 3	A108 AEC Q100- 008  AEC Q100- 005	3	800 77	Early Life Failure Rate, 125C  NV M Endurance, Data Retention, and Operational Life	Hours 24 Hours	1/77/0 - -	
EDR	B 2 B 3	A108 AEC Q100- 008 AEC Q100-	3	800 77	Early Life Failure Rate, 125C  NV M Endurance, Data Retention, and Operational Life	Hours 24 Hours	1/77/0 - -	
EDR	B 2 B 3	A108  AEC Q100- 008  AEC Q100- 005	3	800 77	Early Life Failure Rate, 125C  NV M Endurance, Data Retention, and Operational Life	Hours 24 Hours	1/77/0 - -	
EDR Test	B 2 B 3	A108  AEC Q100- 008  AEC Q100- 005  IP C - Package  AEC Q100-	3	800 77	Early Life Failure Rate, 125C NV M Endurance, Data Retention, and Operational Life y Tests	Hours 24 Hours	-	
EDR	B 2 B 3	A108  AEC Q100- 008  AEC Q100- 005	3 3 Assemb	800 77 oly Integrit	Early Life Failure Rate, 125 C NV M Endurance, Data Retention, and Operational Life y Tests Wire Bond Shear	Hours 24 Hours 1000 Hours	1/77/0 1/30/0	3/2400/0
EDR Test WBS	B 2 B 3	A108  AEC Q100- 008  AEC Q100- 005  IP C - Package  AEC Q100- 001	3 3 Assemb	800 77 oly Integrit	Early Life Failure Rate, 125 C NV M Endurance, Data Retention, and Operational Life y Tests Wire Bond Shear Cpk>1.67	Hours  24 Hours  1000 Hours  Wires	- 1/30/0	3/2400/0
EDR Test	B 2 B 3 Crou	A108  AEC Q100- 008  AEC Q100- 005  IP C - Package  AEC Q100- 001  MIL-STD883	3 3 Assemb	800 77 oly Integrit	Early Life Failure Rate, 125C NV M Endurance, Data Retention, and Operational Life y Tests Wire Bond Shear Cpk>1.67 Wire Bond Pull	Hours 24 Hours 1000 Hours	-	3/2400/0
EDR Test WBS	B 2 B 3	A108  AEC Q100- 008  AEC Q100- 005  UP C - Package  AEC Q100- 001  MIL-STD883  Method 2011	3 3 Assemb	800 77 oly Integrit	Early Life Failure Rate, 125 C NV M Endurance, Data Retention, and Operational Life y Tests Wire Bond Shear Cpk>1.67 Wire Bond Pull Cpk>1.67	Hours  24 Hours  1000 Hours  Wires	- 1/30/0	3/2400/0
EDR Test WBS WBP	B 2 B 3 Crou	A108  AEC Q100- 008  AEC Q100- 005  UP C - Package  AEC Q100- 001  MIL-STD883  Method 2011  JEDEC	3 Assemb	800 77 Sly Integrit 30 30	Early Life Failure Rate, 125C NV M Endurance, Data Retention, and Operational Life y Tests Wire Bond Shear Cpk>1.67 Wire Bond Pull	Hours  24 Hours  1000 Hours  Wires	- 1/30/0	3/2400/0 - - 1/30/0 1/30/0
EDR Test WBS	B 2 B 3 C C 1 C 2	A108  AEC Q100- 008  AEC Q100- 005  AEC Q100- 001  MIL-STD883 Method 2011  JEDEC JESD22-	3 3 Assemb	800 77 oly Integrit	Early Life Failure Rate, 125 C NV M Endurance, Data Retention, and Operational Life y Tests Wire Bond Shear Cpk>1.67 Wire Bond Pull Cpk>1.67	Hours  24 Hours  1000 Hours  Wires	- 1/30/0	3/2400/0
EDR Test WBS WBP	B 2 B 3 C C 1 C C C	A108  AEC Q100- 008  AEC Q100- 005  AEC Q100- 001  MIL-STD883 Method 2011  JEDEC JESD22- B102	3 Assemb	800 77 Sly Integrit 30 30	Early Life Failure Rate, 125 C NV M Endurance, Data Retention, and Operational Life y Tests Wire Bond Shear Cpk>1.67 Wire Bond Pull Cpk>1.67 Surface Mount	Hours  24 Hours  1000 Hours  Wires	- 1/30/0	3/2400/0 - - 1/30/0 1/30/0
EDR Test WBS WBP	B 2 B 3 Crou	A108  AEC Q100- 008  AEC Q100- 005  IP C - Package  AEC Q100- 001  MIL-STD883  Method 2011  JEDEC  JESD22- B102  JEDEC	3 Assemb	800 77 Sly Integrit 30 30	Early Life Failure Rate, 125 C NV M Endurance, Data Retention, and Operational Life y Tests Wire Bond Shear Cpk>1.67 Wire Bond Pull Cpk>1.67 Surface Mount	Hours  24 Hours  1000 Hours  Wires	- 1/30/0	3/2400/0 - - 1/30/0 1/30/0
EDR Test WBS WBP	B 2 B 3 C C 1 C 2 C 3 C C	A108  AEC Q100- 008  AEC Q100- 005  IP C - Package  AEC Q100- 001  MIL-STD883  Method 2011  JEDEC JESD22- B102  JEDEC JESD22-	3 Assemb	800 77 Sly Integrit 30 30	Early Life Failure Rate, 125C NV M Endurance, Data Retention, and Operational Life y Tests Wire Bond Shear Cpk>1.67 Wire Bond Pull Cpk>1.67 Surface Mount Solderability	Hours  24 Hours  1000 Hours  Wires	- 1/30/0	3/2400/0 - - 1/30/0 1/30/0
EDR  Test  WBS  WBP	B 2 B 3 Crou	A108  AEC Q100- 008  AEC Q100- 005  IP C - Package  AEC Q100- 001  MIL-STD883  Method 2011  JEDEC  JESD22- B102  JEDEC  JESD22- B100 and	3 Assemb	800 77 30 30 15	Early Life Failure Rate, 125C NV M Endurance, Data Retention, and Operational Life y Tests Wire Bond Shear Cpk>1.67 Wire Bond Pull Cpk>1.67 Surface Mount Solderability	Hours  24 Hours  1000 Hours  Wires	- 1/30/0 1/30/0	3/2400/0 - - 1/30/0 1/30/0 1/15/0
EDR  Test  WBS  WBP	B 2 B 3 C C 4	A108  AEC Q100- 008  AEC Q100- 005  IP C - Package  AEC Q100- 001  MIL-STD883 Method 2011  JEDEC JESD22- B102  JEDEC JESD22- B100 and B108	3 Assemb	800 77 30 30 15	Early Life Failure Rate, 125C NV M Endurance, Data Retention, and Operational Life y Tests Wire Bond Shear Cpk>1.67 Wire Bond Pull Cpk>1.67 Surface Mount Solderability Physical Dimensions (Cpk>1.67)	Hours  24 Hours  1000 Hours  Wires  -	- 1/30/0 1/30/0	3/2400/0 - - 1/30/0 1/30/0 1/15/0
EDR  Test  WBS  WBP	B 2 B 3 C C 1 C 2 C 3 C C	A108  AEC Q100- 008  AEC Q100- 005  IP C - Package  AEC Q100- 001  MIL-STD883  Method 2011  JEDEC  JESD22- B102  JEDEC  JESD22- B100 and	3 Assemb	800 77 30 30 15	Early Life Failure Rate, 125C NV M Endurance, Data Retention, and Operational Life y Tests Wire Bond Shear Cpk>1.67 Wire Bond Pull Cpk>1.67 Surface Mount Solderability Physical Dimensions	Hours  24 Hours  1000 Hours  Wires	- 1/30/0 1/30/0	3/2400/0 - - 1/30/0 1/30/0 1/15/0

