

6.8 MICROCIRCUITS (08)

6.8.1 Digital C-MOS

MICROCIRCUITS, DIGITAL, C-MOS-B, 4000B SERIES				73R
Procurement Specifications	Manufacturer	Nature of Approval	Supervising Authority	Initial Qualification Date
Generic ESCC 9000	ST Microelectronics Rennes France	Qualification	CNES	Apr 1981
Detail ESCC		Remarks:		
9201/041, 9201/042, 9201/043, 9201/045, 9201/047, 9201/048, 9201/052, 9201/055, 9201/061, 9201/063, 9201/064, 9201/065, 9201/066, 9201/082, 9202/039, 9202/040, 9202/042, 9202/043, 9202/044, 9202/045, 9202/046, 9202/047, 9202/048, 9202/049, 9202/051, 9202/065, 9203/022, 9203/023, 9203/038, 9204/020, 9204/021, 9204/022, 9204/023, 9204/025, 9204/026, 9204/028, 9204/036, 9204/041, 9204/045, 9204/052, 9204/054, 9205/010, 9205/011, 9206/003, 9207/003, 9207/007, 9209/001, 9306/014, 9306/015, 9306/016, 9306/022, 9306/026, 9401/010, 9401/013, 9401/030, 9407/003, 9408/005, 9408/006, 9408/009, 9408/011, 9408/012, 9408/025, 9409/002, 9409/005				
Qualified range:				
9201/041	Quad 2-input NOR gate		4001B	
9201/042	Dual 4-input NOR gate		4002B	
9202/039	4-bit full adder		4008B	
9201/043	Quad 2-input NAND gate		4011B	
9203/023	Dual D-type flip-flop		4013B	
9306/014	8-stage synchronous static shift register		4014B	
9306/015	Dual 4-stage static shift register with serial input/parallel input		4015B	
9204/020	Decade counter/divider		4017B	
9204/021	Presettable divide-by-N counter		4018B	
9202/051	Quad AND/OR select gate		4019B	
9204/022	14-stage ripple carry binary counter/divider		4020B	
9306/016	8-stage static shift register		4021B	
9204/023	Octal counter/divider		4022B	
9201/045	Triple 3-input NAND gates		4023B	
9203/022	Dual J-K master slave flip-flop		4027B	
9205/010	BCD-to-decimal or binary-to-octal decoder		4028B	
9204/025	Presettable up/down counter binary or BCD decade		4029B	
9201/047	Quad 2-input exclusive OR gates		4030B	
9204/026	12-stage ripple carry binary counter/divider		4040B	
9202/040	Quad true/complement buffer with unbuffered outputs		4041UB	
9202/042	Quad NOR 3-state R/S latches		4043B	

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9202/043	Quad NAND 3-state R/S latch	4044B	
9202/044	Micropower phase-locked loop	4046B	
9207/003	Low power monostable/astable multivibrator	4047B	
9202/045	Hex buffer/converter (inverting type)	4049UB	
9202/046	Hex buffer/converter (non-inverting type)	4050B	
9202/047	Analogue multiplexer/demultiplexer	4051B	
9202/048	Analogue multiplexer/demultiplexer	4052B	
9202/049	Triple 2-channel analogue multiplexer/demultiplexer	4053B	
9209/001	4-bit magnitude comparator	4063B	
9204/052	14-stage ripple-carry binary counter/divider and oscillator	4060B	
9408/005	Quad bilateral switch	4066B	
9408/009	Analogue multiplexer/demultiplexer	4067B	
9201/061	8-input NAND gate	4068B	
9401/010	Hex inverter	4069UB	
9201/048	Quad exclusive OR gate	4070B	
9201/063	Quad 2-input OR gate	4071B	
9201/082	Dual 4-input OR gate	4072B	
9201/064	Triple 3-input AND gate	4073B	
9201/065	Triple 3-input OR gate	4075B	
9306/022	4-bit D-type register with 3-state output	4076B	
9201/055	Quad exclusive NOR gate	4077B	
9201/052	Quad 2-input AND gate	4081B	
9201/066	Dual 4-input AND gate	4082B	
9409/002	Quad 2-input NAND gate with Schmitt trigger input	4093B	
9306/026	8-stage shift and store bus register with synchronous serial outputs and 3-state parallel output	4094B	
9206/003	Dual monostable multivibrator	4098B	
9408/006	8-channel multiplexer with 3-state output	4512B	
9408/012	4-bit latch/4-to-16 decoder	4514B	
9205/011	4-bit latch/4-to-16 line decoder	4515B	
9204/045	Synchronous quad presettable up/down binary counter	4516B	
9204/028	Dual binary up counter	4520B	
9202/065	8-bit priority encoder	4532B	
9207/007	Dual monostable multivibrator with reset	4538B	
9408/011	Dual 1-of-4 decoder/demultiplexer	4555B	
9408/025	Dual 1-of-4 decoder/demultiplexer (output low on select)	4556B	
9204/036	Presettable 8-bit synchronous down-counter	40103B	
9409/005	Hex Schmitt-trigger	40106B	
9401/013	Dual 2-input NAND buffer/driver	40107B	
9407/003	Quad low-to-high 3-state voltage level shifter	40109B	
9204/054	Programmable 4-bit binary counter with	40161B	

