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 23-Aug-99
		Line Drvr/Rcvr/Xcvr											
	Note: Entries in **RED** indicate data added since the 1997 Compendium.												
LIN	26C31	Line driver	CMOS	NSC					1991	20			Sferrino '91
BREL	26C31	Line driver	CMOS	NSC					Jun-93				Latchup rate reported but no threshold. WP-01; Wes Will
LIN/S[3]	26C32	Line receiver	CMOS	NSC					1992	20			Sferrino '91; S(Cubed)='92
BREL	26C32	Line receiver	CMOS	NSC					1993				Latchup rate reported but no threshold. WP-01; Wes Will
JPL	32C278TM	Transceiver	CMOS	NSC					Dec-96	>152		TAM	Tested @ 25 °C.
GSFC	**54ABT245**	**Octal Transceiver**	**BiCMOS**	**NSC**	**>100**				**1997**	**>100**		**BNL**	**O'Bryan, et al, 98IEEE Wrkshp Rec., pg 39.**
GSFC	**54ABT245**	**Octal Transceiver**	**BiCMOS**	**PHL**	**>100**				**1997**	**>100**		**BNL**	**O'Bryan, et al, 98IEEE Wrkshp Rec., pg 39.**
ARSP	54AC245	Transceiver	ACMOS/no epi	FAS	60				Feb-90	70	2.0E-06	UCB	D/C 8747 11/88 & 8751 2/90.
ARSP	54AC245	Octal Transceiver	ACMOS/no epi	NSC	70	2.0E-06			Feb-90	60	2.0E-06		D/C 8747. *LU & SEU threshold are similar as given.
ARSP	54AC245	Transceiver	ACMOS/epi	NSC					1989	>120		UCB	
ARSP	54AC245	Transceiver	ACMOS/no epi	NSC					Feb-90	60		UCB	
JH	54ACTQ244	Octal buffer/driver	FACT w. I/O	NSC					Jan-91	>120			Based on similarity to 54ACTQ245 (below)
JH	54ACTQ244	Buffer/driver	FACT w. I/O	NSC					Jan-91	>120		BNL	
JPL	54ACTQ245	Octal Transceiver	FACT	NSC					Jan-91	>120			
JPL	54ACTQ245	Transceiver	FACT	NSC					Jan-94	>120		BNL	
ARSP	54ALS240	Octal buffer/driver	Bipolar-ALS-TTL	TIX					May-90				No latchup. May 90.
ARSP	54ALS241	Buffer	Bipolar-ALS-TTL	TIX					May-90				No latchup. May 90.
ARSP	54ALS244	Octal buffer/driver	Bipolar-ALS-TTL	TIX					May-90				No latchup. May 90.
JPL/ARSP	54HC244	Octal buffer/driver	HCMOS	TIX					Aug-88	>120			
JPL/ARSP	54HC245	Octal Transceiver	HCMOS	TIX					Dec-88	>120			
ARSP	54HCT240	Octal buffer/driver	HCMOS/TTL compatable	RCA						>80			Based on 54HCT244 data.
ARSP	54HCT244	Octal buffer/driver	HCMOS/TTL compatable	RCA						>80			
JPL/ARSP	54HCT244	Octal buffer/driver	HCMOS/TTL compatable	TIX						>168			D/C 8637. (4/87 & 5/87)
ARSP	54HCT245	Octal Transceiver	HCMOS/TTL compatable	RCA						>80			Based on 54HCT244 data.
GSFC	74FTC163245PV	Transceiver (3.3V/5V)	CEMOS (low power)	IDT					May-94	25	5.0E-04		Compare to IDT CEMOS register. LaBel

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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 23-Aug-99
JPL	**74LVQ244**	**Buffer/epi (3.3 V)**	**CMOS**	**NSC**					**Apr-96**	**>120**		**BNL**	
GSFC	88C20	Diff Line receiver	CMOS	NSC	11	1.0E-05			Jan-94	>100			LaBel, 94 SEE Symposium
GSFC	88C30	Diff Line driver	CMOS	NSC	>120				Jan-94	>120			LaBel, 94 SEE Symposium
JPL	AD1485	Transceiver	CMOS	ADI					Dec-96	>90		TAM	Tested @ 88° C.
