8/29/2006

RELIABILITY REPORT
FOR

DS1077, Rev C2

Dallas Semiconductor

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Conclusion:

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

DS1077, Rev C2

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):**	**124998**	**FITS:**	**0.9**
	DEVICE HOURS:	**1063776**	**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:	DS1073
Process:	D8W-1P1M,HPVt,E2,TCN0 LOCOS:GOI
Passivation:	Passivation w/Nov TEOS Oxide-Nitride
Die Size:	75 x 106
Number of Transistors:	6035
Interconnect:	Aluminum / 1% Silicon / 0.5% Copper
Gate Oxide Thickness:	175 Å

Assembly Information:

Qualification Vehicle:	DS1073
Assembly Site:	ATP (Amkor, PI)
Pin Count:	8
Package Type:	SOIC (Pb-Free)
Body Size:	150x1.4
Mold Compound:	Sumitomo 6600H w/Q3-6646 Die Coat
Lead Frame:	Stamped Copper CDA194
Lead Finsh:	Sn Plate 100% Matte (With Anneal Bake)
Die Attach:	84-1 LMISR4 Epoxy Silverfilled Ablebond
Bond Wire / Size:	Au / 1.0 mil
Theta JA:	170
Theta JC:	40
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 4
Date Code Range:	0412 to 0413

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
HIGH TEMP OP LIFE	0412	125C, 3.5 VOLTS	1000 HRS	77	0	

HIGH TEMP OP LIFE	0413	125C, 3.5 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0413	125C, 3.5 VOLTS	1000 HRS	77	0	
			Total:		**0**	

PACKAGE TESTS

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
SOLDERABILITY (Sn/Pb)	0412	JESD22-B102, COND C		3	0	
X-RAY	0412	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)	0413	JESD22-B102, COND C		3	0	
X-RAY	0413	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)	0413	JESD22-B102, COND C		3	3	No FA
X-RAY	0413	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:		**3**	

PRECONDITIONING LEVEL 4

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
STORAGE LIFE	0412	125C	24 HRS	385		
MOISTURE SOAK		30C/60% R.H.	96 HRS	385		
CONVECTION REFLOW		260C +0/-5C	3 PASS	385	0	
STORAGE LIFE	0413	125C	24 HRS	385		
MOISTURE SOAK		30C/60% R.H.	96 HRS	385		
CONVECTION REFLOW		260C +0/-5C	3 PASS	385	0	
STORAGE LIFE	0413	125C	24 HRS	385		
MOISTURE SOAK		30C/60% R.H.	96 HRS	385		
CONVECTION REFLOW		260C +0/-5C	3 PASS	385	0	
			Total:		**0**	

STORAGE LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
STORAGE LIFE	0412	150C	1000 HRS	77	0	
STORAGE LIFE	0413	150C	1000 HRS	77	0	
STORAGE LIFE	0413	150C	1000 HRS	77	0	
			Total:		**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
TEMP CYCLE	0412	-55C TO 125C	1000 CYS	77	0	

TEMP CYCLE	0413	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE	0413	-55C TO 125C	1000 CYS	77	0	
			Total:		**0**	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
HAST	0412	130C, 85%R.H.,3.5V	156 HRS	45	0	
HAST	0413	130C, 85%R.H.,3.5V	156 HRS	45	0	
HAST	0413	130C, 85%R.H.,3.5V	156 HRS	45	0	
			Total:		**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
AUTOCLAVE	0412	121C, 2 ATM STEAM, UNBIASED	168 HRS	77	0	
AUTOCLAVE	0413	121C, 2 ATM STEAM, UNBIASED	168 HRS	77	0	
AUTOCLAVE	0413	121C, 2 ATM STEAM, UNBIASED	168 HRS	77	0	
			Total:		**0**	

Device Information:

Device:	DS1077
Process:	D6W-2P2M,HPVt,E2,TCN3|TCN1 ALOCOS:GOI
Passivation:	Passivation w/Nov TEOS Oxide-Nitride
Die Size:	56 x 82
Number of Transistors:	0
Interconnect:	Aluminum / 1% Silicon / 0.5% Copper
Gate Oxide Thickness:	150 Å

Assembly Information:

Qualification Vehicle:	DS1077
Assembly Site:	ATP (Amkor, PI)
Pin Count:	8
Package Type:	SOIC
Body Size:	150x1.4
Mold Compound:	Nitto MP8000 w/BCB4026 Die Coat
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:	170
Theta JC:	40
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 4
Date Code Range:	0209 to 0209

ELECTRICAL CHARACTERIZATION

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
ESD SENSITIVITY	0209	EOS/ESD S5.1 HBM 500 VOLTS	1 PUL'S	3	0	
ESD SENSITIVITY	0209	EOS/ESD S5.1 HBM 1000 VOLTS	1 PUL'S	3	0	
ESD SENSITIVITY	0209	EOS/ESD S5.1 HBM 2000 VOLTS	1 PUL'S	3	0	

