REDW2002 Revision 0.1, Dec. 1/2005 Prepared by: David M. Hiemstra dave.hiemstra@mdacorpoartion.com

Paper No., Page No.	First Author	Part No.	Type	Manufacture	Data		Total Ionizing Dose				Single Event Effects							Displacement Damage		Facilities	Standard	Environment
					Terrestrial	Flight	Co60	ELDRS	Protons	Electrons	SEU	SET	SEFI	SEL	SEB	SEGR	Dose Rate	Protons	Neutrons			
1, pp. 1-6	S. Duzellier	HM62256	256k bit SRAM	Hitachi		√			√													
		HM65756	256k bit SRAM	Matra-MHS		√			√													
2, pp. 7-13	B. Pritchard	SA2901		Sandia		√			√													
		DG-181	Anlaog Switch			√			√													
		4N49	Optocoupler	Texas Instrument		√												√				
			1M bit x 4 DRAM	OKI		√					√											
			Solid State Power Switch			√						√										
			GPS Reciever	Motorola		√								√								
		GEMIII	GPS Reciever	Collins		√					√			√								
			Stellar Reference Unit			√										√						
		LUNA-C	DRAM	IMC		√					√											
			GPS Reciever	Blackjack		√								√								
3, pp. 14-17	E. Mikkelson																					√
4, pp. 18-23	G. Hopkinson	Star-250	512x512 Active Pixel Sensor	FillFactory	√		√															
5, pp. 24-31	M. Ott		Various Optical Fiber		√		√											√	√			
6, pp.32-40	J. Howard	Crossbar Switch	Switchboard, MS-SW16-8S	Myricom	√				√		√		√	√								
		Crossbar Switch	Switchboard, MS-SW16-8S	Myricom	√				√		√		√	√								
		NIC	NIC, M3S-PC164B-2	Myricom	√				√		√		√	√								
		LANai9	NIC, 9.1	Myricom	√				√		√		√	√								
		SerDeser	NIC, 1.1	Myricom	√				√		√		√	√								
		PCIDMA	NIC, 1.3	Myricom	√				√		√		√	√								
		Transceiver	NIC, VCS7146RH	Vitesse	√				√		√		√	√								
		SRAM	NIC, K7N803601M	Samsung	√				√		√		√	√								
7, pp. 41-44	D. Gingrich	EPF10K50EQC240-1	CPLD	Alterra	√		√															
		XC2S150-5PQ240C	SRAM FPGA	Xilinx	√		√															
8, pp. 45-50	M. Ceschia	EP20K400E	SRAM FPGA	Alterra	√						√		√									
9, pp. 51-57	D. Hiemstra	Pentium 4	Microprocessor	Intel	√				√		√		√	√								
		Pentium III	Microprocessor	Intel	√				√		√		√	√								
		Low Power MMX	Microprocessor	Intel	√				√		√		√	√								
10, pp. 58-61	J. Benedetto	Wafer Tech 0.25µm	Various Flip Flop Structure	Aeroflex	√						√			√			√					
11, pp. 62-66	D. Nguyen	ACT-F2M32A	2Mbit x 32 Flash	Aeroflex	√		√				√		√	√								
		SDTNF-512	64Mbit x 8 NAND Flash	SanDisk	√		√				√		√	√								
		TC58512FT	64Mbit x 8 NAND Flash	Toshiba	√		√				√		√	√								
12, pp. 67-74	R. Koga	54ABT16244	16 bit Tri-state Buffer	National Semiconductor	√									√								
		SNJ54ABT16244	16 bit Tri-state Buffer	Texas Instrument	√							√		√								
		54ABT16245	16 bit Tri-state Transciever	National Semiconductor	√									√								
		SNJ54ABT16245A	16 bit Tri-state Transciever	Texas Instrument	√									√								
		SN74LVT162245A	16 bit Tri-state Transciever	Texas Instrument	√							√		√								
		SN74LVT16244B	16 bit Tri-state Buffer	Texas Instrument	√							√		√								
		SN74LVT16245B	16 bit Tri-state Transciever	Texas Instrument	√							√		√								
		SN74LVT244B	8 bit Tri-state buffer	Texas Instrument	√							√		√								
		SN74LVT245B	8 bit Tri-state buffer	Texas Instrument	√							√		√								
		SN74LVTH162245	16 bit Tri-state Transciever	Texas Instrument	√							√		√								
		SNJ54LVTH16244A	16 bit Tri-state Buffer	Texas Instrument	√							√		√								
		SNJ54LVTH16245B	16 bit Tri-state Transciever	Texas Instrument	√							√		√								
		SNJ54LVT244A	8 bit Tri-state buffer	Texas Instrument	√							√		√								
		UT54ACS164245S	16 bit Tri-state Transciever	Aeroflex	√							√		√								
		SN74ALVC16244A	16 bit Tri-state Buffer	Texas Instrument	√									√								
		SN74LVC16244A	16 bit Tri-state Buffer	Texas Instrument	√									√								
13, pp. 75-81	M. Savage	LM124A	Operational Amplifier	National Semiconductor	√							√										