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	asynchronous clear	
9203/038	Hex D-type flip-flop	40174B
9204/041	Presetable binary up/down counter (dual clock with reset)	40193B
Package Types: Ceramic Dual-in-Line Ceramic Flat Pack		

MICROCIRCUITS, DIGITAL, MONOLOTHIC, HIGH SPEED CMOS, 54HC AND 54HCT SERIES					190M
Procurement Specifications		Manufacturer	Nature of Approval	Supervising Authority	Initial Qualification Date
Generic ESCC 9000 Detail ESCC		ST Microelectronics Rennes France	Qualification	CNES	Nov 1992
			Remarks		
	9201/105, 9201/106, 9201/107, 9201/108, 9201/109, 9201/110, 9201/111, 9201/113, 9201/114, 9201/117, 9201/118, 9201/119, 9201/120, 9201/123, 9202/072, 9202/075, 9203/050, 9203/052, 9203/053, 9203/054, 9203/059, 9203/060, 9203/064, 9203/070, 9203/073, 9204/059, 9204/062, 9204/065, 9204/066, 9204/069, 9204/070, 9204/071, 9204/074, 9204/076, 9205/013, 9205/017, 9205/019, 9205/021, 9205/023, 9207/006, 9208/003, 9209/004, 9209/005, 9306/041, 9306/042, 9306/043, 9306/047, 9306/048, 9306/050, 9306/051, 9306/052, 9306/054, 9401/033, 9401/034, 9401/037, 9401/038, 9401/039, 9401/044, 9401/047, 9401/048, 9401/049, 9402/009, 9405/013, 9405/014, 9408/038, 9408/046, 9408/047, 9408/048, 9408/052, 9408/054, 9408/057, 9408/059, 9408/064, 9408/065, 9409/007, 9410/017,				
Qualified range:					
ESCC Spec. No.	Component Type			Component Type	Note
9201/105	Quad 2-input NAND gate			54HC 00	1
9201/113	Quad 2-input NOR gate			02	1
9201/114	Quad 2-input NAND gate with open drain output			03	1
9401/033	Hex inverter			04	1
9201/106	Quad 2-input positive AND gate			08	1
9201/107	Triple 3-input NAND gate			10	1
9201/117	Triple 3-input AND gate			11	1
9409/007	Hex Schmitt trigger inverter			14	1
9201/118	Dual 4-input NAND gate			20	1
9201/108	Dual 4-input AND gate			21	1
9201/109	Triple 3-input NOR gate			27	1
9201/110	8-input NAND gate			30	1
9201/111	Quad 2-input OR gate			32	1
9203/050	Dual D-type flip-flop with preset and clear			74	1
9209/004	4-bit magnitude comparator			85	1
9201/119	Quad 2-input exclusive OR gate			86	1
9306/048	Dual J-K positive edge triggered flip-flop with preset and clear			109	1
9207/006	Dual positive or negative edge Schmitt-retriggerable monostable multivibrator with clear			123	1
9401/039	Quad bus buffer with 3 state output			125	1
9201/120	Quad 2-input NAND gate with Schmitt-trigger input			132	1
9205/013	3-to-8 line decoder/demultiplexer with address latch and inverted output			137	1
9408/046	3-to-8 line decoder/demultiplexer with inverted output			54HC 138	1

