05/03/2006

RELIABILITY REPORT
FOR

DS1609, Rev A1

Dallas Semiconductor

4401 South Beltwood Parkway
Dallas, TX 75244-3292

Prepared by:

Ken Wendel

Ken Wendel
Reliability Engineering Manager
Dallas Semiconductor
4401 South Beltwood Pkwy.
Dallas, TX 75244-3292
Email : ken.wendel@dalsemi.com
ph: 972-371-3726
fax: 972-371-6016
mbl: 214-435-6610

Conclusion:

The following qualification successfully meets the quality and reliability standards required of all Dallas Semiconductor products and processes:

DS1609, Rev A1

Device Description:

A description of the device used in this qualification can be found in the product data sheet. You can find the product data sheet at http://dbserv.maxim-ic.com/l_datasheet3.cfm.

Reliability Derating:

The Arrhenius model will be used to determine the acceleration factor for failure mechanisms that are temperature accelerated.

AfT = exp((Ea/k)*(1/Tu - 1/Ts)) = tu/ts
AfT = Acceleration factor due to Temperature
tu = Time at use temperature (e.g. 55°C)
ts = Time at stress temperature (e.g. 125°C)
k = Boltzmann's Constant (8.617 x 10-5 eV/°K)
Tu = Temperature at Use (°K)
Ts = Temperature at Stress (°K)
Ea = Activation Energy (e.g. 0.7 ev)

The activation energy of the failure mechanism is derived from either internal studies or industry accepted standards, or activation energy of 0.7ev will be used whenever actual failure mechanisms or their activation energies are unknown. All deratings will be done from the stress ambient temperature to the use ambient temperature.

An exponential model will be used to determine the acceleration factor for failure mechanisms, which are voltage accelerated.

AfV = exp(B*(Vs - Vu))
AfV = Acceleration factor due to Voltage
Vs = Stress Voltage (e.g. 7.0 volts)
Vu = Maximum Operating Voltage (e.g. 5.5 volts)
B = Constant related to failure mechanism type (e.g. 1.0, 2.4, 2.7, etc.)

The Constant, B, related to the failure mechanism is derived from either internal studies or industry accepted standards, or a B of 1.0 will be used whenever actual failure mechanisms or their B are unknown. All deratings will be done from the stress voltage to the maximum operating voltage. Failure rate data from the operating life test is reported using a Chi-Squared statistical model at the 60% or 90% confidence level (Cf).

The failure rate, Fr, is related to the acceleration during life test by:

Fr = X/(ts * AfV * AfT * N * 2)
X = Chi-Sq statistical upper limit
N = Life test sample size

Failure Rates are reported in FITs (Failures in Time) or MTTF (Mean Time To Failure). The FIT rate is related to MTTF by:

MTTF = 1/Fr

NOTE: MTTF is frequently used interchangeably with MTBF.

The calculated failure rate for this device/process/assembly is:

FAILURE RATE:	**MTTF (YRS):**	**119476**	**FITS:**	**1.0**
	DEVICE HOURS:	**1016784**	**FAILS:**	**0**

Only data from Operating Life or similar stresses are used for this calculation.

The parameters used to calculate this failure rate are as follows:

Cf: 60% **Ea: 0.7** **B: 0** **Tu: 25** **°C** **Vu: 5.5** **Volts**

The reliability data follows. At the start of this data is the device information. This is a description of the device for this report. Following this is the assembly information. This section includes a description of the assembly vehicle used to generate this reliability data for both qualifications and monitors. The next section is the detailed reliability data for each stress found in the qualification / monitor. If there are additional assemblies used as part of this report, a description of each will follow which includes the respective reliability data for that assembly. The reliability data section includes the latest data available.

Device Information:

Device:	DS1205
Process:	1P, 1M, 1.2um, PdepletionDiode , TEOS Spacer,
Passivation:	Laser/Nov 4% Ox-Pass/Nov 4% Ox-GenLasP
Die Size:	120 x 158
Number of Transistors:	0
Interconnect:	Aluminum / 1% Silicon / 0.5% Copper
Gate Oxide Thickness:	225 Å

Assembly Information:

Qualification Vehicle:	DS1205
Assembly Site:	Carsem
Pin Count:	16
Package Type:	SOIC
Body Size:	300x2.3
Mold Compound:	Sumitomo 6300H
Lead Frame:	Stamped Copper CDA194
Lead Finsh:	SnPb Plate
Die Attach:	84-1 LMISR4 Epoxy Silverfilled Ablebond
Bond Wire / Size:	Au / 1.0 mil
Theta JA:	105
Theta JC:	22
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0614 to 0614