ESD SENSITIVITY	0209	EOS/ESD S5.1 HBM 4000 VOLTS	1 PUL'S	3	0	
ESD SENSITIVITY	0209	EOS/ESD S5.1 HBM 8000 VOLTS	1 PUL'S	3	3	No FA
LATCH-UP	0209	JESD78, I-TEST 125C		3	0	
LATCH-UP	0209	JESD78, V-SUPPLY TEST 125C		3	0	
			Total:		**3**	

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
HIGH VOLTAGE LIFE	0209	125C, 6.0 VOLTS	1000 HRS	77	0	
			Total:		**0**	

PRECONDITIONING LEVEL 3

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
STORAGE LIFE	0209	125C	24 HRS	390		
MOISTURE SOAK		30C/60% R.H.	192 HRS	390		
CONVECTION REFLOW		235C +5/-0C	3 PASS	390	0	
			Total:		**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
TEMP CYCLE	0209	-55C TO 125C	1000 CYS	77	0	
			Total:		**0**	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
HAST	0209	130C, 85%R.H.,5.5V	96 HRS	75	0	
			Total:		**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
AUTOCLAVE	0209	121C, 2 ATM STEAM, UNBIASED	168 HRS	77	0	
			Total:		**0**	

Assembly Information:

Qualification Vehicle:	DS1077
Assembly Site:	ATP (Amkor, PI)
Pin Count:	8
Package Type:	uSOP
Body Size:	3x0.85
Mold Compound:	Nitto MP8000 w/BCB4026 Die Coat
Lead Frame:	Stamped Copper C7025
Lead Finsh:	SnPb Plate
Die Attach:	84-1 LMISR4 Epoxy Silverfilled Ablebond
Bond Wire / Size:	Au / 1.0 mil
Theta JA:	221
Theta JC:	39
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0314 to 0314

PRECONDITIONING LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
STORAGE LIFE	0314	125C	24 HRS	235		
MOISTURE SOAK		85 C/85% R.H.	168 HRS	235		
CONVECTION REFLOW		235C +5/-0C	3 PASS	235	0	
			Total:		**0**	

STORAGE LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
STORAGE LIFE	0314	150C	1000 HRS	77	0	
			Total:		**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
TEMP CYCLE	0314	-55C TO 125C	1000 CYS	77	0	
			Total:		**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
AUTOCLAVE	0314	121C, 2 ATM STEAM, UNBIASED	168 HRS	69	0	
			Total:		**0**	

Device Information:

Device:	DS1077L
Process:	D6W-2P2M,HPVt,E2,TCN3|TCN1 ALOCOS:GOI
Passivation:	Passivation w/Nov TEOS Oxide-Nitride
Die Size:	56 x 82
Number of Transistors:	0
Interconnect:	Aluminum / 1% Silicon / 0.5% Copper
Gate Oxide Thickness:	150 Å

Assembly Information:

Qualification Vehicle:	DS1077L
Assembly Site:	ATP (Amkor, PI)
Pin Count:	8
Package Type:	SOIC
Body Size:	150x1.4
Mold Compound:	Nitto MP8000 w/BCB4026 Die Coat
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:	170
Theta JC:	40
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 4
Date Code Range:	0216 to 0216

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
HIGH VOLTAGE LIFE	0216	125C, 6.0 VOLTS	1000 HRS	77	0	

				Total:		**0**	

PRECONDITIONING LEVEL 3

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
STORAGE LIFE	0216	125C	24	HRS	390		
MOISTURE SOAK		30C/60% R.H.	192	HRS	390		
CONVECTION REFLOW		235C +5/-0C	3	PASS	390	0	
				Total:		**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
TEMP CYCLE	0216	-55C TO 125C	1000	CYS	77	0	
				Total:		**0**	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
HAST	0216	130C, 85%R.H.,5.5V	96	HRS	76	0	
				Total:		**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
AUTOCLAVE	0216	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0	
				Total:		**0**	

Assembly Information:

Qualification Vehicle:	DS1077L
Assembly Site:	ATP (Amkor, PI)
Pin Count:	8
Package Type:	SOIC
Body Size:	150x1.4
Mold Compound:	Nitto MP8000 w/Q3-6646 Die Coat
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:	170
Theta JC:	40
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 4
Date Code Range:	0141 to 0141

ELECTRICAL CHARACTERIZATION

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
ESD SENSITIVITY	0141	EOS/ESD S5.1 HBM 500 VOLTS	2	PUL'S	3	0	
ESD SENSITIVITY	0141	EOS/ESD S5.1 HBM 1000 VOLTS	2	PUL'S	3	0	
ESD SENSITIVITY	0141	EOS/ESD S5.1 HBM 2000 VOLTS	2	PUL'S	3	0	
ESD SENSITIVITY	0141	EOS/ESD S5.1 HBM 4000 VOLTS	2	PUL'S	3	2	No FA
ESD SENSITIVITY	0141	EOS/ESD S5.1 HBM 8000 VOLTS	2	PUL'S	3	3	No FA
LATCH-UP	0141	JESD78, I-TEST 125C			3	0	