JPL	AD485AQ	Transceiver	CMOS	ADI					Dec-96	>152		TAM	Tested @ 90 °C.
GSFC	AD524	Diff amplifier	Bipolar	ADI	12	1.0E-03			Jun-94	>80			LaBel. DC 9344.
GSFC	AM7968 & AM7969	TAXI Transmitter & Receiver	Bipolar	AMD	<3.4				Jul-93	>53		BNL	LaBel, et al, 93IEEE Wrkshp Rec., pg 27.
GSFC	**AM7968 & AM7969**	**TAXI Transmitter & Receiver**	**Bipolar**	**AMD**	**<3.4**				**1996**	**>53**		**BNL**	**LaBel, et al, 97IEEE Wrkshp Rec., pg 14. Data and sync errors. Sync errors required power reset.**
MMS	**AM79C98**	**Twisted Pair Transceiver**	**CMOS**	**AMD**	**>42**				**1995**	**50**	**5.0E-05**	**GANIL GSI**	**Poivey, et al, 96IEEE Wrkshp Rec. pg 73. D/C 9545. LU cross section @ LET=82.**
GSFC	AX3411	1553B Transceiver 15V	Bipolar	AFX	<11.5	3.0E-04			1994	>80			LaBel, et al, 94IEEE Wrkshp Rec., pg 64. D/C A67625.
GSFC	AX3453	1553B Transceiver 5V	Bipolar	AFX	<11.5	5.0E-05			1994	>80			LaBel, et al, 94IEEE Wrkshp Rec., pg 64.
GSFC	CT1487D	1553B Transceiver 15V	Bipolar	MED	11.5	5.5E-05			1994	>80			LaBel, et al, 94IEEE Wrkshp Rec., pg 64. D/C 9316.
GSFC	CT2521	1553B Transceiver 5V	Bipolar	MED	<26.5	4.5E-05			1994	>80			LaBel, et al, 94IEEE Wrkshp Rec., pg 64. D/C 9249. DUTs failed with Ni.
ESA	D469A	High Current Power Driver	CMOS/epi (PolyMOS)	SIL					1993	51	9.0E-05		H. Van Looy, ESA Rept.
GSFC	DDC63125 (ILC)	1553B Transceiver 15V	Bipolar	DDC	14	3.0E-04			1994	>80			LaBel, et al, 94IEEE Wrkshp Rec., pg 64.
MMS	**DP8392CV**	**Coaxial Transceiver Interface**	**Bipolar Low Power Schottky, Junction Isolation**	**NSC**	**~1**	**2.0E-13**			**1995**	**>60**		**GANIL GSI**	**Poivey, et al, 96IEEE Wrkshp Rec., pg 73. D/C 9452. Transmit Mode. Errors normalized/transmitted bit.**
MMS	**DP8392CV**	**Coaxial Transceiver Interface**	**Bipolar Low Power Schottky, Junction Isolation**	**NSC**	**~1**	**2.0E-14**			**1995**	**>60**		**GANIL GSI**	**Poivey, et al, 96IEEE Wrkshp Rec., pg 73. . D/C 9452. Receive Mode. Errors normalized/transmitted bit.**
BREL	DS26C32AMJ	Diff. Line receiver	CMOS/thick epi [mfr < 7/92] old	NSC						14	1.6E-04	UCB	Majewski, BREL Rept RTR-SLH-V1-A. Tested @ 5.25V & 100 °C.
BREL	DS26C32AMJ	Diff. Line receiver	CMOS/thin epi [mfr > 7/92] new	NSC					Mar-94	>77		UCB	Majewski, BREL Rept RTR-SLH-V2-A. Tested @ 5.25V & 100 °C.
GSFC	FC1553921	1553B Transceiver 5V	Bipolar	STC	<11.5	2.0E-03			1994	>80			LaBel, et al, 94IEEE Wrkshp Rec., pg 64. DUTs failed with Ni.
