

RELIABILITY MONITOR

PROCESS: 0.6 µm Double Poly, Single Metal (Ti/TiN layers used on all Metals)

STRESS: INFANT LIFE

PRODUCT	REV	MONITOR DATE	JOB NO	DATE CODE	ASSEMBLY FACILITY	LOT NO.	PACKAGE	READ POINT	QTY	FAILS
DS2502	C2	JUN '99	24169	9915	Carsem S	DM846764AA	SOIC	48	229	0
DS2502	C2	MAR '99	24153	9913	Carsem S	DM842206AL	SOIC	48	222	0
DS2502	C2	SEP '99	24480	9918	Carsem S	DM849359AC	SOIC	48	231	0

STRESS: HIGH VOLTAGE LIFE

PRODUCT	REV	MONITOR DATE	JOB NO	DATE CODE	ASSEMBLY FACILITY	LOT NO.	PACKAGE	READ POINT	QTY	FAILS
DS2502	C2	MAR '99	24261	9913	Carsem S	DM842206AL	SOIC	1000	77	0
DS2502	C2	JUN '99	24174	9915	Carsem S	DM846764AA	SOIC	1000	77	0
DS2502	C2	SEP '99	24481	9918	Carsem S	DM849359AC	SOIC	1000	77	0
DS2502	C2	JUN '99	24174	9915	Carsem S	DM846764AA	SOIC	336	77	0
DS2502	C2	MAR '99	24261	9913	Carsem S	DM842206AL	SOIC	336	77	0
DS2502	C2	SEP '99	24481	9918	Carsem S	DM849359AC	SOIC	336	77	0

TOTALS FOR: 0.6 µm Double Poly, Single Metal (Ti/Ti) FAIL RATE (Fits): 27 DEVICE HRS: 3.39E+07 0

RELIABILITY MONITOR

PROCESS: 0.6 μ m Single Poly, Single Metal (Ti/TiN layers used on all Metals)

STRESS: INFANT LIFE

PRODUCT	REV	MONITOR		DATE	ASSEMBLY	LOT NO.	PACKAGE	READ		
		DATE	JOB NO					CODE	FACILITY	POINT
DS2401	C2	JUN '99	23956	9910	Carsem	DM840523AH	TO92	48	231	3
DS2401	C2	SEP '99	24472	9926	Carsem	DM912460AA	TO92	48	234	0
DS5002	C4	OCT '99	24579	9931	Carsem	DM849386AA	MQFP	48	88	0
DS80C320	C4	APR '99	23673	9903	ATP (Anam, PI)	DK826547AAD	DIP	48	234	0
DS80C320	C5	OCT '99	24584	9938	CPS (ChipPac, China)	DH925592AAB	DIP	48	234	0

STRESS: HIGH VOLTAGE LIFE

PRODUCT	REV	MONITOR		DATE	ASSEMBLY	LOT NO.	PACKAGE	READ		
		DATE	JOB NO					CODE	FACILITY	POINT
DS2401	C2	JUN '99	24411	9910	Carsem	DM840523AH	TO92	1000	77	0
DS2401	C2	SEP '99	24473	9926	Carsem	DM912460AA	TO92	1000	77	0
DS2401	C2	JUN '99	24411	9910	Carsem	DM840523AH	TO92	336	77	0
DS2401	C2	SEP '99	24473	9926	Carsem	DM912460AA	TO92	336	77	0
DS80C320	C4	APR '99	23690	9903	ATP (Anam, PI)	DK826547AAD	DIP	1000	77	0
DS80C320	C4	APR '99	23690	9903	ATP (Anam, PI)	DK826547AAD	DIP	336	77	0
DS80C320	C5	OCT '99	24585	9938	CPS (ChipPac, China)	DH925592AAB	DIP	336	76	0

TOTALS FOR: 0.6 μ m Single Poly, Single Metal (Ti/Ti) FAIL RATE (Fits): 62 DEVICE HRS: 6.78E+07 3