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
HIGH TEMP OP LIFE	0614	125C, 5.5 VOLTS	192 HRS	77	0	

					Total:		0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
TEMP CYCLE	0614	-55C TO 125C	500	CYS	77	0	
				Total:		0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
AUTOCLAVE	0614	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0	
				Total:		0	

Device Information:

Device:	DS1233
Process:	1P, 1M, 1.2um, ZTC P1, Ndepletion ,LateII ZTC,TEOSsp,
Passivation:	Passivation w/Nitride
Die Size:	65 x 72
Number of Transistors:	395
Interconnect:	Aluminum / 1% Silicon / 0.5% Copper
Gate Oxide Thickness:	225 Å

Assembly Information:

Qualification Vehicle:	DS1233
Assembly Site:	Carsem
Pin Count:	3
Package Type:	SOT223
Body Size:	140x1.75
Mold Compound:	Shinetsu KMC 175
Lead Frame:	Stamped Copper OMCL-1
Lead Finsh:	SnPb Plate
Die Attach:	84-1 LMISR4 Epoxy Silverfilled Ablebond
Bond Wire / Size:	Au / 1.0 mil
Theta JA:	
Theta JC:	
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0308 to 0308

MOISTURE SENSITIVITY LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
ULTRASOUND	0308	J-STD-020			8	0	
STORAGE LIFE		125C	24	HRS	8		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	8		
CONVECTION REFLOW		235C +5/-0C	3	PASS	8	0	
EXTERNAL VISUAL		J-STD-020, 6.1a			8	0	
PRECONDITION U/S		J-STD-020			8	0	
ULTRASOUND	0308	J-STD-020			8	0	
STORAGE LIFE		125C	24	HRS	8		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	8		
CONVECTION REFLOW		235C +5/-0C	3	PASS	8	0	
EXTERNAL VISUAL		J-STD-020, 6.1a			8	0	
PRECONDITION U/S		J-STD-020			8	0	

ULTRASOUND	0308	J-STD-020		8	0	
STORAGE LIFE		125C	24 HRS	8		
MOISTURE SOAK		85 C/85% R.H.	168 HRS	8		
CONVECTION REFLOW		235C +5/-0C	3 PASS	8	0	
EXTERNAL VISUAL		J-STD-020, 6.1a		8	0	
PRECONDITION U/S		J-STD-020		8	0	
			Total:		**0**	

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
HIGH VOLTAGE LIFE	0308	125C, 7.0 VOLTS	1000 HRS	68	0	
HIGH VOLTAGE LIFE	0308	125C, 7.0 VOLTS	1000 HRS	68	0	
HIGH TEMP OP LIFE	0308	125C, 5.0 VOLTS	1000 HRS	77	0	
			Total:		**0**	

PACKAGE TESTS

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
SOLDERABILITY (Sn/Pb)	0308	JESD22-B102, COND C		3	0	
X-RAY	0308	MIL-STD-883-2012 : TOP & SIDE VIEW		6	0	
PHYSICAL DIMENSIONS		JESD22-B100		6	0	
MARK PERMANENCY		JESD22-B107		6	0	
LEAD INTEGRITY		JESD22-B105, COND B		6	0	
SOLDERABILITY (Sn/Pb)	0308	JESD22-B102, COND C		3	0	
X-RAY	0308	MIL-STD-883-2012 : TOP & SIDE VIEW		6	0	
PHYSICAL DIMENSIONS		JESD22-B100		6	0	
MARK PERMANENCY		JESD22-B107		6	0	
LEAD INTEGRITY		JESD22-B105, COND B		6	0	
SOLDERABILITY (Sn/Pb)	0308	JESD22-B102, COND C		3	0	
X-RAY	0308	MIL-STD-883-2012 : TOP & SIDE VIEW		6	0	
PHYSICAL DIMENSIONS		JESD22-B100		6	0	
MARK PERMANENCY		JESD22-B107		6	0	
LEAD INTEGRITY		JESD22-B105, COND B		6	0	
			Total:		**0**	