GSFC	Hot Rod REC	Transmitter/Receiver pair	GaAs	GAZ	<1.4	1.5E-03			1994	>120			LaBel, et al, 93IEEE Wrkshp Rec., pg. 27 & 94IEEE Wrkshp Rec., pg. 64. Proton data exist.
GSFC	Hot Rod TX	Transmitter/Receiver pair	GaAs	GAZ	<1.4	3.0E-03			1994	>120			LaBel, et al, 93IEEE Wrkshp Rec., pg. 27 & 94IEEE Wrkshp Rec., pg. 64. Proton data exist.
JPL/GSFC	HS26C31	Diff. Line driver	HCMOS/SOS	HAR	>80				Sep-92	>120			LaBel, et al, 94IEEE Wrkshp Rec., pg 64. Tested up to 100° C.
JPL/GSFC	HS26C32	Diff. Line receiver	HCMOS/SOS	HAR	>80				Sep-92	>120			LaBel, et al, 94IEEE Wrkshp Rec., pg 64. Tested up to 100° C.
GSFC	IDA07318	Laser Driver	Bipolar ECL	HPA					Aug-93	>80			LaBel Test Rept.
JPL	LTC1480	3.3V Transceiver	CMOS	LTN					Dec-96	>152		TAM	Tested @ 25 °C.

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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 23-Aug-99
JPL	LTC1487	Transceiver	CMOS	LTN					Dec-96	<45	2.0E-07	TAM	
HON	LTC485	RS485 Transceiver	CMOS	LTN					Aug-93	14	1.3E-05		D/C 9227. WP2 (Jim Pollock)
ARSP	LTC485CN8	Transceiver	CMOS	LTN					Jun-91	3	8.0E-05		
JPL	**LV244**	**3V octal buffer driver**	**CMOS**	**PHL**					**Apr-96**	**>120**		**BNL**	**Tested @ 90 °C.**
JPL	**LVC245**	**3V octal bidirectional buffer**	**CMOS**	**PHL**					**Apr-96**	**85**		**BNL**	**Latchup current >50mA.**
GSFC	M63147	1553B Transceiver 5V	Bipolar	UTM	<11.5	1.0E-04			Aug-93	>80			LaBel, et al, 94IEEE Wrkshp Rec., pg 64.
JPL	MAX3485	3.3V Transceiver	CMOS	MXM					Dec-96	>152		TAM	No LU with LET = 152 @ 25 °C.: SEL at LET = 152 @ 90 °C.
JPL	MAX485E	Transceiver	CMOS	MXM					Dec-96	>152		TAM	Tested @ 25 °C.
ARSP	MC10H115	Receiver	Bipolar- ECL	MOT					Feb-90	>100			
JPL	MIC4420	Buffer driver	No memory elements	MIC					Aug-92	>120			Includes temp up to 125° C
GSFC	MIC4427	MOSFET driver	4426/4427/4428 family	MIC						>90		BNL	Skipper, 95IEEE Wrkshp Rec., pg 50. p+ isolations prevent LU.
HON	MIC4428	MOSFET driver	No memory elements	MIC					Oct-92	>37			Martinez. D/C 9234. Tested @ 120° C. No transients @ 12 V.
GSFC	**MIC4429AJB**	**Linear Driver**	**No memory elements**	**MIC**	**>84.7**				**1997**	**>84.7**		**BNL**	**O'Bryan, et al, 98IEEE Wrkshp Rec., pg 39. No memory elements.**
GSFC	NH1500	1553B Transceiver 15V	Bipolar-- National Hybrids	NSC	<11.5	6.0E-06			Aug-93	>80			LaBel, et al, 94IEEE Wrkshp Rec., pg 64. D/C 9328. Die bigger than beam.
GSFC	NH1529	1553B Transceiver 5V	Bipolar-- National Hybrids	NSC	<11.5	1.5E-05			Aug-93	>80			LaBel, et al, 94IEEE Wrkshp Rec., pg 64. D/C 9329.