LATCH-UP	0141	JESD78, V-SUPPLY TEST 125C			3	0	
				Total:		**5**	

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
HIGH VOLTAGE LIFE	0141	125C, 6.0 VOLTS	1000	HRS	77	0	
				Total:		**0**	

PRECONDITIONING LEVEL 3

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
STORAGE LIFE	0141	125C	24	HRS	586		
MOISTURE SOAK		30C/60% R.H.	192	HRS	586		
CONVECTION REFLOW		235C +5/-0C	3	PASS	586	0	
				Total:		**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
TEMP CYCLE	0141	-55C TO 125C	1000	CYS	77	0	
				Total:		**0**	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
HAST	0141	130C, 85%R.H.,5.5V	96	HRS	77	0	
				Total:		**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
AUTOCLAVE	0141	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0	
				Total:		**0**	

W/E ENDURANCE AND DATA RET'N

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
WRITE CYCLE STRESS (KCYS)	0141	70 C, 3.6 VOLTS	5	KCYS	77	0	
STORAGE LIFE		150C	1000	HRS	73	0	
				Total:		**0**	

Assembly Information:

Qualification Vehicle: DS1077L
Assembly Site: ATP (Amkor, PI)
Pin Count: 8
Package Type: SOIC (Pb-Free)
Body Size: 150x1.4
Mold Compound: Sumitomo G600 w/BCB4026 Die Coat
Lead Frame: Stamped Copper CDA194
Lead Finsh: Sn Plate 100% Matte (With Anneal Bake)
Die Attach: 8290 Ablestik
Bond Wire / Size: Au / 1.0 mil
Theta JA: 170
Theta JC: 40
Flammability: UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A) Level 1
Date Code Range: 0536 to 0536

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
HIGH TEMP OP LIFE	0536	125C, 3.6 VOLTS	1000 HRS	77	0	
			Total:		**0**	

PRECONDITIONING LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
STORAGE LIFE	0536	125C	24 HRS	385		
MOISTURE SOAK		85 C/85% R.H.	168 HRS	385		
CONVECTION REFLOW		260C +0/-5C	3 PASS	385	0	
			Total:		**0**	

STORAGE LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
STORAGE LIFE	0536	150C	1000 HRS	77	0	
			Total:		**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
TEMP CYCLE	0536	-55C TO 125C	1000 CYS	77	0	
			Total:		**0**	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
HAST	0536	130C, 85%R.H.,3.5V	96 HRS	77	0	
			Total:		**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
AUTOCLAVE	0536	121C, 2 ATM STEAM, UNBIASED	168 HRS	77	0	
			Total:		**0**	

Assembly Information:

Qualification Vehicle:	DS1077L
Assembly Site:	ATP (Amkor, PI)
Pin Count:	8
Package Type:	uSOP
Body Size:	3x0.85
Mold Compound:	Nitto MP8000 w/BCB4026 Die Coat
Lead Frame:	Stamped Copper C7025
Lead Finsh:	SnPb Plate
Die Attach:	84-1 LMISR4 Epoxy Silverfilled Ablebond
Bond Wire / Size:	Au / 1.0 mil
Theta JA:	221
Theta JC:	39
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0209 to 0209

PRECONDITIONING LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
STORAGE LIFE	0209	125C	24	HRS	229		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	229		
CONVECTION REFLOW		235C +5/-0C	3	PASS	229	0	
			Total:			**0**	

STORAGE LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
STORAGE LIFE	0209	150C	1000	HRS	77	0	
			Total:			**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
TEMP CYCLE	0209	-55C TO 125C	1000	CYS	77	0	
			Total:			**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
AUTOCLAVE	0209	121C, 2 ATM STEAM, UNBIASED	168	HRS	67	0	
			Total:			**0**	

Device Information:

Device:	DS1086
Process:	D6W-2P2M,HPVt,E2,EPROGVt,TCN3 PBL:GOI
Passivation:	Passivation w/Nov TEOS Oxide-Nitride
Die Size:	58 x 84
Number of Transistors:	11000
Interconnect:	Aluminum / 1% Silicon / 0.5% Copper
Gate Oxide Thickness:	150 Å

Assembly Information:

Qualification Vehicle:	DS1086
Assembly Site:	ATP (Amkor, PI)
Pin Count:	8
Package Type:	SOIC
Body Size:	150x1.4
Mold Compound:	Nitto MP8000 w/BCB4026 Die Coat level 1
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:	170
Theta JC:	40
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0228 to 0248

ELECTRICAL CHARACTERIZATION

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
ESD SENSITIVITY	0228	EOS/ESD S5.1 HBM 500 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0228	EOS/ESD S5.1 HBM 1000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0228	EOS/ESD S5.1 HBM 2000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0228	EOS/ESD S5.1 HBM 4000 VOLTS	1	PUL'S	3	2	No FA
ESD SENSITIVITY	0228	EOS/ESD S5.1 HBM 8000 VOLTS	1	PUL'S	3	3	No FA
LATCH-UP	0228	JESD78, I-TEST 125C			3	0	
LATCH-UP	0228	JESD78, V-SUPPLY TEST 125C			3	0	
				Total:		**5**	

