



10/8/2010

**RELIABILITY MONITOR REPORT
FOR**

X3 SiGe HBT 0.18 μ m BiCMOS (S18)

MAXIM Integrated Products

120 San Gabriel Dr.
Sunnyvale, CA 94086

**This Report was prepared by
Maxim Reliability Engineering**

Summary:

The data in the tables that follow was generated as the result of an on-going Process Reliability Monitor. The specific products in this process monitor are:

DS28E10	MAX17042	MAX17801EJU	MAX8930EWJ+	MAX8930EWJ+T
MAX9618AXA+	MAX97200AETE	MAX9830AETA+	MAX9830AETA+T	MAX9832ETG+
MAX98400AET	MAX9888EWJ+	MAX9888EWJ+	MAX9888EWY+	

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 163493 QUANTITY: 1039 FAILS: 0 FITS: 0.7

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

Cf: 60% Ea: 0.7 Tu: 25 °C

The reliability data follows and in this section is the detailed reliability data by stress. The reliability data section includes the latest data available. This report covers data between 10/1/2009 and 9/30/2010 .

Process Information:

Process Description: X3 SiGe HBT 0.18µm BiCMOS (S18)

DATA RETENTION

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1018	DS28E10	150C	192 HRS	77	0	QH000900AEA
Total:						0	

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	0921	MAX8930EWJ+T	135C	1000 HRS	48	0	SWDZAZ007BI
HIGH TEMP OP LIFE	0922	MAX8930EWJ+T	135C	1000 HRS	48	0	SWDZAA009BC
HIGH TEMP OP LIFE	0929	MAX97200AETE+	135C	192 HRS	48	0	SZQZBQ001BQ
HIGH TEMP OP LIFE	0937	MAX9830AETA+T	135C	1000 HRS	80	0	SPYZHQ003FA
HIGH TEMP OP LIFE	0938	MAX9830AETA+T	135C	1000 HRS	80	0	SPYZHQ003G
HIGH TEMP OP LIFE	0939	MAX9830AETA+T	135C	1000 HRS	80	0	SPYZHQ003DZ
HIGH TEMP OP LIFE	0951	MAX8930EWJ+T	135C	1000 HRS	48	0	SWDZAA009AJ
HIGH TEMP OP LIFE	1003	MAX17042	125C, 5.5 VOLTS	192 HRS	45	0	QJ000200DAB-NPI
HIGH TEMP OP LIFE	1005	MAX8930EWJ+T	135C	1000 HRS	46	0	SWDZAA004AF
HIGH TEMP OP LIFE	1005	MAX8930EWJ+T	135C	500 HRS	46	0	SWDZAA009CC
HIGH TEMP OP LIFE	1005	MAX8930EWJ+T	135C	500 HRS	46	0	SWDZAA009AC
HIGH TEMP OP LIFE	1010	MAX8930EWJ+T	135C	1000 HRS	46	0	SWDZAA004BF
HIGH TEMP OP LIFE	1010	MAX8930EWJ+T	135C	500 HRS	46	0	SWDZAA008AC
HIGH TEMP OP LIFE	1018	DS28E10	125C, 3.6 VOLTS	192 HRS	45	0	QH000900AEA
HIGH TEMP OP LIFE	1020	MAX9830AETA+	135C	1000 HRS	80	0	VPYZHA008BD

HIGH TEMP OP LIFE	1022	MAX9832ETG+	135C	1000 HRS	79	0	VTHZDA010B
HIGH TEMP OP LIFE	1025	MAX9830AETA+	135C	1000 HRS	80	0	VPYZHA011AB
HIGH TEMP OP LIFE	N/A	MAX8930EWJ+T	135C	1000 HRS	48	0	SWDZAA008BC
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	0951	MAX8930EWJ+T	150C	1000 HRS	80	0	SWDZAA009AE
STORAGE LIFE	1005	MAX8930EWJ+T	150C	1000 HRS	77	0	SWDZAA004AF
STORAGE LIFE	1005	MAX8930EWJ+T	150C	1000 HRS	77	0	SWDZAA009CC
STORAGE LIFE	1005	MAX8930EWJ+T	150C	1000 HRS	77	0	SWDZAA009AC
STORAGE LIFE	1010	MAX8930EWJ+T	150C	1000 HRS	80	0	SWDZAA004BF
STORAGE LIFE	1010	MAX8930EWJ+T	150C	1000 HRS	80	0	SWDZAA008AC
STORAGE LIFE	1018	MAX8930EWJ+	150C	1000 HRS	80	0	SWDZDA011AD
STORAGE LIFE	1020	MAX9830AETA+	150C	1000 HRS	80	0	VPYZHA008BD
STORAGE LIFE	1020	MAX8930EWJ+	150C	1000 HRS	80	0	SWDZDA011B
STORAGE LIFE	1020	MAX8930EWJ+	150C	1000 HRS	80	0	SWDZDA011AC
STORAGE LIFE	1022	MAX9832ETG+	150C	1000 HRS	80	0	VTHZDA010B
STORAGE LIFE	1025	MAX9830AETA+	150C	1000 HRS	80	0	VPYZHA011AB
STORAGE LIFE	1029	MAX17801EUU+	150C	150 HRS	79	0	SG2ZCZ007E
STORAGE LIFE	N/A	MAX9888EWJ+	150C	1000 HRS	80	0	SVNZE3003BB
STORAGE LIFE	N/A	MAX9888EWJ+	150C	1000 HRS	80	0	SVNZE3003BD
STORAGE LIFE	N/A	MAX9888EWJ+	150C	1000 HRS	80	0	SVNZE3003BF
STORAGE LIFE	N/A	MAX9888EWJ+T	150C	1000 HRS	80	0	SVNZE3003BA
STORAGE LIFE	N/A	MAX9888EWJ+T	150C	1000 HRS	80	0	SVNZE3003BC
STORAGE LIFE	N/A	MAX9888EWJ+T	150C	1000 HRS	80	0	SVNZE3003BE
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX9888EWY+T	-40C TO +125C	1000 CYS	50	0	SVNZGQ001A
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX9888EWY+T	-40C TO +125C	1000 CYS	50	0	SVNZGQ001AB
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX9888EWY+T	-40C TO +125C	1000 CYS	49	0	SVNZGQ001AC
TEMP CYCLE, 15' RAMP, 15' DWELL	0921	MAX8930EWJ+T	-40C TO +125C	500 CYS	80	0	SWDZAZ007BF
TEMP CYCLE, 15' RAMP, 15' DWELL	0922	MAX8930EWJ+T	-40C TO +125C	500 CYS	80	0	SWDZAA008BA

