

PARTS LIST FOR 620/f-100 CIRCUIT CARDS 98A0812A

The following is a parts list for the standard 620/f-100 circuit cards. The circuit-card part numbers are listed in numerical order. The parts for each circuit card are listed in numerical order according to their Varian part numbers. For components on wire-wrap circuit cards, the reference designations in the parts list consist of location coordinates from the assembly drawings. The location coordinates are also used as reference designations in the logic diagrams. For components on etched circuit cards, the reference designations in the parts list also appear on the assembly drawings and logic diagrams.

Card P/N and Name	Varian P/N	Manufacturer and P/N	Reference Designation
44P0409-000, Display	63A0002-013	Ochina OL-783BP	DS1 through DS20
	76S1046-000	VDM	Q1 through Q19
	77S1017-000	VDM	CR1 through CR19
	78A0087-000	Cutler Hammer 8931K185	S1 through S16
	78A0087-001	Cutler Hammer 8931K86	S17 through S24, 28, 31
	78A0087-002	Cutler Hammer 8931K187	S25, 26, 27 29, 30
44P0440-000, Clock	49A0002-000	Texas Instruments SN7473N	IC4
	49A0019-000	Texas Instruments SN74H40N	IC3, 7
	49A0036-000	Texas Instruments SN74H73N	IC5
	49A0039-000	SN74H00N	IC1, 8
	49A0107-000	Texas Instruments SN74S00N	IC2, 6
	64A0000-008	Bourns 275-1-203	R12

<u>Card P/N and Name</u>	<u>Varian P/N</u>	<u>Manufacturer and P/N</u>	<u>Reference Designation</u>
	64A0000-009	Bourns 275-1-503	R2, 31
	64A0022-000	Bourns 3329W-1-101	R23, 28
	76A0003-000	General Electric 2N1671B	Q1, 6
	76S1046-000	Fairchild 2N3646	Q2, 3, 4, 5, 7, 8
	77S1017-000	VDM	CR1 thru CR11
	82A0006-000	Aztec 20229	K2
	82A0006-003	Aztec 20213	K1
	87A0002-000	Standard Crystal CR-19A/U 18 MHz	Y2
	87A0050-000	Monitor CR-19/0 Case 8.8 MHz	Y1
44P0442-000 I/O Control	49A0008-000	Texas Instruments SN15846N	ICC3
	49A0010-000	Texas Instruments SN6006N	IC A3, B3, B4
	49A0019-000	Texas Instruments SN74H40N	IC C2, D3, F2, S2
	49A0022-000	Texas Instruments SN74H11N	IC H3, K5, T2
	49A0023-000	Texas Instruments SN74H04N	IC E5, V4, W5
	49A0025-000	Allen Bradley	IC D4
	49A0039-000	Texas Instruments SN74H00N	IC D5, F3, F4, H2, H5, L5, N2, R5, U5, W2

<u>Card P/N and Name</u>	<u>Varian P/N</u>	<u>Manufacturer and P/N</u>	<u>Reference Designation</u>
	49A0040-000	Texas Instruments SN7404N	IC A5
	49A0042-000	Texas Instruments SN74H01N	IC C5
	49A0056-000	Texas Instruments SN74H20N	IC L3, T4, W3, W4
	49A0082-001	Texas Instruments SN74H74N	IC S5, V3
	49A0094-001	Texas Instruments SN74H21N	IC E2, R4, U4
	49A0099-000	Texas Instruments SN74H108N	IC E3, E4, K3, K4, L4, M3, N3, R3, U3, V2
	49A0104-000	Motorola MC3001P	IC F5, L2, M4, S3, T3
	49A0105-000	Motorola MC3002P	IC R2
	49A0554-001	Texas Instruments SN74H10N	IC B5, D2, H4, K2, M2, N4, S4, T5, U2, V5
44P0443-000, I/O Date	49A0008-000	Texas Instruments SN15846N	IC C5, D3, D4, D5
	49A0010-000	Texas Instruments SN6006N	IC A3, A4, B3, B4, B5, C2, C3
	49A0019-000	Texas Instruments SN74H40N	IC M4
	49A0023-000	Texas Instruments SN74H04N	IC L4, L5, M5

Card P/N and Name	Varian P/N	Manufacturer and P/N	Reference Designation
	49A0042-000	Texas Instruments SN74H01N	IC D2, E3, E5, F3, F4, F5, H4, H5, S4, S5, T5, U4, U5, W5, X4, X5
	49A0081-001	Texas Instruments SN7403N	IC H3, K3, K4, K5
	49A0090-000	Texas Instruments SN7495N	IC K2, L2, N2, N3
	49A0095-000	Texas Instruments SN74H52N	IC M2, N4, N5, R2, R3, R5, S2, S3, T2, T3, U2, U3, V2, V3, V4, V5
	49A0104-000	Motorola MC3001P	IC T4
44P0445-000, D/L 0-3	49A0019-000	Texas Instruments SN74H40N	IC T5
	49A0022-000	Texas Instruments SN74H11N	IC U4, X5
	49A0023-000	Texas Instruments SN74H04N	IC A5, D3, H5, K4, K5, V5
	49A0025-000	Allen Bradley	IC H4, L2
	49A0039-000	Texas Instruments SN74H00N	IC S5, W5
	49A0042-000	Texas Instruments SN74H01N	IC D4, D5, V3, V4
	49A0056-000	Texas Instruments SN74H20N	IC A3, B2
	49A0082-000	Texas Instruments SN74H74J	IC D2