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
HIGH VOLTAGE LIFE	0248	125C, 6.0 VOLTS	1000	HRS	77	0	
				Total:		**0**	

PRECONDITIONING LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
STORAGE LIFE	0248	125C	24	HRS	398		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	398		
CONVECTION REFLOW		235C +5/-0C	3	PASS	398	0	
				Total:		**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
TEMP CYCLE	0248	-55C TO 125C	1000	CYS	77	0	
				Total:		**0**	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#

HAST	0248	130C, 85%R.H.,5.5V	96 HRS	77	0	
			Total:		**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
AUTOCLAVE	0248	121C, 2 ATM STEAM, UNBIASED	168 HRS	77	0	
			Total:		**0**	

W/E ENDURANCE AND DATA RET'N

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
WRITE CYCLE STRESS (KCYS)	0248	70 C, 5.25 VOLTS	5 KCYS	77	0	
STORAGE LIFE		150C	1000 HRS	76	0	
			Total:		**0**	

Device Information:

Device:	DS1086H
Process:	D6W-2P2M,HPVt,E2,EPROGVt,TCN3 ALOCOS:GOI
Passivation:	Passivation w/Nov TEOS Oxide-Nitride
Die Size:	58 x 84
Number of Transistors:	8000
Interconnect:	Aluminum / 1% Silicon / 0.5% Copper
Gate Oxide Thickness:	150 Å

Assembly Information:

Qualification Vehicle:	DS1086H
Assembly Site:	ATP (Amkor, PI)
Pin Count:	8
Package Type:	SOIC
Body Size:	150x1.4
Mold Compound:	Nitto MP8000 w/BCB4026 Die Coat level 1
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:	170
Theta JC:	40
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0507 to 0507

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
HIGH TEMP OP LIFE	0507	125C, 5.25 VOLTS	408 HRS	77	0	
			Total:		**0**	

W/E ENDURANCE AND DATA RET'N

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
WRITE CYCLE STRESS (KCYS)	0507	70 C, 5.25 VOLTS	5 KCYS	77	0	
STORAGE LIFE		150C	500 HRS	77	0	
			Total:		**0**	

Assembly Information:

Qualification Vehicle: DS1086H
Assembly Site: ATP (Amkor, PI)
Pin Count: 8
Package Type: uSOP
Body Size: 3x0.85
Mold Compound: Nitto MP8000 w/BCB4026 Die Coat
Lead Frame: Stamped Copper C7025
Lead Finsh: SnPb Plate
Die Attach: 84-1 LMISR4 Epoxy Silverfilled Ablebond
Bond Wire / Size: Au / 1.0 mil
Theta JA: 221
Theta JC: 39
Flammability: UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A) Level 1
Date Code Range: 0504 to 0504

CONSTRUCTION ANALYSIS

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
PACKAGE, ASSEMBLY PROCESS	0504	TO BE DONE BY F/A		5	0	30034505
DIE, FAB PROCESS	0504	TO BE DONE BY F/A		5	0	30034504
			Total:		**0**	

ELECTRICAL CHARACTERIZATION

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
ESD SENSITIVITY	0504	EOS/ESD S5.1 HBM 500 VOLTS	1 PUL'S	3	0	
ESD SENSITIVITY	0504	EOS/ESD S5.1 HBM 1000 VOLTS	1 PUL'S	3	0	
ESD SENSITIVITY	0504	EOS/ESD S5.1 HBM 2000 VOLTS	1 PUL'S	3	0	
ESD SENSITIVITY	0504	EOS/ESD S5.1 HBM 4000 VOLTS	1 PUL'S	3	2	No FA
ESD SENSITIVITY	0504	EOS/ESD S5.1 HBM 8000 VOLTS	1 PUL'S	3	3	No FA
LATCH-UP	0504	JESD78, I-TEST 125C		6	0	
LATCH-UP	0504	JESD78, V-SUPPLY TEST 125C		6	0	
ESD SENSITIVITY	0504	JESD22-A115 MM 50 VOLTS	1 PUL'S	3	0	
ESD SENSITIVITY	0504	JESD22-A115 MM 100 VOLTS	1 PUL'S	3	0	
ESD SENSITIVITY	0504	JESD22-A115 MM 200 VOLTS	1 PUL'S	3	0	
ESD SENSITIVITY	0504	JESD22-A115 MM 400 VOLTS	1 PUL'S	3	3	No FA
ESD SENSITIVITY	0504	JESD22-C101 CDM 100 VOLTS	5 PUL'S	3	0	
ESD SENSITIVITY	0504	JESD22-C101 CDM 200 VOLTS	5 PUL'S	3	0	
ESD SENSITIVITY	0504	JESD22-C101 CDM 400 VOLTS	5 PUL'S	3	0	
ESD SENSITIVITY	0504	JESD22-C101 CDM 500 VOLTS	5 PUL'S	3	0	
ESD SENSITIVITY	0504	JESD22-C101 CDM 1000 VOLTS	5 PUL'S	3	0	
ESD SENSITIVITY	0504	JESD22-C101 CDM 2000 VOLTS	5 PUL'S	3	1	No FA