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9205/017	Dual 2-to-4 line decoder/demultiplexer with inverted output	54HC	139	1
9410/017	8-line to 3-line priority encoder		148	1
9408/054	8-line to 1-line data selector/multiplexer		151	1
9408/038	Dual 4-line to 1-line data selectors/multiplexer		153	1
9205/023	4-to-16 line decoder/demultiplexer with inverted output		154	1
9408/057	Quad 2-line to 1-line data selector/multiplexer		157	1
9408/059	Quad 2-line to 1-line data selector/multiplexer with inverted output		158	1
9204/062	Synchronous presettable 4-bit decade counter with direct clear		160	1
9204/059	Asynchronous 4-bit binary counter		161	1
9306/041	8-bit SIPO shift register		164	1
9306/042	8-bit PISO shift register		165	1
9306/043	8-bit PISO shift register		166	1
9306/052	Hex D-type edge-triggered flip-flop with clear		174	1
9203/052	Quad D-type edge-triggered flip-flop with clear		175	1
9204/066	Synchronous 4-bit up/down binary counter		191	1
9204/065	Synchronous 4-bit up/down binary counter (dual clock with clear)		193	1
9306/047	4-bit PIPO shift register		194	1
9205/021	3-line to 8-line decoder/demultiplexer with address latch		237	1
9401/034	Octal bus buffer with inverted 3-state output		240	1
9401/048	Octal bus buffer with 3-state output		244	1
9405/013	Octal bus transceiver with 3-state output		245	1
9408/048	1-to-8 data selector/multiplexer with 3-state output		251	1
9408/047	Quad 2-line to 1-line data selector/multiplexer with 3-state output		257	1
9203/073	8-bit addressable latch		259	1
9203/053	Octal D-type edge-triggered flip-flop with clear		273	1
9208/003	9-bit odd/even parity generator/checker		280	1
9202/075	4-bit binary full adder with fast carry		283	1
9401/044	Hex bus buffer with 3-state output		367	1
9203/059	Octal D-type transparent latch with 3-state output		373	1
9203/060	Octal D-type edge-triggered flip-flop with 3-state output		374	1
9204/074	Dual 4-bit negative edge-triggered binary counter		393	1
9401/049	Octal bus buffer with inverted 3-state output		540	1
9401/047	Octal bus buffer with 3-state output		541	1
9202/072	Octal D-type transparent latch with 3-state output		573	1
9203/054	Octal D-type edge-triggered flip-flop with 3-state output		574	1
9204/071	8-bit binary counter with 3-state output register		590	1
9306/051	8-bit shift register with 3-state output register		595	1
9306/054	8-bit PISO shift register		597	1
9209/005	8-bit identify comparator		688	1
9204/070	Asynchronous negative-edge-triggered 14-bit binary counter		4020	1
9204/069	Asynchronous negative edge-triggered 12-bit binary counter		4040	1
9401/037	Hex buffer/converter with inverted output		4049	1
9401/038	Hex buffer/converter		4050	1
9408/064	Analogue multiplexer/demultiplexer		4051	1
9408/065	Analogue multiplexer/demultiplexer (triple 2-channel)		4053	1
9204/076	Asynchronous negative-edge-triggered 14-bit binary counter and oscillator	54HC	4060	1
9408/052	Quad bilateral switch	54HC	4066	1

MICROCIRCUITS, DIGITAL, MONOLITHIC, HIGH SPEED CMOS, 54HC AND 54HCT SERIES			190M	
9201/123	8-input OR/NOR gate		4078	1
9306/050	8-bit SIPO shift latch register with 3-state output		4094	1
9205/019	4-to-16 line decoder/latch		4514	1
9203/070	Dual D-type flip-flop with preset and clear	54HCT	74	1
9402/009	Octal bus buffer with 3-state output		244	1
9405/014	Octal bus transceiver with 3-state output		245	1
9203/064	Octal D-type transparent latch with 3-state output		373	1
NOTES, 1. These parts have successfully passed radiation testing to 50 kRads. Package Types: Ceramic Dual-in-Line Ceramic Flat Pack				

6.8.2 Linear Switching Regulator

IINTEGRATEC CIRCUITS, PULSE WIDTH MODULATOR, BASED ON TYPES ST1843 AND ST1845				344A
Procurement Specifications	Manufacturer	Nature of Approval	Supervising Authority	Initial Qualification Date
Generic ESCC 9000 Detail ESCC 9108/020 9108/021	ST Microelectronics Rennes France	Qualification	CNES	Nov 2016
Remarks				
Qualified range: Variants 01, 02				