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RELIABILITY REPORT
FOR

DS9097 Universal One-Wire Port Adapter

Dallas Semiconductor

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Prepared by:

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Conclusion:

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

DS9097 Universal One-Wire Port Adapter

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.*

Module Description

A description of this Module 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:

A module device consists of one or more IC's in a single, upward integrated, package. This package is assembled to include batteries, crystals, and other piece parts that make up the configuration of the Module. Because of either the complexity of the package or the included piece parts, standard high temperature reliability testing is not possible. Therefore, in order to determine the reliability of module products, the reliability of each of the piece parts is individually determined, then summed to determine the reliability of the integrated module product. If there are "n" significant components in the module then:

Fr (module) = Fr (1) + Fr (2) + Fr (3) + ... + Fr (n)
Fr (module) = Failure rate of module
Fr(n) = Failure rate of the nth component

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 module/assembly is:

Module Device:	Module Units:	Quantity:	Fails:	Ea:	MTTF (Yrs):	FITs:
DS2480	**1**	**1078**	**0**	**0.7**	**62919**	**1.8**
XSTR	**3**	**10000**	**0**	**0.7**	**391679**	**0.3**
Totals:					**54211**	**2.1**

The parameters used to calculate the module failure rate are as follows

Cf: 60% **Tu: 25** **°C**

The reliability data follows. At the start of this data is the module assembly information. This is a description of the module. 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. Some of this data may be generic with other packages or products.

* Some proprietary products may be excepted from this requirement

Assembly Information:

Assembly Site:	Dallas
Pin Count:	2
Package Type:	Dongle or Fob
Body Size:	0
Mold Compound:	?
Lead Frame:	Unknown
Lead Finsh:	NA
Die Attach:	?
Bond Wire / Size:	/
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	NA
Date Code Range:	0328 to 0328

MECHANICAL LIFE

DESCRIPTION	DATE CD	CONDITION	READPOINT	QTY	FAILS	FA#
MECHANICAL SHOCK	0328	200G, 1/2 SINE, 6 MS	30 CYS	50	0	
VIBRATION, VARIABLE FREQUENCY	0328	10g or 0.06", 5Hz-2KHz, X Y Z axis	9 HRS	50	0	
			Total:		**0**	

STORAGE LIFE

DESCRIPTION	DATE CD	CONDITION	READPOINT	QTY	FAILS	FA#
STORAGE LIFE	0328	85 C	1000 HRS	50	0	
			Total:		**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CD	CONDITION	READPOINT	QTY	FAILS	FA#
TEMP CYCLE	0328	-40 TO 85C	1000 CYS	50	0	
			Total:		**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CD	CONDITION	READPOINT	QTY	FAILS	FA#
MOISTURE SOAK	0328	60C/90% R.H.	1000 HRS	50	0	
			Total:		**0**	

Assembly Information:

Assembly Site:	Fastech
Pin Count:	0
Package Type:	Dongle or Fob (RoHS)
Body Size:	0
Mold Compound:	?
Lead Frame:	Unknown
Lead Finsh:	
Die Attach:	?
Bond Wire / Size:	/
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	
Date Code Range:	0619 to 0619

STORAGE LIFE

DESCRIPTION	DATE CD	CONDITION	READPOINT		QTY	FAILS	FA#
STORAGE LIFE	0619	85 C	500	HRS	77	0	
STORAGE LIFE	0619	85 C	500	HRS	77	0	
STORAGE LIFE	0619	85 C	500	HRS	77	0	
				Total:		**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CD	CONDITION	READPOINT		QTY	FAILS	FA#
TEMP CYCLE	0619	-40 TO 85C	500	CYS	77	0	
TEMP CYCLE	0619	-40 TO 85C	500	CYS	77	0	
TEMP CYCLE	0619	-40 TO 85C	500	CYS	77	0	
				Total:		**0**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CD	CONDITION	READPOINT		QTY	FAILS	FA#
MOISTURE SOAK	0619	60C/90% R.H.	500	HRS	77	0	
MOISTURE SOAK	0619	60C/90% R.H.	500	HRS	77	0	
MOISTURE SOAK	0619	60C/90% R.H.	500	HRS	77	0	
				Total:		**0**	

Assembly Information:

Assembly Site:	ISPL (ATEC, PI)
Pin Count:	0
Package Type:	Dongle or Fob
Body Size:	0
Mold Compound:	?
Lead Frame:	Unknown
Lead Finsh:	
Die Attach:	?
Bond Wire / Size:	/
Flammability:	UL 94-V0
Moisture Sensitivity (JEDEC J-STD20A)	
Date Code Range:	0246 to 0246

STORAGE LIFE

DESCRIPTION	DATE CD	CONDITION	READPOINT	QTY	FAILS	FA#
STORAGE LIFE	0246	85 C	1000 HRS	77	0	
STORAGE LIFE	0246	85 C	1000 HRS	77	0	
STORAGE LIFE	0246	85 C	1000 HRS	77	0	
			Total:		**0**	

TEMPERATURE CYCLE

DESCRIPTION	DATE CD	CONDITION	READPOINT	QTY	FAILS	FA#
TEMP CYCLE	0246	-40 TO 85C	1000 CYS	77	0	
TEMP CYCLE	0246	-40 TO 85C	1000 CYS	77	0	
TEMP CYCLE	0246	-40 TO 85C	1000 CYS	77	1	30011174
			Total:		**1**	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CD	CONDITION	READPOINT	QTY	FAILS	FA#
MOISTURE SOAK	0246	60C/90% R.H.	1000 HRS	77	0	
MOISTURE SOAK	0246	60C/90% R.H.	1000 HRS	77	0	
MOISTURE SOAK	0246	60C/90% R.H.	1000 HRS	77	0	
			Total:		**0**	