			Total:			**9**	

MOISTURE SENSITIVITY LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
ULTRASOUND	0504	J-STD-020			22	0	
STORAGE LIFE		125C	24	HRS	22		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	22		
CONVECTION REFLOW		235C +5/-0C	3	PASS	22	0	
EXTERNAL VISUAL		J-STD-020, 6.1a			22	0	
PRECONDITION U/S		J-STD-020			22	0	
			Total:			**0**	

PACKAGE TESTS

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
SOLDERABILITY (Sn/Pb)	0504	JESD22-B102, COND C			15	0	
SOLDERABILITY (Sn/Pb)	0504	J-STD-002, WETTING BALANCE			20	0	
EXTERNAL VISUAL	0504	JESD22-B101			30	0	
			Total:			**0**	

PRECONDITIONING LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
STORAGE LIFE	0504	125C	24	HRS	320		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	320		
CONVECTION REFLOW		235C +5/-0C	3	PASS	320	0	
			Total:			**0**	

STORAGE LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
STORAGE LIFE	0504	150C	500	HRS	77	0	
			Total:			**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
TEMP CYCLE	0504	-55C TO 125C	500	CYS	77	0	
			Total:			**0**	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
HAST	0504	130C, 85%R.H.,5.5V	100	HRS	77	0	
			Total:			**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
AUTOCLAVE	0504	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0	
			Total:			**0**	

Device Information:

Device:	DS1086L
Process:	D6W-2P2M,HPVt,E2,EPROGVt,TCN3 ALOCOS:GOI
Passivation:	Passivation w/Nov TEOS Oxide-Nitride
Die Size:	58 x 84
Number of Transistors:	8000
Interconnect:	Aluminum / 1% Silicon / 0.5% Copper
Gate Oxide Thickness:	150 Å

Assembly Information:

Qualification Vehicle:	DS1086L
Assembly Site:	ATP (Amkor, PI)
Pin Count:	8
Package Type:	SOIC
Body Size:	150x1.4
Mold Compound:	Nitto MP8000 w/BCB4026 Die Coat level 1
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:	170
Theta JC:	40
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0348 to 0348

ELECTRICAL CHARACTERIZATION

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
ESD SENSITIVITY	0348	EOS/ESD S5.1 HBM 500 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0348	EOS/ESD S5.1 HBM 1000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0348	EOS/ESD S5.1 HBM 2000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0348	EOS/ESD S5.1 HBM 4000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0348	EOS/ESD S5.1 HBM 8000 VOLTS	1	PUL'S	3	3	No FA
LATCH-UP	0348	JESD78, I-TEST 125C			6	0	
LATCH-UP	0348	JESD78, V-SUPPLY TEST 125C			6	0	
			Total:			**3**	

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
HIGH TEMP OP LIFE	0348	125C, 3.5 VOLTS	1000	HRS	77	0	
			Total:			**0**	

PRECONDITIONING LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
STORAGE LIFE	0348	125C	24	HRS	400		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	400		
CONVECTION REFLOW		235C +5/-0C	3	PASS	400	0	
			Total:			**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
TEMP CYCLE	0348	-55C TO 125C	1000	CYS	77	0	
				Total:		**0**	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
HAST	0348	130C, 85%R.H.,5.5V	96	HRS	77	0	
				Total:		**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
AUTOCLAVE	0348	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0	
				Total:		**0**	

W/E ENDURANCE AND DATA RET'N

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
WRITE CYCLE STRESS (KCYS)	0348	70 C, 3.6 VOLTS	10	KCYS	77	0	
STORAGE LIFE		150C	1000	HRS	77	0	
				Total:		**0**	

Assembly Information:

Qualification Vehicle:	DS1086L
Assembly Site:	ATP (Amkor, PI)
Pin Count:	8
Package Type:	uSOP (Pb-Free)
Body Size:	3x0.85
Mold Compound:	Sumitomo G700K w/BCB4026 Die Coat
Lead Frame:	Stamped Copper CDA194
Lead Finsh:	Sn Plate 100% Matte (With Anneal Bake)
Die Attach:	8290 Ablestik
Bond Wire / Size:	Au / 1.3 mil
Theta JA:	221
Theta JC:	39
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0502 to 0502

PRECONDITIONING LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
STORAGE LIFE	0502	125C	24	HRS	318		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	318		
CONVECTION REFLOW		260C +0/-5C	3	PASS	318	0	
				Total:		**0**	

STORAGE LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
STORAGE LIFE	0502	150C	1000	HRS	77	0	
				Total:		**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
TEMP CYCLE	0502	-55C TO 125C	1000	CYS	77	0	
			Total:			**0**	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
HAST	0502	130C, 85%R.H.,3.5V	96	HRS	77	0	
			Total:			**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
AUTOCLAVE	0502	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0	
			Total:			**0**	

