Test Org.*	Device	Function	Technology	Mfr.	Effective SEU LET* Threshold	Device Xsection (cm^2)	Bits Tested	Bit Xsection (cm^2)	Test Date	LUth	LU Xsection (cm^2)	Fac.	Remarks 31-Aug-99
		DSP (16-bit)											
	Note: Entries in **RED** indicate data added since the 1997 Compendium.												
ARSP	320C25		CMOS	TIX					Sep-89	12	3.0E-03	UCB	
JPL/JH	320C25		CMOS/epi	TIX					May-91	27 to 36		BNL	JH: Lu_{th} = 27. JPL: Lu_{th} = 36; 26 @ 125 °C
JH	320C25		CMOS/epi (8 µm)	TIX					Apr-92	80		BNL	"New LU-proof" (~6 µm epi) may not be available.
CNES	320C25		CMOS/epi (15 µm)	TIX					Oct-89	14	1.0E-04	GANIL	D/C 8917.
CNES	320C25		CMOS/epi (15 µm)	TIX					Feb-90			IPN	Tandem could not locate LU_{th} because of insufficient range.
NRL	320C26			TIX						<<29.5	1.0E-02		Limited test for LU. Stapor memo for test of Feb 93.
JPL	ADSP1016A	Multiplier	CMOS	ADI						<<37	1.0E-04		
CNES	ADSP2100		CMOS/epi	ADI					Dec-89	<30	1.0E-04	GANIL	Matra Rept. Dec 89 & Dufour, 92IEEE Wrkshp Rec., pg 21.
JH	ADSP2100		CMOS/epi (18 µm)	ADI						14		BNL	Commercial devices.
JH	ADSP2100		CMOS/epi (18 µm)	ADI								BNL	Same response as for previous entry.
JH	ADSP2100		CMOS	HTC					Apr-90	9		BNL	
JH	ADSP2100A		CMOS/epi (experimental)	ADI	13	5.0E-03				13.5		BNL	Kinnison, et. al., 91IEEE TNS, No. 6, pg 1398. Some developmental (other epi thicknesses & well-depths) do not latchup.
MMS	ADSP2100A		CMOS/epi	ADI					1992	26	1.0E-03	GANIL	Dufour, 92IEEE Wrkshp Rec., pg 21.
ESA	ADSP2100A		CMOS/epi (12.5 µm.) low power	ADI	~8		531	3.0E-06	Jun-92	12	2.0E-05	IPN	Harboe-Sorensen, 91IEEE TNS, No. 6, pg 441.
ARSP	ADSP2100AGU		CMOS	ADI	7	~2.0E-04				10 to 18	3.0E-04	UCB	Koga, et. al., 96IEEE TNS, No. 6, pg 2982. D/C 8950.
ARSP	ADSP2100ASG		CMOS	ADI					Feb-90	12	1.0E-03	UCB	
ARSP	ADSP2181ES & -KS		CMOS- 0.6 µm. feature	ADI	4	2.0E-04		1.0E-07 (mem)		4	~3.0E-03	UCB	Koga, et. al., 96IEEE TNS, No. 6, pg 2982. D/C 9513. Memory only tested.
ARSP	PDSP16510A	FFT Processor	CMOS	PLS	3	1.0E-02				3	3.0E-04	UCB	Koga, et. al., 96IEEE TNS, No. 6, pg 2982.
IBM	SM320E15			TIX					May-93			BNL	LU rates given for RAM and register. WP-02, Jim Pollock
ARSP	**SMJ320C50GFAM50**	**Fixed Point - SARAM**	**CMOS, 0.7µm feature, 6.5µm epi**	**TIX**	**3**	**1.0E-02**			**1997**	**>63**		**UCB**	**Crain, et al, 98IEEE Wrkshp Rec., pg 51. D/C 9711B. Lockup errors begin @ LET = 15.**
ARSP	**SMJ320C50GFAM50**	**Fixed Point - DARAM**	**CMOS, 0.7µm feature, 6.5µm epi**	**TIX**	**3**	**3.0E-03**			**1997**	**>63**		**UCB**	**Crain, et al, 98IEEE Wrkshp Rec., pg 51. D/C 9711B. Lockup errors begin @ LET = 15.**
ARSP	**SMJ320C50GFAM50**	**Fixed Point - PLU, ALU**	**CMOS, 0.7µm feature, 6.5µm epi**	**TIX**	**5**	**1.0E-03**			**1997**	**>63**		**UCB**	**Crain, et al, 98IEEE Wrkshp Rec., pg 51. D/C 9711B. Lockup errors begin @ LET = 15.**
ARSP	**SMJ320C50GFAM50**	**Fixed Point - NOP**	**CMOS, 0.7µm feature, 6.5µm epi**	**TIX**	**5**	**2.0E-04**			**1997**	**>63**		**UCB**	**Crain, et al, 98IEEE Wrkshp Rec., pg 51. D/C 9711B. Lockup errors begin @ LET = 15.**
JH	TMC2310	FFT Processor	CMOS/epi	TRW					Jan-91	>>75		BNL	Kinnison
JPL	TMP320C50		CMOS/epi (prototype)	TIX					Jun-92	>69		BNL	Compare to TMS version below.

Heavy Ion SEE

Test Org.*	Device	Function	Technology	Mfr.	Effective SEU LET* Threshold	Device Xsection (cm^2)	Bits Tested	Bit Xsection (cm^2)	Test Date	LUth	LU Xsection (cm^2)	Fac.	Remarks 31-Aug-99
MMS	TMS320C25		CMOS	TIX	7	2.0E-02			1992	<37	2.0E-03	GANIL	Dufour, 92IEEE Workshop, pg 21.
CNES	TMS320C25		CMOS/epi (15 µm)	TIX		2.0E-02			Jun-05	<<37	1.0E-04	GANIL	Adams, 91IEEE TNS, No. 6, pg 1686.
JPL	TMS320C50		CMOS	TIX	3	5.0E-04			Aug-94	18	3.0E-4	BNL	Compare to TMP version above. SARAM partial Xsection
CNES	ZR34161		CMOS/epi (12 µm)	ZOR					Oct-89	~17	4.0E-03	GANIL IPN	Both tests showed same results.

Legend

Manufacturers: ADA - Advanced Analog Devices; HTC - Hitachi; PLS - Plessey Semiconductors; TIX - Texas Instruments; TRW - TRW Semiconductor; ZOR - Zoran

Test Organizations

ARSP - Aerospace Corp., El Segundo, CA
CNES - Centre National d'etudes Spatiales, Toulouse, France
ESA - European Space Agency, Noordwijk, Netherlands
GSFC - Goddard Space Flight Center, Greenbelt, MD
IBM - IBM Federal Systems Division, Manassas, VA
JH - Johns Hopkins Applied Physics Lab, Laurel, MD
JPL - Jet Propulsion Laboratory, Pasadena, CA
MMS - Matra Marconi Space, France

Radiation Test Facilities

BNL - Tandem Van de Graaff, Brookhaven National Laboratories, Long Island, NY
GANIL - GANIL Accelerator, France
IPN - Insitute Physique Nuclaire, University of Orsay, France
UCB - 88-inch Cyclotron, University of California, Berkeley, CA