02/24/04

RELIABILITY REPORT
FOR

DS1085, Rev A2

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:

DS1085, Rev A2

In addition, Dallas Semiconductor's continuous reliability monitor program ensures that all outgoing product will continue to meet Maxim's quality and reliability standards. The current status of the reliability monitor program can be viewed at http://www.maxim-ic.com/TechSupport /dsreliability.html.

Device Description:

A description of this device 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 is:

FAILURE RATE: MTTF (YRS): 14280 FITS: 8.0

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. A the start of this data is the device information. This is a description of the device either used as a reliability test vehicle for a process / assembly qualification / monitor or a device used as part of a product qualification / monitor. 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 processes or assemblies used as part of this report, a description of each will follow which includes the respective reliability data for that process/ assembly. The reliability data section includes the latest data available.

Device Information:

Device:	DS1077
Process:	D6W-2P2M,HPVt,E2,TCN3 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
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 4
Date Code Range:	0209 to 0209

ELECTRICAL CHARACTERIZATION

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
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
LATCH-UP	0209	JESD78, I-TEST 125C	2	DYS	3	0
LATCH-UP	0209	JESD78, Vsupply TEST 125C	2	DYS	3	0
				Total:		**3**

OPERATING LIFE

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

PRECONDITIONING LEVEL 3

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

TEMPERATURE CYCLE

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

TEMPERATURE HUMIDITY BIAS

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

UNBIASED MOISTURE RESISTANCE

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

Device Information:

Device:	DS1077L
Process:	D6W-2P2M,HPVt,E2,TCN3 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/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
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 4
Date Code Range:	0141 to 0216

ELECTRICAL CHARACTERIZATION

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
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
ESD SENSITIVITY	0141	EOS/ESD S5.1 HBM 8000 VOLTS	2	PUL'S	3	3
LATCH-UP	0141	JESD78, I-TEST 125C	2	DYS	3	0
LATCH-UP	0141	JESD78, Vsupply TEST 125C	2	DYS	3	0
				Total:		**5**

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
HIGH VOLTAGE LIFE	0141	125C, 6.0 VOLTS	1000	HRS	77	0
HIGH VOLTAGE LIFE	0216	125C, 6.0 VOLTS	1000	HRS	77	0
				Total:		**0**

PRECONDITIONING LEVEL 3

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
STORAGE LIFE	0141	125C	24	HRS	586	
MOISTURE SOAK		30C/60% R.H.	192	HRS	586	
CONVECTION REFLOW		235C	3	PASS	584	0
STORAGE LIFE	0216	125C	24	HRS	390	
MOISTURE SOAK		30C/60% R.H.	192	HRS	390	
CONVECTION REFLOW		235C	3	PASS	389	0
				Total:		**0**

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
TEMP CYCLE	0141	-55C TO 125C	1000	CYS	77	0
TEMP CYCLE	0216	-55C TO 125C	1000	CYS	77	0
				Total:		**0**

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
HAST	0141	130C, 85%R.H.,5.5V	96	HRS	77	0
HAST	0216	130C, 85%R.H.,5.5V	96	HRS	76	0
				Total:		**0**

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
AUTOCLAVE	0141	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0
AUTOCLAVE	0216	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	0
				Total:		**0**

W/E ENDURANCE AND DATA RET'N

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
WRITE CYCLE STRESS	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:	uSOP - TSSOP (3 X 3)
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
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		QUANTITY	FAILS
STORAGE LIFE	0209	125C	24	HRS	229	
MOISTURE SOAK		85 C/85% R.H.	168	HRS	229	
CONVECTION REFLOW		235C	3	PASS	226	0
				Total:		**0**

STORAGE LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
STORAGE LIFE	0209	150C	1000	HRS	77	2
				Total:		**2**

TEMPERATURE CYCLE

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

UNBIASED MOISTURE RESISTANCE

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

Device Information:

Device:	DS1085L
Process:	D6W-2P2M,HPVt,E2,TCN1 PBL:GOI
Passivation:	Passivation w/Nov TEOS Oxide-Nitride
Die Size:	60 x 102
Number of Transistors:	7000
Interconnect:	Aluminum / 1% Silicon / 0.5% Copper
Gate Oxide Thickness:	150 Å

Assembly Information:

Qualification Vehicle:	DS1085L
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
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0218 to 0218

ELECTRICAL CHARACTERIZATION

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
ESD SENSITIVITY	0218	EOS/ESD S5.1 HBM 500 VOLTS	1	PUL'S	3	0
ESD SENSITIVITY	0218	EOS/ESD S5.1 HBM 1000 VOLTS	1	PUL'S	3	0
ESD SENSITIVITY	0218	EOS/ESD S5.1 HBM 2000 VOLTS	1	PUL'S	3	0
ESD SENSITIVITY	0218	EOS/ESD S5.1 HBM 4000 VOLTS	1	PUL'S	3	0
ESD SENSITIVITY	0218	EOS/ESD S5.1 HBM 8000 VOLTS	1	PUL'S	3	3
LATCH-UP	0218	JESD78, I-TEST 125C	2	DYS	3	0
LATCH-UP	0218	JESD78, Vsupply TEST 125C	2	DYS	3	0
				Total:		**3**