Device Information:

Device:	DS1087L
Process:	D6W-2P2M,HPVt,E2,EPROGVt,TCN3 ALOCOS:GOI
Passivation:	Passivation w/Nov TEOS Oxide-Nitride
Die Size:	58 x 84
Number of Transistors:	8000
Interconnect:	Aluminum / 1% Silicon / 0.5% Copper
Gate Oxide Thickness:	150 Å

Assembly Information:

Qualification Vehicle:	DS1087L
Assembly Site:	ATP (Amkor, PI)
Pin Count:	8
Package Type:	SOIC
Body Size:	150x1.4
Mold Compound:	Nitto MP8000 w/BCB4026 Die Coat level 1
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:	170
Theta JC:	40
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0321 to 0333

ELECTRICAL CHARACTERIZATION

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
ESD SENSITIVITY	0321	EOS/ESD S5.1 HBM 500 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0321	EOS/ESD S5.1 HBM 1000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0321	EOS/ESD S5.1 HBM 2000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0321	EOS/ESD S5.1 HBM 4000 VOLTS	1	PUL'S	3	3	No FA
ESD SENSITIVITY	0321	EOS/ESD S5.1 HBM 8000 VOLTS	1	PUL'S	3	3	No FA
LATCH-UP	0321	JESD78, I-TEST 125C			6	0	

LATCH-UP	0321	JESD78, V-SUPPLY TEST 125C			6	0	
			Total:			**6**	

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
HIGH TEMP OP LIFE	0333	125C, 3.5 VOLTS	1000	HRS	77	0	
			Total:			**0**	

PRECONDITIONING LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
STORAGE LIFE	0333	125C	24	HRS	393		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	393		
CONVECTION REFLOW		235C +5/-0C	3	PASS	393	0	
			Total:			**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
TEMP CYCLE	0333	-55C TO 125C	1000	CYS	77	0	
			Total:			**0**	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
HAST	0333	130C, 85%R.H.,3.5V	96	HRS	77	0	
			Total:			**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
AUTOCLAVE	0333	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0	
			Total:			**0**	

W/E ENDURANCE AND DATA RET'N

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
WRITE CYCLE STRESS (KCYS)	0333	70 C, 3.6 VOLTS	5	KCYS	77	0	
STORAGE LIFE		150C	1000	HRS	76	0	
			Total:			**0**	

Device Information:

Device: DS1088L
Process: D35X-3P3M,DPE2,CrSi,DSD,PDESD,PDRES,Cap,ENPN,D
Passivation: TEOS Ox-Nit Passivation for E35K; Full BEOL at X3; PT onl
Die Size: 51 x 52
Number of Transistors: 4507
Interconnect: Aluminum / 1% Silicon / 0.5% Copper
Gate Oxide Thickness: 131 Å

Assembly Information:

Qualification Vehicle:	DS1088L
Assembly Site:	ATP (Amkor, PI)
Pin Count:	8
Package Type:	uSOP
Body Size:	3x0.85
Mold Compound:	Nitto MP8000 w/BCB4026 Die Coat
Lead Frame:	Stamped Copper C7025
Lead Finsh:	SnPb Plate
Die Attach:	84-1 LMISR4 Epoxy Silverfilled Ablebond
Bond Wire / Size:	Au / 1.0 mil
Theta JA:	221
Theta JC:	39
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0501 to 0501

ELECTRICAL CHARACTERIZATION

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
ESD SENSITIVITY	0501	EOS/ESD S5.1 HBM 500 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0501	EOS/ESD S5.1 HBM 1000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0501	EOS/ESD S5.1 HBM 2000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0501	EOS/ESD S5.1 HBM 4000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0501	EOS/ESD S5.1 HBM 8000 VOLTS	1	PUL'S	3	3	No FA
LATCH-UP	0501	JESD78, I-TEST 125C			6	0	
LATCH-UP	0501	JESD78, V-SUPPLY TEST 125C			6	0	
				Total:		**3**	

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
HIGH TEMP OP LIFE	0501	125C, 3.6 VOLTS	1000	HRS	77	0	
				Total:		**0**	

PRECONDITIONING LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
STORAGE LIFE	0501	125C	24	HRS	306		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	306		
CONVECTION REFLOW		235C +5/-0C	3	PASS	306	0	
				Total:		**0**	

STORAGE LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
STORAGE LIFE	0501	150C	1000	HRS	77	0	
				Total:		**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#

TEMP CYCLE	0501	-55C TO 125C	1000	CYS	77	0	
				Total:		**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
AUTOCLAVE	0501	121C, 2 ATM STEAM, UNBIASED	168	HRS	70	0	
				Total:		**0**	

Device Information:

Device:	DS1089L
Process:	E6WA-2P2M,HPVt,E2,EPROGVt,TCN3,PF ALOCOS:GOI
Passivation:	Passivation w/Nov TEOS Oxide-Nitride
Die Size:	58 x 84
Number of Transistors:	7359
Interconnect:	Aluminum / 1% Silicon / 0.5% Copper
Gate Oxide Thickness:	150 Å