		LM111	Voltage Comparator	National Semiconductor	√							√										
14, pp. 82-105	M. O'Bryan	LM124	Operational Amplifier	National Semiconductor	√							√										
		LM119	Voltage Comparator	National Semiconductor	√							√										
		PALCE22V10	PLD	Cypress	√								√	√								
		ATF22V10B	EEPLD	Atmel	√							√		√	√	√						
		GAL22V10/883	Logic Array	Lattice	√									√	√	√						
		AN10E40	Analog FPGA	Anadigm	√									√	√	√						
		MDI3051RES05ZF	DC-DC Converter	Modular Devices Inc.	√							√										
		MDI3051RED12ZF	DC-DC Converter	Modular Devices Inc.	√							√										
		MDI3051RED15ZF	DC-DC Converter	Modular Devices Inc.	√							√										
		LM2651	Switching Regulator	National Semiconductor	√							√		√								
		MSK5042	Switching Regulator	MS Kennedy	√										√							
		LP3470	Voltage Supervisor	National Semiconductor	√							√										
		AD7714	24 bit ADC	Analog Devices	√		√				√			√								
		AD7821	8 bit ADC	Analog Devices	√						√			√								
		AD9223	12 bit ADC	Analog Devices	√						√											
		LTC1272	12 bit ADC	Linear Technology	√		√				√			√								
		LTC1657	16 bit ADC	Linear Technology	√						√			√								
		ADC1175	8 bit ADC	National Semiconductor	√						√			√								
		TSB12LV26PZT	Link Firewrie Chipset	Texas Instrument	√						√		√									
		TSB41AB3PFP	Physical Firewrie Chipset	Texas Instrument	√								√									
		CS4210VJG	Link Firewrie Chipset	National Semiconductor	√								√	√								
		CS4103VHG	Physical Firewrie Chipset	National Semiconductor	√								√	√								
		M3-SW16-8S	Myrinet Crosspoint Switch	Myricom	√						√		√	√								
		Lanai9	Myrinet NIC Protocol Processor	Myricom	√						√		√	√								
			Myrinet Serilaizer-Deserializer	Myricom	√						√		√	√								
			Myrinet PCI to DMS	Myricom	√						√		√	√								
		VCS7146RH	Myrinet Transceiver	Vitesse	√						√		√	√								
		K7N803601M	SRAM	Samsung	√						√		√	√								
		AD8151	Crossbar Switch	Analog Devices	√							√		√				√				
		LSP2916		Agere Systems							√			√								
			Active Pixel Sensor	Photobit								√		√								
		Test Structure	Prescaler	IBM							√											
		PE9301	Prescaler	Peregrine							√											
		MTX8501	Transmitter	Emcore								√										
		MRX8501	Receiver	Emcore								√										
		Pentium III	Microprocessor, various frequencies	Intel							√		√	√								
		LTC1604	16 bit ADC	Linear Technology										√								
		LTC1605	16 bit ADC	Linear Technology										√								
		LTC1608	16 bit ADC	Linear Technology										√								
		ADG452	Analog Switch	Analog Devices										√								
		ICL7662	Voltage converter	Intersil										√								
		XA1	ASIC	AMS										√								
		PCA80C522	Microprocessor	Phillips										√								
		CCD486	4kx4k CCD Detector	British Aerospace														√				
		TIL25	GaAs LED	Texas Instrument														√				
		TIL601	Opto Transistor	Texas Instrument														√				
		4N49	Optocoupler	Micropac														√				
		AD6640	12 bit ADC	Analog Devices			√															
		FDN361AN	30V N channel	Fairchild			√															
		NDS352A	30V P channel	Fairchild			√															
		IRLML2803	30V N channel	International Rectifier			√															
		IRLML5103A	30V P channel	International Rectifier			√															
		2N5114	30V P channel JFET	New England			√															
15, pp. 106-108	K. Warren	DVSA2815S/ES	+15V Outout, 6W, DC-DC Converter	VPT Inc.	√							√				√						
		DVTR2815S/ES	+15V Output, 40W, DC-DC Converter	VPT Inc.	√							√				√						
		DVHF2815S/ES	+15V Output, 20W, DC-DC Converter	VPT Inc.	√							√				√						
		AHF2805S	+5V Output, 12W, DC-DC Converter	Advanced Analog	√							√				√						
		AMF2805S	+5V Output, 12W	Advanced Analog	√							√				√						
		AMF2805S	+5V Output, 12W, Radiation Hardened	Advanced Analog	√							√				√						