RELIABILITY MONITOR

PROCESS: 0.8 μ m Double Poly, Double Metal

STRESS: INFANT LIFE

PRODUCT	REV	MONITOR DATE	JOB NO	DATE CODE	ASSEMBLY FACILITY	LOT NO.	PACKAGE	READ POINT	QTY	FAILS
DS2154	A2	JUN '99	24426	9914	ASI (Anam, K)	DN901043AAC	LQFP	48	230	0

STRESS: HIGH VOLTAGE LIFE

PRODUCT	REV	MONITOR DATE	JOB NO	DATE CODE	ASSEMBLY FACILITY	LOT NO.	PACKAGE	READ POINT	QTY	FAILS
DS2154	A2	JUN '99	24427	9914	ASI (Anam, K)	DN901043AAC	LQFP	1000	73	
DS2154	A2	JUN '99	24427	9914	ASI (Anam, K)	DN901043AAC	LQFP	336	73	0

TOTALS FOR: 0.8 μ m Double Poly, Double Metal FAIL RATE (Fits): 31 DEVICE HRS: 2.94E+07 0

RELIABILITY MONITOR

PROCESS: 0.8 µm Single Poly, Double Metal

STRESS: INFANT LIFE

PRODUCT	REV	MONITOR DATE	JOB NO	DATE CODE	ASSEMBLY FACILITY	LOT NO.	PACKAGE	READ POINT	QTY	FAILS
DS1302	A3	JUN '99	23938	9905	ATP (Anam, PI)	DK824165AAA	DIP	48	230	0
DS1302	A3	MAR '99	23359	9838	ATP (Anam, PI)	DK818104ADA	DIP	48	234	
DS174855	A4	AUG '99	24362	9906	ATP (Anam, PI)	DK838211AAF	SOIC	48	231	
DS1803	A2	AUG '99	24370	9909	ATP (Anam, PI)	DK830515AAB	SOIC	48	234	0
DS1803	A2	NOV '99	24738	9923	ATP (Anam, PI)	DK913631AAA	SOIC	48	224	0
DS1803	A2	FEB '99	23928	9835	CPK (ChipPac, Korea)	DL818111AAB	SOIC	48	232	0
DS1803	A2	NOV '98	23173	9833	CPK (ChipPac, Korea)	DL820412AAB	SOIC	48	234	0
DS2118M	A4	JUN '99	24038	9912	ASi (Anam, K)	DN848138AAA	SSOP	48	234	0
DS2118M	A4	MAR '99	23526	9904	ASi (Anam, K)	DN844402AAC	SSOP	48	234	0
DS2118M	A4	SEP '99	24453	9919	Carsem	DM905555AA	SSOP	48	231	0

STRESS: HIGH VOLTAGE LIFE

PRODUCT	REV	MONITOR DATE	JOB NO	DATE CODE	ASSEMBLY FACILITY	LOT NO.	PACKAGE	READ POINT	QTY	FAILS
DS1302	A3	JUN '99	24513	9905	ATP (Anam, PI)	DK824165AAA	DIP	1000	75	0
DS1302	A3	JUN '99	24513	9905	ATP (Anam, PI)	DK824165AAA	DIP	336	75	0
DS1803	A2	AUG '99	24371	9909	ATP (Anam, PI)	DK830515AAB	SOIC	336	77	0
DS1803	A2	FEB '99	24003	9835	CPK (ChipPac, Korea)	DL818111AAB	SOIC	1000	76	0
DS1803	A2	NOV '98	23923	9833	CPK (ChipPac, Korea)	DL820412AAB	SOIC	1000	77	0
DS1803	A2	FEB '99	24003	9835	CPK (ChipPac, Korea)	DL818111AAB	SOIC	336	76	1