Туре	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duratio n	Qual Device: CODMIOAZWCR	Process QBS: TPS2543QRTERQ1
					(Cpk>1.67)			
Test	Gro	up D – Die Fabri	cation F	Reliability <sup>*</sup>				
EM	D 1	JESD61	-	-	Electromigratio n	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
TDDB	D 2	JESD35	-	-	Time Dependant Dielectric Breakdown	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
HCI	D 3	JESD60 & 28	-	-	Hot Injection Carrier	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
NBTI	D 4	-	-	-	Negative Bias Temperature Instability	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
SM	D 5	-	-	-	Stress Migration	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
Test	Grou	ıp E – Electrical	Verifica	ation Tests	5			
НВМ	E 2	AEC Q100- 002	1	3	ESD – HBM	1500 V	1/3/0	-
						2000 V	-	1/3/0
CDM	E 3	AEC Q100- 011	1	3	ESD – CDM	500 V (all pins) 750V (corner pins only)	1/3/0	1/3/0
LU	E 4	AEC Q100- 004	1	6	Latch-up (125C)	Per A EC Q100- 004	1/6/0	1/6/0
ED	E 5	AEC Q100- 009	3	30	Electrical Distributions (-40, 25C, 125C)	Cpk>1.6 7	3/90/0	3/90/0

<sup>-</sup> QBS: Qual By Similarity

# A1 (PC): Preconditioning:

Performed for THB, Biased HAST, AC, uHAST &TC samples, as applicable.