JH	P54PCT245	Octal transceiver, 3-state	CMOS	PFS					1989	<40			
LIN	P54PCT245	Octal transceiver, 3-state	CMOS	PFS					Apr-91	<27			
JPL	SA3297	Periph.-Bus Transceiver	CMOS/bulk Twin Well	SNL	>120				Oct-88	>120		BNL	Similar to 54LS245.
JPL	SN75LBC176	Transceiver	CMOS	TIX					Dec-96	90		TAM	SEL at LET=90 @ 88° C.
GSFC	**SNJ54ABT245AJ**	**Octal buffer driver**	**CMOS**	**TIX**	**>100**				**1997**	**>100**		**BNL**	**O'Bryan, et al, 98IEEE Wrkshp Rec., pg 39.**
JPL	SP485ES	Transceiver	CMOS	SIP					Dec-96	>152		TAM	No LU with LET = 152 @ 25 °C.: SEL at LET = 152 @ 90 °C.
GSFC	TAXI	Transmitter/Receiver pair	Bipolar	AMD					1993	>50			LaBel, et al, 93IEEE Wrkshp Rec., pg 27.
JPL	TC4428	MOSFET driver	CMOS	TCS					Dec-96	~24	1.0E-06	TAM	Easy burnout.
JH	TSC430	FET Driver	CMOS/epi	TEL					Jan-91	>120			
GSFC	TSC4429	MOSFET driver		TEL	>120				Jan-94	>120			LaBel, et al, 94IEEE Wrkshp Rec., pg 64.
GSFC	UT63M125	1553B Transceiver 15V	Bipolar	UTM	<11.5	3.0E-04			1994	>80			LaBel, et al, 94IEEE Wrkshp Rec., pg 64. D/Cs 9250/9315.
GSFC	UT63M125	1553 bus transceiver	Bipolar	UTM	11				Jun-93	27			M. Gates. One maverick LU at LET=11.

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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 23-Aug-99
GSFC	**UT63M147-BPC**	**1553 Tranceiver**	**CMOS**	**UTM**	**11**				**1996**	**>35**		**BNL**	**LaBel, et al, 97IEEE Wrkshp Rec., pg 14.**
GSFC	UT63M147-BPC	1553 bus transceiver	Bipolar?	UTM	11				Mar-97	>35		BNL	LaBel, EEE Links
Legend													
	Manufacturers: AMD - Advanced Micro Devices; BOE - Boeing Corp; DDC - Digital Data Corp; GAZ - Gazelle Semiconductors; HAR - Harris Corp; HPA - Hewlett-Packard Corp; IDT - Integrated Device Technology;												
	LTN - Linear Technology; MED - Matra Electronic Division; MIC - Micrel Semiconductor; Micro-Rel Corp; MOT - Motorola Semiconductors; MXM - Maxim; NSC - National Semiconductor; PFS - Performance Semiconductor;												
	PHL - Hillips Semiconductor; SIL - Siliconix; SNL - Sandia National Labs; STC - Silicon Transistor Corp; TCS - Telecom Semiconductor; TEL - Teledyne Crystalonics; TIX - Texas Instruments												
	Test Organizations			**Radiation Test Facilities**									
	ARSP - Aerospace Corp., El Segundo, CA			BNL - Tandem Van de Graaff, Brookhaven National Laboratories, Long Island, NY									
	BREL - Boeing Radiation Effects Laboratory, Seattle, WA			GANIL - GANIL Accelerator, France									
	ESA - European Space Agency, Noordwijk, Netherlands			GSI - Gesellschaft fur Schwerionenforschung, Darmstadt, Germany									
	GSFC - Goddard Space Flight Center, Greenbelt, MD			TAM - Texas A&M University Cyclotron Institute, College Station, TX									
	HON - Honeywell Space Systems, Clearwater, FL			UCB - 88-inch Cyclotron, University of California, Berkeley, CA									
	JH - Johns Hopkins Applied Physics Lab, Laurel, MD												
	JPL - Jet Propulsion Laboratory, Pasadena, CA												
	LIN - MIT Lincoln Labs, Lexington, MA												
	MMS - Matra Marconi Space, France												
	S^3 - S-Cubed, San Diego, CA												