16. pp. 109-114	J. Lehman	28F/28K Series	DC-DC Converter	Interpoint	√		√		√													
17. pp. 115-119	N. Boetti	L4913	Voltage Regulator	ST Microelectronics	√		√					√										
18. pp. 120-126	Y. Choquette		Dry Lithium Battery		√				√													
19, pp. 127-130	Z. Jin	5HP/7HP	SiGe HBT BiCMOS process	IBM	√				√													
20, pp. 131-137	C. Yui	LM139	Voltage Comparator Dual	National Semiconductor	√		√	√														
		LM139	Volatge Comparator Quad	National Semiconductor	√		√	√														
		LT1019-2.5	2.5V Voltage Reference	Linaer Technology	√		√	√														
		LM185-1.2	1.25V Voltage Reference	National Semiconductor	√		√	√														
		LM134	Temperature Transducer	National Semiconductor	√		√	√														
21, pp. 138-144	J. Gillberg	FSGL033	30V n-channel Power MOSFET	Fairchild	√														√			
		FSGL035	60V n-channel Power MOSFET	Fairchild	√														√			
		FSPL033	30V n-channel Power MOSFET	Fairchild	√														√			
		FSL13A0	100V n-channel Power MOSFET	Fairchild	√														√			
		FSL9130	100V n-channel Power MOSFET	Fairchild	√														√			
		FSL923A0	200V n-channel Power MOSFET	Fairchild	√														√			
		2N7397	250V n-channel Power MOSFET	Fairchild	√														√			
		FSL33A0	400V n-channel Power MOSFET	Fairchild	√														√			
		FSL430	500V n-channel Power MOSFET	Fairchild	√														√			
		FRL130	100V n-channel Power MOSFET	Fairchild	√														√			
		FRL9130	100V n-channel Power MOSFET	Fairchild	√														√			
		FRL234	250V n-channel Power MOSFET	Fairchild	√														√			
22, pp. 145-151	S. Mulford	G28F640J5-150	64 Mbit NOR Flash	Intel	√												√					
		K4E640812D-TC60	64 Mbit DRAM	Samsung	√												√					
		SDC-14616T-392	Resolver to Digital Converter	Data Devices Corporation	√												√					
		MC6012	Crytal Oscillator	Oak Corning	√												√					
		IR2110	Power MOSFET Driver	International Rectifier	√												√					
		CS5101	Regulator	On Semiconductor	√														√			
		GC80503CSM66166	Pentium 166	Intel	√												√					
		CA91C142-33CE	PCI-VME Bridge	Tundra	√												√					
		FW82371EB-SL2MY	Southbridge	Intel	√												√					
		CY2278PAC3L	Clock Synthesizer/Driver	Cypress	√												√					
		ADSP-2181KS-133	Digital Signal Proccessor	Analog Devices	√												√					
		MC68HC711	8 bit Microcontroller	Motorola	√												√					
		IRFS33N15D	Power MOSFET	International Rectifier	√												√					
		IRF1BC40GLC	Power MOSFET	International Rectifier	√												√					
		APT6021BFLL	Power MOSFET	Advanced Power Technology	√												√					
23, pp. 152-159	P. Chanbaud	MUR160T3	Rectifier Diode	Motorola	√		√	√														
		AD711KR	Operational Amplifier	Analog Devices																		
24, pp. 160-164	W. Hajdas		PSI proton beam properties																	√		
25, pp. 165-170	G. Vizkelethy		Radiation Effects Microscopy	Sandia																√		
26, pp. 171-176	A. Fernandez		SCK-CEN Gamma Facility																	√		
27, pp. 177-180	W. Abare	LM2941J	Low Dropout Voltage Regulator	National Semiconductor	√		√	√														
		LM185BY-2.5	Voltage Reference	National Semiconductor	√		√	√														
28, pp. 181-186	S. McCready	XTE-190-25A	Pressure Transducer	Kulite Semiconductor	√		√												√			
		7624B-500T	Accelerometer	Endevco	√		√												√			
		2255B-1	Accelerometer	Endevco	√		√												√			
		Type K & E	Thermocouple	Omega	√		√												√			
		44031	Thermistor	Omega	√		√												√			
29, pp. 187-193	C. Marshall	Custom	Active Pixel Sensor Array	Photobit	√							√										

Once the paper(s) with the response data required has been located it is the radiation effects engineer's responsibility to perform a detailed review to establish applicability.