# Ambient Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40°C to +150°C Grade 1 (or Q): -40°C to +125°C Grade 2 (or T): -40°C to +105°C Grade 3 (or I): -40°C to +85°C

## E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):

Room/Hot/Cold: HTOL, ED

Room/Hot: THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU

Room: AC/uHAST
Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

<sup>-</sup> Qual Device is qualified at LEV EL3-260 C

**Qualification Report**Automotive New Product Qualification Summary (As per AEC-Q100 and JEDEC Guidelines)

Approve Date 16-Dec-2013

**Qualification Results**Data Displayed as: Number of lots / Total sample size / Total failed

	Data Displayed as: Number of lots / Total sample size / Total failed							
	Туре	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: TMS320DM6437ZWTQ6
			Test Group A – A	cceler	ated Envi	ronment Stress Tests		
	PC	A1	JEDEC J-STD- 020 JESD22- A113	3	77	Preconditioning	Level 3-260C	No Fails
	HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 110C/85%RH	264 Hours	3/231/0
ι	JHA ST	А3	JEDEC JESD22-A102	3	77	Unbiased HAST 110C/85%RH	96 Hours	3/231/0
	тс	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, - 55/125C	1000 Cycles	3/231/0
	TC- WBP	A4	MIL-STD883 Method 2011	1	60	Post Temp Cycle Bond Pull	Wires	-
	PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle	1000 Cycles	N/A
	HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 150C	1000 Hours	3/231/0
				Accele	rated Life	time Simulation Tests		
	HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 Hours	-
	ELFR	B2	AEC Q100-008	3	800	Auto Early Life Failure Rate Grade 1	150C(24 Hrs)	-
	EDR	ВЗ	AEC Q100-005	3	77	NV M Endurance, Data Retention, and Operational Life	-	N/A
			Test Group C -	- Packa	age Asse	mbly Integrity Tests		
	WBS	C1	AEC Q100-001	1	30	Wire Bond Shear, Cpk>1.67	Wires	3/90/0
	WBP	C2	MIL-STD883 Method 2011	1	30	Bond Pull, Cpk>1.67	Wires	3/90/0
	SD	СЗ	JEDEC JESD22-B102	1	15	Surface Mount Solderability	Pb Free Solder	-
	SD	СЗ	JEDEC JESD22-B102	1	15	Surface Mount Solderability	Pb Solder	-
	PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions	Cpk>1.67	3/30/0
	SBS	C5	AEC Q100-010	3	50	Solder Ball Shear (Cpk>1.67)	Solder Balls	3/96/0
			Test Group D	– Die l	Fabricatio	n Reliability Tests		
	EM	D1	JESD61	-	-	Electromigration	-	Completed Per Process Technology Requirements
	TDDB	D2	JESD35	-	-	Time Dependant Dielectric Breakdown	-	Completed Per Process Technology Requirements
	HCI	D3	JESD60 & 28	-	-	Hot Injection Carrier	-	Completed Per Process Technology Requirements
	NBTI	D4	-	-	-	Negative Bias Temperature Instability	-	Completed Per Process Technology Requirements
	SM	D5	-	-	-	Stress Migration	-	Completed Per Process Technology Requirements
			Test Group	E – El	ectrical V	erification Tests		
	HBM	E2	AEC Q100-002	1	3	Auto ESD HBM	2000V	-

Туре	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: TMS320DM6437ZWTQ6
CDM	E3	AEC Q100-011	1	3	Auto ESD CDM	250V	3/9/0
LU	E4	AEC Q100-004	1	6	Auto Latch-up	25C, 125C	-
ED	E5	AEC Q100-009	3	30	Auto Electrical Distributions	Cpk>1.67 Room, hot, and cold test	-

<sup>-</sup> QBS: Qual By Similarity

#### A1 (PC): Preconditioning:

Performed for THB, Biased HAST, AC, uHAST, TC & PTC samples, as applicable.

## Ambient Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40°C to +150°C Grade 1 (or Q): -40°C to +125°C Grade 2 (or T): -40°C to +105°C Grade 3 (or I): -40°C to +85°C

## E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):

Room/Hot/Cold: HTOL, ED

Room/Hot: THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU

Room: AC/uHAST
Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

For questions regarding this notice, e-mails can be sent to the regional contacts shown below or your local Field Sales Representative.

Location	E-Mail
WW PCN Team	PCN www admin_team@list.ti.com

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<sup>-</sup> Qual Device TMS320DM6437ZWTQ6 is qualified at LEV EL3-260CG