PRECONDITIONING LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
STORAGE LIFE	0308	125C	24 HRS	308		
MOISTURE SOAK		85 C/85% R.H.	168 HRS	308		
CONVECTION REFLOW		235C +5/-0C	3 PASS	308	0	
STORAGE LIFE	0308	125C	24 HRS	308		
MOISTURE SOAK		85 C/85% R.H.	168 HRS	308		
CONVECTION REFLOW		235C +5/-0C	3 PASS	308	0	
STORAGE LIFE	0308	125C	24 HRS	308		
MOISTURE SOAK		85 C/85% R.H.	168 HRS	308		
CONVECTION REFLOW		235C +5/-0C	3 PASS	308	0	
			Total:		**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
TEMP CYCLE	0308	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE	0308	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE	0308	-55C TO 125C	1000 CYS	77	0	
			Total:		**0**	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
HAST	0308	130C, 85%R.H.,5.5V	96 HRS	77	0	
HAST	0308	130C, 85%R.H.,5.5V	96 HRS	77	0	
HAST	0308	130C, 85%R.H.,5.5V	96 HRS	77	0	
			Total:		**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
AUTOCLAVE	0308	121C, 2 ATM STEAM, UNBIASED	168 HRS	77	0	
AUTOCLAVE	0308	121C, 2 ATM STEAM, UNBIASED	168 HRS	77	0	
AUTOCLAVE	0308	121C, 2 ATM STEAM, UNBIASED	168 HRS	77	0	
			Total:		**0**	

Assembly Information:

Qualification Vehicle:	DS1233
Assembly Site:	Hana
Pin Count:	3
Package Type:	SOT223
Body Size:	140x1.75
Mold Compound:	Nitto MP8000C
Lead Frame:	Stamped Copper CDA194
Lead Finsh:	SnPb Plate
Die Attach:	84-1 LMISR4 Epoxy Silverfilled Ablebond
Bond Wire / Size:	Au / 1.0 mil
Theta JA:	
Theta JC:	
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0150 to 0421

CONSTRUCTION ANALYSIS

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
CONSTRUCTION ANALYSIS	0150	TO BE DONE BY F/A				
CONSTRUCTION ANALYSIS	0150	TO BE DONE BY F/A		5		
			Total:			

MOISTURE SENSITIVITY LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#

ULTRASOUND	0150	J-STD-020			8	0	
STORAGE LIFE		125C	24	HRS	8		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	8		
CONVECTION REFLOW		235C +5/-0C	3	PASS	8	0	
EXTERNAL VISUAL		J-STD-020, 6.1a			8	0	
PRECONDITION U/S		J-STD-020			8	0	
ULTRASOUND	0150	J-STD-020			8	0	
STORAGE LIFE		125C	24	HRS	8		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	8		
CONVECTION REFLOW		235C +5/-0C	3	PASS	8	0	
EXTERNAL VISUAL		J-STD-020, 6.1a			8	0	
PRECONDITION U/S		J-STD-020			8	0	
ULTRASOUND	0150	J-STD-020			8	0	
STORAGE LIFE		125C	24	HRS	8		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	8		
CONVECTION REFLOW		235C +5/-0C	3	PASS	8	0	
EXTERNAL VISUAL		J-STD-020, 6.1a			8	0	
PRECONDITION U/S		J-STD-020			8	0	
			Total:			**0**	

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
HIGH VOLTAGE LIFE	0150	125C, 7.0 VOLTS	1000	HRS	68	0	
HIGH VOLTAGE LIFE	0150	125C, 7.0 VOLTS	1000	HRS	68	0	
HIGH VOLTAGE LIFE	0150	125C, 7.0 VOLTS	1000	HRS	68	0	
HIGH TEMP OP LIFE	0311	125C, 5.5 VOLTS	1000	HRS	80	0	
HIGH TEMP OP LIFE	0326	125C, 5.5 VOLTS	1000	HRS	80	0	
HIGH TEMP OP LIFE	0402	125C, 5.5 VOLTS	1000	HRS	80	0	
HIGH TEMP OP LIFE	0410	125C, 5.5 VOLTS	1000	HRS	80	0	
HIGH TEMP OP LIFE	0421	125C, 5.5 VOLTS	1000	HRS	61	0	
			Total:			**0**	

PACKAGE TESTS

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
SOLDERABILITY (Sn/Pb)	0150	JESD22-B102, COND C			3	0	
X-RAY	0150	MIL-STD-883-2012 : TOP & SIDE VIEW			6	0	
PHYSICAL DIMENSIONS		JESD22-B100			6	0	
MARK PERMANENCY		JESD22-B107			6	0	
LEAD INTEGRITY		JESD22-B105, COND B			6	0	
SOLDERABILITY (Sn/Pb)	0150	JESD22-B102, COND C			3	0	
X-RAY	0150	MIL-STD-883-2012 : TOP & SIDE VIEW			6	0	
PHYSICAL DIMENSIONS		JESD22-B100			6	0	
MARK PERMANENCY		JESD22-B107			6	0	
LEAD INTEGRITY		JESD22-B105, COND B			6	0	
SOLDERABILITY (Sn/Pb)	0150	JESD22-B102, COND C			3	0	