TEMP CYCLE, 15' RAMP, 15' DWELL	0922	MAX8930EWJ+T	-40C TO +125C	500	CYS	80	0	SWDZAA008BC
TEMP CYCLE, 15' RAMP, 15' DWELL	0922	MAX8930EWJ+T	-40C TO +125C	500	CYS	80	0	SWDZAA009BA
TEMP CYCLE, 5' RAMP, 10' DWELL	0937	MAX9830AETA+T	-65C TO 150C	500	CYS	80	0	SPYZHQ003FA
TEMP CYCLE, 5' RAMP, 10' DWELL	0938	MAX9830AETA+T	-65C TO 150C	500	CYS	350	0	SPYZHQ003G
TEMP CYCLE, 5' RAMP, 10' DWELL	0939	MAX9830AETA+T	-65C TO 150C	500	CYS	80	0	SPYZHQ003DZ
TEMP CYCLE, 5' RAMP, 10' DWELL	0941	MAX9618AXA+T	-65C TO 150C	1000	CYS	77	0	SC3ZAQ001Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	0941	MAX9618AXA+T	-65C TO 150C	1000	CYS	77	0	SC3ZAQ001Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	0941	MAX9618AXA+T	-65C TO 150C	1000	CYS	77	0	SC3ZAQ001Q3
TEMP CYCLE, 15' RAMP, 15' DWELL	0951	MAX8930EWJ+T	-40C TO +125C	500	CYS	80	0	SWDZAA009AE
TEMP CYCLE, 15' RAMP, 15' DWELL	1005	MAX8930EWJ+T	-40C TO +125C	500	CYS	77	0	SWDZAA004AF
TEMP CYCLE, 15' RAMP, 15' DWELL	1005	MAX8930EWJ+T	-40C TO +125C	500	CYS	77	0	SWDZAA009CC
TEMP CYCLE, 15' RAMP, 15' DWELL	1005	MAX8930EWJ+T	-40C TO +125C	500	CYS	77	0	SWDZAA009AC
TEMP CYCLE, 15' RAMP, 15' DWELL	1010	MAX8930EWJ+T	-40C TO +125C	500	CYS	80	0	SWDZAA004BF
TEMP CYCLE, 15' RAMP, 15' DWELL	1010	MAX8930EWJ+T	-40C TO +125C	500	CYS	80	0	SWDZAA008AC
TEMP CYCLE, 5' RAMP, 10' DWELL	1014	MAX98400AETX+	-65C TO 150C	200	CYS	80	0	SD7ZC3001BI
TEMP CYCLE, 15' RAMP, 15' DWELL	1018	MAX8930EWJ+	-40C TO +125C	500	CYS	80	0	SWDZDA011AD
TEMP CYCLE, 5' RAMP, 10' DWELL	1020	MAX9830AETA+	-65C TO 150C	500	CYS	80	0	VPYZHA008BD
TEMP CYCLE, 15' RAMP, 15' DWELL	1020	MAX8930EWJ+	-40C TO +125C	500	CYS	80	0	SWDZDA011B
TEMP CYCLE, 15' RAMP, 15' DWELL	1020	MAX8930EWJ+	-40C TO +125C	500	CYS	80	0	SWDZDA011AC
TEMP CYCLE, 5' RAMP, 10' DWELL	1022	MAX9832ETG+	-65C TO 150C	200	CYS	80	0	VTHZDA010B
TEMP CYCLE, 15' RAMP, 15' DWELL	1024	MAX9888EWY+T	-40C TO +125C	500	CYS	77	0	SVNZGQ001BD
TEMP CYCLE, 15' RAMP, 15' DWELL	1024	MAX9888EWY+T	-40C TO +125C	500	CYS	77	0	SVNZGQ001BE
TEMP CYCLE, 5' RAMP, 10' DWELL	1025	MAX9830AETA+	-65C TO 150C	1000	CYS	80	0	VPYZHA011AB
TEMP CYCLE, 5' RAMP, 10' DWELL	1029	MAX17801EUU+	-65C TO 150C	500	CYS	80	0	SG2ZCZ007E
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX9888EWJ+	-40C TO +125C	1000	CYS	80		SVNZE3003BB

TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX9888EWJ+	-40C TO +125C	1000	CYS	80		SVNZE3003BD
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX9888EWJ+T	-40C TO +125C	1000	CYS	80	0	SVNZE3003BA
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX9888EWJ+T	-40C TO +125C	1000	CYS	80	0	SVNZE3003BC
TEMP CYCLE, 15' RAMP, 15' DWELL	N/A	MAX9888EWJ+T	-40C TO +125C	1000	CYS	80	0	SVNZE3003BE

Total: **0**

FAILURE RATE: **MTTF (YRS): 163493** **QUANTITY: 1039** **FAILS: 0** **FITS: 0.7**