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DS1803	A2	NOV '98	23923	9833	CPK (ChipPac, Korea)	DL820412AAB	SOIC	336	77	0
DS2118M	A4	MAR '99	23600	9904	ASl (Anam, K)	DN844402AAC	SSOP	1000	76	1
DS2118M	A4	JUN '99	24070	9912	ASl (Anam, K)	DN848138AAA	SSOP	336	77	0
DS2118M	A4	MAR '99	23600	9904	ASl (Anam, K)	DN844402AAC	SSOP	336	77	0
DS2118M	A4	SEP '99	24454	9919	Carsem	DM905555AA	SSOP	1000	75	0
DS2118M	A4	SEP '99	24454	9919	Carsem	DM905555AA	SSOP	336	75	0

TOTALS FOR: 0.8 μ m Single Poly, Double Metal FAIL RATE (Fits): 26 DEVICE HRS: 1.21E+08 2

RELIABILITY MONITOR

PROCESS: 0.8 µm Single Poly, Single Metal

STRESS: INFANT LIFE

PRODUCT	REV	MONITOR DATE	JOB NO	DATE CODE	ASSEMBLY FACILITY	LOT NO.	PACKAGE	READ POINT	QTY	FAILS
DS1232L	C2	APR '99	24189	9848	CPK (ChipPac, Korea)	DL829603AAC	SOIC	48	230	0
DS1621	A7	SEP '99	24462	9930	ATP (Anam, PI)	DK906731AAC	SOIC	48	225	0
DS1621	A7	JUN '99	24321	9915	ATP (Anam, PI)	DK815282AAB	SOIC	48	234	0
DS2109	A7	MAR '99	23723	9839	Carsem	DM812688AA	SOIC	48	228	1
DS21S07A	F	NOV '99	24730	9908	ATP (Anam, PI)	DK836680AAF	TSSOP	48	231	0
DS21S07A	F	AUG '99	24378	9913	Carsem S	DM828145AA	TSSOP	48	229	0
DS2434	D1	NOV '99	24712	9851	Carsem	DM833262AA	TO226 (PR35)	48	237	0
DS2434	D1	FEB '99	23278	9828	Carsem	DM809174AA	TO226 (PR35)	48	237	0
DS2434	D1	AUG '99	24391	9837	Carsem	DM811482AA	TO226 (PR35)	48	233	0

STRESS: HIGH VOLTAGE LIFE

PRODUCT	REV	MONITOR DATE	JOB NO	DATE CODE	ASSEMBLY FACILITY	LOT NO.	PACKAGE	READ POINT	QTY	FAILS
DS1232L	C2	APR '99	24190	9848	CPK (ChipPac, Korea)	DL829603AAC	SOIC	1000	76	0
DS1232L	C2	APR '99	24190	9848	CPK (ChipPac, Korea)	DL829603AAC	SOIC	336	77	0
DS1621	A7	SEP '99	24463	9930	ATP (Anam, PI)	DK906731AAC	SOIC	1000	77	0
DS1621	A7	JUN '99	24322	9915	ATP (Anam, PI)	DK815282AAB	SOIC	1000	77	0
DS1621	A7	SEP '99	24463	9930	ATP (Anam, PI)	DK906731AAC	SOIC	336	77	0
DS1621	A7	JUN '99	24322	9915	ATP (Anam, PI)	DK815282AAB	SOIC	336	77	0
DS2109	A7	MAR '99	23832	9839	Carsem	DM812688AA	SOIC	1000	74	0

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DS2109	A7	MAR '99	23832	9839	Carsem	DM812688AA	SOIC	336	77	0
DS21S07A	F	AUG '99	24379	9913	Carsem S	DM828145AA	TSSOP	336	77	0
DS2434	D1	FEB '99	24066	9828	Carsem	DM809174AA	TO226 (PR35)	1000	76	0
DS2434	D1	AUG '99	24392	9837	Carsem	DM811482AA	TO226 (PR35)	1000	77	0
DS2434	D1	NOV '99	24713	9851	Carsem	DM833262AA	TO226 (PR35)	336	77	0
DS2434	D1	AUG '99	24392	9837	Carsem	DM811482AA	TO226 (PR35)	336	77	0
DS2434	D1	FEB '99	24066	9828	Carsem	DM809174AA	TO226 (PR35)	336	76	0