X-RAY	0150	MIL-STD-883-2012 : TOP & SIDE VIEW			6	0
PHYSICAL DIMENSIONS		JESD22-B100			6	0
MARK PERMANENCY		JESD22-B107			6	0
LEAD INTEGRITY		JESD22-B105, COND B			6	0
			Total:			**0**

PRECONDITIONING LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
STORAGE LIFE	0150	125C	24	HRS	308		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	308		
CONVECTION REFLOW		235C +5/-0C	3	PASS	308	0	
STORAGE LIFE	0150	125C	24	HRS	308		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	308		
CONVECTION REFLOW		235C +5/-0C	3	PASS	308	0	
STORAGE LIFE	0150	125C	24	HRS	308		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	308		
CONVECTION REFLOW		235C +5/-0C	3	PASS	308	0	
ULTRASOUND	0311	J-STD-020			4	0	
STORAGE LIFE	0311	125C	24	HRS	241		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	241		
CONVECTION REFLOW		235C +5/-0C	3	PASS	241	0	
PRECONDITION U/S	0311	J-STD-020			4	0	
ULTRASOUND	0326	J-STD-020			4	0	
STORAGE LIFE	0326	125C	24	HRS	241		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	241		
CONVECTION REFLOW		235C +5/-0C	3	PASS	241	0	
PRECONDITION U/S	0326	J-STD-020			4	0	
ULTRASOUND	0402	J-STD-020			4	0	
STORAGE LIFE	0402	125C	24	HRS	241		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	241		
CONVECTION REFLOW		235C +5/-0C	3	PASS	241	0	
PRECONDITION U/S	0402	J-STD-020			4	0	
ULTRASOUND	0410	J-STD-020			4	0	
STORAGE LIFE	0410	125C	24	HRS	241		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	241		
CONVECTION REFLOW		235C +5/-0C	3	PASS	241	0	
PRECONDITION U/S	0410	J-STD-020			4	0	
ULTRASOUND	0421	J-STD-020			4	0	
STORAGE LIFE	0421	125C	24	HRS	196		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	196		
CONVECTION REFLOW		235C +5/-0C	3	PASS	196	0	
PRECONDITION U/S	0421	J-STD-020			4	0	
			Total:			**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
TEMP CYCLE	0150	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE	0150	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE	0150	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE	0311	-55C TO 125C	1000 CYS	40	0	
TEMP CYCLE	0326	-55C TO 125C	1000 CYS	40	0	
TEMP CYCLE	0402	-55C TO 125C	1000 CYS	40	0	
TEMP CYCLE	0410	-55C TO 125C	1000 CYS	40	0	
TEMP CYCLE	0421	-55C TO 125C	1000 CYS	35	0	
			Total:		**0**	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
HAST	0150	130C, 85%R.H.,5.5V	100 HRS	77	0	
HAST	0150	130C, 85%R.H.,5.5V	100 HRS	77	0	
HAST	0150	130C, 85%R.H.,5.5V	100 HRS	76	0	
HAST	0311	130C, 85%R.H.,5.5V	96 HRS	77	0	
HAST	0326	130C, 85%R.H.,5.5V	96 HRS	77	0	
HAST	0402	130C, 85%R.H.,5.5V	96 HRS	77	0	
HAST	0410	130C, 85%R.H.,5.5V	96 HRS	77	0	
HAST	0421	130C, 85%R.H.,5.5V	96 HRS	61	0	
			Total:		**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
AUTOCLAVE	0150	121C, 2 ATM STEAM, UNBIASED	96 HRS	77	0	
AUTOCLAVE	0150	121C, 2 ATM STEAM, UNBIASED	96 HRS	77	0	
AUTOCLAVE	0150	121C, 2 ATM STEAM, UNBIASED	96 HRS	77	0	
AUTOCLAVE	0311	121C, 2 ATM STEAM, UNBIASED	168 HRS	40	0	
AUTOCLAVE	0326	121C, 2 ATM STEAM, UNBIASED	168 HRS	40	0	
AUTOCLAVE	0402	121C, 2 ATM STEAM, UNBIASED	168 HRS	40	0	
AUTOCLAVE	0410	121C, 2 ATM STEAM, UNBIASED	168 HRS	40	0	
AUTOCLAVE	0421	121C, 2 ATM STEAM, UNBIASED	168 HRS	35	0	
			Total:		**0**	

Assembly Information:

Qualification Vehicle:	DS1233
Assembly Site:	Hana
Pin Count:	3
Package Type:	SOT223
Body Size:	140x1.75
Mold Compound:	Shinetsu KMC 175
Lead Frame:	Stamped Copper OMCL-1
Lead Finsh:	SnPb Plate
Die Attach:	84-1 LMISR4 Epoxy Silverfilled Ablebond
Bond Wire / Size:	Au / 1.0 mil
Theta JA:	
Theta JC:	
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0245 to 0245

CONSTRUCTION ANALYSIS

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
CONSTRUCTION ANALYSIS	0245	PERFORMED BY ASSEMBLY SITE			0	0	
			Total:			0	

MOISTURE SENSITIVITY LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
ULTRASOUND	0245	J-STD-020			8	0	
STORAGE LIFE		125C	24	HRS	8		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	8		
CONVECTION REFLOW		235C +5/-0C	3	PASS	8	0	
EXTERNAL VISUAL		J-STD-020, 6.1a			8	0	
PRECONDITION U/S		J-STD-020			8	0	
ULTRASOUND	0245	J-STD-020			8	0	
STORAGE LIFE		125C	24	HRS	8		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	8		
CONVECTION REFLOW		235C +5/-0C	3	PASS	8	0	
EXTERNAL VISUAL		J-STD-020, 6.1a			8	0	
PRECONDITION U/S		J-STD-020			8	0	
ULTRASOUND	0245	J-STD-020			8	0	
STORAGE LIFE		125C	24	HRS	8		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	8		
CONVECTION REFLOW		235C +5/-0C	3	PASS	8	0	
EXTERNAL VISUAL		J-STD-020, 6.1a			8	0	
PRECONDITION U/S		J-STD-020			8	0	
			Total:			0	

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
HIGH VOLTAGE LIFE	0245	125C, 7.0 VOLTS	1000	HRS	68	0	
HIGH VOLTAGE LIFE	0245	125C, 7.0 VOLTS	1000	HRS	68	0	

HIGH VOLTAGE LIFE	0245	125C, 7.0 VOLTS	1000 HRS	68	0	
			Total:		**0**	

PACKAGE TESTS

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
SOLDERABILITY (Sn/Pb)	0245	JESD22-B102, COND C		3	0	
X-RAY	0245	MIL-STD-883-2012 : TOP & SIDE VIEW		6	0	
PHYSICAL DIMENSIONS		JESD22-B100		6	0	
MARK PERMANENCY		JESD22-B107		6	0	
LEAD INTEGRITY		JESD22-B105, COND B		6	0	
SOLDERABILITY (Sn/Pb)	0245	JESD22-B102, COND C		3	0	
X-RAY	0245	MIL-STD-883-2012 : TOP & SIDE VIEW		6	0	
PHYSICAL DIMENSIONS		JESD22-B100		6	0	
MARK PERMANENCY		JESD22-B107		6	0	
LEAD INTEGRITY		JESD22-B105, COND B		6	0	
SOLDERABILITY (Sn/Pb)	0245	JESD22-B102, COND C		3	0	
X-RAY	0245	MIL-STD-883-2012 : TOP & SIDE VIEW		6	0	
PHYSICAL DIMENSIONS		JESD22-B100		6	0	
MARK PERMANENCY		JESD22-B107		6	0	
LEAD INTEGRITY		JESD22-B105, COND B		6	0	
			Total:		**0**	

PRECONDITIONING LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
STORAGE LIFE	0245	125C	24 HRS	308		
MOISTURE SOAK		85 C/85% R.H.	168 HRS	308		
CONVECTION REFLOW		235C +5/-0C	3 PASS	308	0	
STORAGE LIFE	0245	125C	24 HRS	308		
MOISTURE SOAK		85 C/85% R.H.	168 HRS	308		
CONVECTION REFLOW		235C +5/-0C	3 PASS	308	0	
STORAGE LIFE	0245	125C	24 HRS	308		
MOISTURE SOAK		85 C/85% R.H.	168 HRS	308		
CONVECTION REFLOW		235C +5/-0C	3 PASS	308	0	
			Total:		**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
TEMP CYCLE	0245	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE	0245	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE	0245	-55C TO 125C	1000 CYS	77	0	
			Total:		**0**	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
HAST	0245	130C, 85%R.H.,5.5V	96 HRS	77	0	
HAST	0245	130C, 85%R.H.,5.5V	96 HRS	77	0	

HAST	0245	130C, 85%R.H.,5.5V	96	HRS	75	0	
				Total:		**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
AUTOCLAVE	0245	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0	
AUTOCLAVE	0245	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0	
AUTOCLAVE	0245	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0	
				Total:		**0**	

FAILURE RATE: **MTTF (YRS):** **119476** **FITS:** **1.0**

DEVICE HOURS: **1016784** **FAILS:** **0**