Assembly Information:

Qualification Vehicle:	DS1089L
Assembly Site:	ATP (Amkor, PI)
Pin Count:	8
Package Type:	uSOP (Pb-Free)
Body Size:	3x0.85
Mold Compound:	Sumitomo G700K w/BCB4026 Die Coat
Lead Frame:	Stamped Copper CDA194
Lead Finsh:	Sn Plate 100% Matte (With Anneal Bake)
Die Attach:	8290 Ablestik
Bond Wire / Size:	Au / 1.3 mil
Theta JA:	221
Theta JC:	39
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0535 to 0535

ELECTRICAL CHARACTERIZATION

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
ESD SENSITIVITY	0535	EOS/ESD S5.1 HBM 500 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0535	EOS/ESD S5.1 HBM 1000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0535	EOS/ESD S5.1 HBM 2000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0535	EOS/ESD S5.1 HBM 4000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0535	EOS/ESD S5.1 HBM 8000 VOLTS	1	PUL'S	3	3	No FA
LATCH-UP	0535	JESD78, I-TEST 125C			6	0	
LATCH-UP	0535	JESD78, V-SUPPLY TEST 125C			6	0	
				Total:		**3**	

MOISTURE SENSITIVITY LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
ULTRASOUND	0535	J-STD-020			22	0	
STORAGE LIFE		125C	24	HRS	22		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	22		

CONVECTION REFLOW	0535	260C +0/-5C	3 PASS	22	0	
EXTERNAL VISUAL		J-STD-020, 6.1a		22	0	
PRECONDITION U/S		J-STD-020		22	0	
			Total:		**0**	

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
HIGH TEMP OP LIFE	0535	125C, 3.6 VOLTS	408 HRS	45	0	
			Total:		**0**	

PRECONDITIONING LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
STORAGE LIFE	0535	125C	24 HRS	308		
MOISTURE SOAK		85 C/85% R.H.	168 HRS	308		
CONVECTION REFLOW		260C +0/-5C	3 PASS	308	0	
			Total:		**0**	

STORAGE LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
STORAGE LIFE	0535	150C	1000 HRS	77	0	
			Total:		**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
TEMP CYCLE	0535	-55C TO 125C	500 CYS	77	0	
			Total:		**0**	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
HAST	0535	130C, 85%R.H.,3.5V	100 HRS	77	0	
			Total:		**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
AUTOCLAVE	0535	121C, 2 ATM STEAM, UNBIASED	168 HRS	77	0	
			Total:		**0**	

W/E ENDURANCE AND DATA RET'N

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
WRITE CYCLE STRESS (KCYS)	0535	70 C, 3.6 VOLTS	10 KCYS	77	0	
STORAGE LIFE		150C	500 HRS	77	0	
			Total:		**0**	

Device Information:

Device:	DS1090
Process:	E6H-2P2M,HPVt,TCZ ALOCOS:GOI
Passivation:	Passivation w/Nov TEOS Oxide-Nitride
Die Size:	52 x 52
Number of Transistors:	0
Interconnect:	Aluminum / 1% Silicon / 0.5% Copper
Gate Oxide Thickness:	150 Å

Assembly Information:

Qualification Vehicle:	DS1090
Assembly Site:	ATP (Amkor, PI)
Pin Count:	8
Package Type:	uSOP
Body Size:	3x0.85
Mold Compound:	Nitto MP8000C
Lead Frame:	Stamped Copper C7025
Lead Finsh:	SnPb Plate
Die Attach:	84-1 LMISR4 Epoxy Silverfilled Ablebond
Bond Wire / Size:	Au / 1.0 mil
Theta JA:	221
Theta JC:	39
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0410 to 0410

ELECTRICAL CHARACTERIZATION

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
ESD SENSITIVITY	0410	EOS/ESD S5.1 HBM 500 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0410	EOS/ESD S5.1 HBM 1000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0410	EOS/ESD S5.1 HBM 2000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0410	EOS/ESD S5.1 HBM 4000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0410	EOS/ESD S5.1 HBM 8000 VOLTS	1	PUL'S	3	3	No FA
LATCH-UP	0410	JESD78, I-TEST 125C			6	0	
LATCH-UP	0410	JESD78, V-SUPPLY TEST 125C			6	0	
				Total:		**3**	

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
HIGH TEMP OP LIFE	0410	125C, 5.5 VOLTS	1000	HRS	45	0	
				Total:		**0**	

Device Information:

Device:	DS1094L
Process:	D6W-2P2M,HPVt,E2,EPROGVt,TCN3 ALOCOS:GOI
Passivation:	Passivation w/Nov TEOS Oxide-Nitride
Die Size:	58 x 84
Number of Transistors:	8000
Interconnect:	Aluminum / 1% Silicon / 0.5% Copper
Gate Oxide Thickness:	150 Å

Assembly Information:

Qualification Vehicle:	DS1094L
Assembly Site:	ATP (Amkor, PI)
Pin Count:	8
Package Type:	uSOP
Body Size:	3x0.85
Mold Compound:	Nitto MP8000 w/BCB4026 Die Coat
Lead Frame:	Stamped Copper C7025
Lead Finsh:	SnPb Plate
Die Attach:	84-1 LMISR4 Epoxy Silverfilled Ablebond
Bond Wire / Size:	Au / 1.0 mil
Theta JA:	221
Theta JC:	39
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0413 to 0413

ELECTRICAL CHARACTERIZATION

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
ESD SENSITIVITY	0413	EOS/ESD S5.1 HBM 500 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0413	EOS/ESD S5.1 HBM 1000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0413	EOS/ESD S5.1 HBM 2000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0413	EOS/ESD S5.1 HBM 4000 VOLTS	1	PUL'S	3	1	No FA
ESD SENSITIVITY	0413	EOS/ESD S5.1 HBM 8000 VOLTS	1	PUL'S	3	3	No FA
LATCH-UP	0413	JESD78, I-TEST 125C			6	0	
LATCH-UP	0413	JESD78, V-SUPPLY TEST 125C			6	0	
				Total:		**4**	

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
HIGH TEMP OP LIFE	0413	125C, 3.6 VOLTS	1000	HRS	45	0	
				Total:		**0**	

PRECONDITIONING LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
STORAGE LIFE	0413	125C	24	HRS	306		
MOISTURE SOAK		85 C/85% R.H.	168	HRS	306		
CONVECTION REFLOW		235C +5/-0C	3	PASS	306	0	
				Total:		**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
TEMP CYCLE	0413	-55C TO 125C	1000	CYS	77	0	
				Total:		**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#

AUTOCLAVE	0413	121C, 2 ATM STEAM, UNBIASED	168 HRS	85	0	
			Total:		**0**	

W/E ENDURANCE AND DATA RET'N

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
WRITE CYCLE STRESS (KCYS)	0413	70 C, 3.6 VOLTS	10 KCYS	77	0	
STORAGE LIFE		150C	1000 HRS	75	0	
			Total:		**0**	

Device Information:

Device:	DS1099
Process:	D35X-3P3M,DPE2,CrSi,DSD,PDESD,PDRES,Cap,ENPN,D
Passivation:	TEOS Ox-Nit Passivation for E35K; Full BEOL at X3; PT onl
Die Size:	35 x 58
Number of Transistors:	4256
Interconnect:	Aluminum / 1% Silicon / 0.5% Copper
Gate Oxide Thickness:	131 Å

Assembly Information:

Qualification Vehicle:	DS1099
Assembly Site:	ATP (Amkor, PI)
Pin Count:	8
Package Type:	SOIC
Body Size:	150x1.4
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:	170
Theta JC:	40
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0521 to 0521

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
HIGH TEMP OP LIFE	0521	125C, 5.5 VOLTS	1000 HRS	77	0	
			Total:		**0**	

PRECONDITIONING LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
STORAGE LIFE	0521	125C	24 HRS	315		
MOISTURE SOAK		85 C/85% R.H.	168 HRS	315		
CONVECTION REFLOW		235C +5/-0C	3 PASS	315	0	
			Total:		**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT	QTY	FAILS	FA#
TEMP CYCLE	0521	-55C TO 125C	1000 CYS	77	0	
			Total:		**0**	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
HAST	0521	130C, 85%R.H.,5.5V	96	HRS	77	0	
				Total:		**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
AUTOCLAVE	0521	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0	
				Total:		**0**	

Assembly Information:

Qualification Vehicle:	DS1099
Assembly Site:	ATP (Amkor, PI)
Pin Count:	8
Package Type:	uSOP
Body Size:	3x0.85
Mold Compound:	Nitto MP8000C
Lead Frame:	Stamped Copper C7025
Lead Finsh:	SnPb Plate
Die Attach:	84-1 LMISR4 Epoxy Silverfilled Ablebond
Bond Wire / Size:	Au / 1.0 mil
Theta JA:	221
Theta JC:	39
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0509 to 0509

ELECTRICAL CHARACTERIZATION

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QTY	FAILS	FA#
ESD SENSITIVITY	0509	EOS/ESD S5.1 HBM 500 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0509	EOS/ESD S5.1 HBM 1000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0509	EOS/ESD S5.1 HBM 2000 VOLTS	1	PUL'S	3	0	
ESD SENSITIVITY	0509	EOS/ESD S5.1 HBM 4000 VOLTS	1	PUL'S	3	3	No FA
ESD SENSITIVITY	0509	EOS/ESD S5.1 HBM 8000 VOLTS	1	PUL'S	3	3	No FA
LATCH-UP	0509	JESD78, I-TEST 125C			6	0	
LATCH-UP	0509	JESD78, V-SUPPLY TEST 125C			6	0	
				Total:		**6**	

FAILURE RATE:	**MTTF (YRS):**	**124998**	**FITS:**	**0.9**
	DEVICE HOURS:	**1063776**	**FAILS:**	**0**