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
HIGH VOLTAGE LIFE	0218	125C, 6.0 VOLTS	1000	HRS	77	1
HIGH VOLTAGE LIFE	0218	125C, 6.0 VOLTS	1000	HRS	77	0
				Total:		**1**

PRECONDITIONING LEVEL 1

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
STORAGE LIFE	0218	125C	24	HRS	400	

MOISTURE SOAK	0218	85 C/85% R.H.	168	HRS	400	
CONVECTION REFLOW		235C	3	PASS	400	0
				Total:		**0**

PRECONDITIONING LEVEL 3

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
STORAGE LIFE	0218	125C	24	HRS	400	
MOISTURE SOAK		30C/60% R.H.	192	HRS	400	
CONVECTION REFLOW		235C	3	PASS	400	0
				Total:		**0**

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
TEMP CYCLE	0218	-55C TO 125C	1000	CYS	77	0
TEMP CYCLE	0218	-55C TO 125C	1000	CYS	77	0
				Total:		**0**

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
HAST	0218	130C, 85%R.H.,5.5V	96	HRS	77	1
HAST	0218	130C, 85%R.H.,5.5V	96	HRS	77	0
				Total:		**1**

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
AUTOCLAVE	0218	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	1
AUTOCLAVE	0218	121C, 2 ATM STEAM, UNBIASED	168	HRS	77	1
				Total:		**2**

W/E ENDURANCE AND DATA RET'N

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
WRITE CYCLE STRESS	0218	70 C, 3.6 VOLTS	5	KCYS	77	0
STORAGE LIFE		150C	1000	HRS	76	0
WRITE CYCLE STRESS	0218	70 C, 3.6 VOLTS	5	KCYS	77	0
STORAGE LIFE		150C	1000	HRS	77	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
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0228 to 0248

ELECTRICAL CHARACTERIZATION

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
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
ESD SENSITIVITY	0228	EOS/ESD S5.1 HBM 8000 VOLTS	1	PUL'S	3	3
LATCH-UP	0228	JESD78, I-TEST 125C	2	DYS	3	0
LATCH-UP	0228	JESD78, Vsupply TEST 125C	2	DYS	3	0
				Total:		**5**

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
HIGH VOLTAGE LIFE	0248	125C, 6.0 VOLTS	1000	HRS	77	2
				Total:		**2**

PRECONDITIONING LEVEL 1

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

TEMPERATURE CYCLE

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

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
HAST	0248	130C, 85%R.H.,5.5V	96	HRS	77	0
				Total:		**0**

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
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		QUANTITY	FAILS
WRITE CYCLE STRESS	0248	70 C, 5.25 VOLTS	5	KCYS	77	0
STORAGE LIFE		150C	1000	HRS	76	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:	0
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
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0348 to 0348

ELECTRICAL CHARACTERIZATION

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
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
LATCH-UP	0348	JESD78, I-TEST 125C	2	DYS	6	0
LATCH-UP	0348	JESD78, Vsupply TEST 125C	2	DYS	6	0
				Total:		**3**

OPERATING LIFE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
HIGH TEMP OP LIFE	0348	125C, 3.5 VOLTS	192	HRS	77	0

				Total:		**0**

PRECONDITIONING LEVEL 1

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

TEMPERATURE CYCLE

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

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
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		QUANTITY	FAILS
WRITE CYCLE STRESS	0348	70 C, 3.6 VOLTS	10	KCYS	77	0
STORAGE LIFE		150C	96	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
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	Level 1
Date Code Range:	0321 to 0333

ELECTRICAL CHARACTERIZATION

DESCRIPTION	DATE CODE	CONDITION	READPOINT		QUANTITY	FAILS
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
ESD SENSITIVITY	0321	EOS/ESD S5.1 HBM 8000 VOLTS	1	PUL'S	3	3
LATCH-UP	0321	JESD78, I-TEST 125C	2	DYS	6	0
LATCH-UP	0321	JESD78, Vsupply TEST 125C	2	DYS	6	0
				Total:		**6**

OPERATING LIFE

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

PRECONDITIONING LEVEL 1

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

TEMPERATURE CYCLE

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

TEMPERATURE HUMIDITY BIAS

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

UNBIASED MOISTURE RESISTANCE

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

FAILURE RATE: MTTF (YRS): 14280 FITS: 8.0

There are eight (non ESD characterization) failures listed within the rel data. These devices are all fully functional but have a Masterfrequency output outside the "typical frequency shift due to aging" as follows. DS1077L date code 0209 Storage Life = -1.2% & -1.3%. DS1085L date code 0218 OP/L = -0.87%, HAST = -1.47% and Autoclave = +1.42% & +1.37%. DS1086 date code 0248 = +1.32% & +1.96%.