TOTALS FOR: 0.8 μ m Single Poly, Single Metal FAIL RATE (Fits): 9 DEVICE HRS: 2.13E+08 1

RELIABILITY MONITOR

PROCESS: 1.2 µm Single Poly, Single Metal

STRESS: INFANT LIFE

PRODUCT	REV	MONITOR DATE	JOB NO	DATE CODE	ASSEMBLY FACILITY	LOT NO.	PACKAGE	READ POINT	QTY	FAILS
DS1233	A5	OCT '99	24566	9932	Carsem	DM924344AC	SOT223	48	229	0
DS1267	A1	FEB '99	24044	9823	ATP (Anam, PI)	DK807766AAH	TSSOP	48	227	0
DS1267	A1	AUG '99	24343	9823	ATP (Anam, PI)	DK807766AAE	TSSOP	48	228	0
DS1869	A3	JUN '99	24032	9836	NSEB	DJ824252AAC	SOIC	48	230	0
DS1869	A3	DEC '98	23024	9829	NSEB	DJ821533ABB	SOIC	48	236	
DS1869	A3	SEP '99	24441	9907	NSEB	DJ824247ABA	SOIC	48	213	0
DS1869	A3	MAR '99	23440	9829	NSEB	DJ821534ABB	SOIC	48	237	0
DS5002	B3	APR '99	23852	9905	Carsem	DM831680AA	MQFP	48	199	0

STRESS: HIGH VOLTAGE LIFE

PRODUCT	REV	MONITOR DATE	JOB NO	DATE CODE	ASSEMBLY FACILITY	LOT NO.	PACKAGE	READ POINT	QTY	FAILS
DS1233	A5	OCT '99	24567	9932	Carsem	DM924344AC	SOT223	336	77	0
DS1267	A1	FEB '99	24132	9823	ATP (Anam, PI)	DK807766AAH	TSSOP	336	77	0
DS1267	A1	FEB '99	24132	9823	ATP (Anam, PI)	DK807766AAH	TSSOP	664	77	0
DS1869	A3	JUN '99	24228	9836	NSEB	DJ824252AAC	SOIC	1000	66	0
DS1869	A3	MAR '99	24022	9829	NSEB	DJ821534ABB	SOIC	1000	76	0
DS1869	A3	JUN '99	24228	9836	NSEB	DJ824252AAC	SOIC	336	70	0
DS1869	A3	SEP '99	24442	9907	NSEB	DJ824247ABA	SOIC	336	75	0
DS1869	A3	MAR '99	24022	9829	NSEB	DJ821534ABB	SOIC	336	76	0

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DS5002	B3	APR '99	23973	9905	Carsem	DM831680AA	MQFP	1000	77	0
DS5002	B3	APR '99	23973	9905	Carsem	DM831680AA	MQFP	336	77	0
TOTALS FOR:		1.2 μ m Single Poly, Single Metal				FAIL RATE (Fits):	7	DEVICE HRS:	1.30E+08	0

RELIABILITY MONITOR

PROCESS: 5.0 μ m Single Poly, Single Metal

STRESS: INFANT LIFE

PRODUCT	REV	MONITOR DATE	JOB NO	DATE CODE	ASSEMBLY FACILITY	LOT NO.	PACKAGE	READ POINT	QTY	FAILS
DS2108	B7	AUG '99	24386	9922	ATP (Anam, PI)	DK913650AAF	SOIC	48	234	0

STRESS: HIGH VOLTAGE LIFE

PRODUCT	REV	MONITOR DATE	JOB NO	DATE CODE	ASSEMBLY FACILITY	LOT NO.	PACKAGE	READ POINT	QTY	FAILS
DS2108	B7	AUG '99	24387	9922	ATP (Anam, PI)	DK913650AAF	SOIC	1000	77	0
DS2108	B7	AUG '99	24387	9922	ATP (Anam, PI)	DK913650AAF	SOIC	336	77	0

TOTALS FOR: 5.0 μ m Single Poly, Single Metal FAIL RATE (Fits): 81 DEVICE HRS: 1.13E+07 0