<u>Card P/N and Name</u>	<u>Varian P/N</u>	<u>Manufacturer and P/N</u>	<u>Reference Designation</u>
	49A0090-001	Texas Instruments SN7495N	IC B5, C4, C5, S3, S4
	49A0093-000	Texas Instruments SN74H50J	IC C2, F2, F3, F4, F5, T4
	49A0094-001	Texas Instruments SN74H21N	IC A4, B4
	49A0096-000	Texas Instruments SN74181N	IC
	49A0098-000	Texas Instruments SN74H62N	IC E2, E3, E4, E5
	49A0099-000	Texas Instruments SN74H108N	IC W3, X3
	49A0104-000	Motorola MC3001P	IC T3, U2, U3, X4
	49A0105-000	Motorola MC3002P	IC W4
	49A0106-000	Texas Instruments SN74H53N	IC B3, C3, L3, L4, M4, M5
	49A0554-000	Texas Instruments SN74H10J	IC N5, R5
	49A0575-000	Texas Instruments SN7405J	IC K3
44P0446-000, D/L 4-7	49A0019-000	Texas Instruments SN74H40N	IC H5, L5
	49A0022-000	Texas Instruments SN74H11N	IC U5
	49A0023-000	Texas Instruments SN74H04N	IC A5, D3, K4, K5, T3, X4

Card P/N and Name	Varian P/N	Manufacturer and P/N	Reference Designation
	49A0025-000	Allen Bradley	IC H4, M2, W3
	49A0039-000	Texas Instruments SN74H00N	IC D2, S5, T2, W2
	49A0042-000	Texas Instruments SN74H01N	IC D4, D5, T4, V3, V4
	49A0060-000	Texas Instruments SN74H30N	IC U4
	49A0082-001	Texas Instruments SN74H74N	IC N2, N3, N4, R4
	49A0090-000	Texas Instruments SN7495J	IC B5, C3, C4, S3, S4
	49A0093-000	Texas Instruments SN74H50J	IC B3, B4, F2, F3, F4, F5, T5
	49A0094-001	Texas Instruments SN74H21N	IC A3, A4
	49A0096-000	Texas Instruments SN74181N	IC H2
	49A0098-000	Texas Instruments SN74H62N	IC E2, E3, E4, E5
	49A0104-000	Motorola MC3001P	IC C5, H3
	49A0105-000	Motorola MC3002P	IC U2
	49A0106-000	Texas Instruments SN74H53N	IC L2, L3, L4, M3, M4, M5, R2, S2, V5, W4, W5, X5

Card P/N and Name	Varian P/N	Manufacturer and P/N	Reference Designation
	49A0554-001	Texas Instruments SN74H10N	IC C2, N5, R3, R5
	49A0575-000	Texas Instruments SN7405J	IC K3
44P0447-000, D/L 8-11	49A0019-000	Texas Instruments SN74H40N	IC L5, V5
	49A0022-000	Texas Instruments SN74H11N	IC M3, R3, T4, U2
	49A0023-000	Texas Instruments SN74H04N	IC A5, D2, D3, K4, K5, S2
	49A0025-000	Allen Bradley	IC H4, M2
	49A0039-000	Texas Instruments 74H00N	IC H5, W3
	49A0042-000	Texas Instruments SN74H01N	IC D4, D5, V3, V4
	49A0082-001	Texas Instruments SN74H74N	IC N2, N3, N4, R4, V2
	49A0090-001	Texas Instruments SN7495N	IC B5, C3, C4, H3, S3, S4
	49A0093-001	Texas Instruments SN74H50N	IC B3, B4, F2, F3, F4, F5, R2, T5
	49A0094-001	Texas Instruments SN74H21N	IC A4, C5, X4, X5
	49A0096-000	Texas Instruments SN74181N	IC H2
	49A0098-000	Texas Instruments SN74H62N	IC E2, E3, E4, E5

Card P/N and Name	Varian P/N	Manufacturer and P/N	Reference Designation
	49A0102-000	Texas Instruments SN74182N	IC L2
	49A0104-000	Motorola MC3001P	IC T2, T3, U3
	49A0105-000	Motorola MC3002P	IC S5, U4
	49A0106-000	Texas Instruments SN74H53N	IC L3, L4, M4, M5
	49A0575-000	Texas Instruments SN7405J	IC K3
44P0448, D/L 12-15	49A0019-000	Texas Instruments SN74H40N	IC H5
	49A0022-000	Texas Instruments SN74H11N	IC S5
	49A0023-000	Texas Instruments SN74H04N	IC A5, C5, D3, K4, K5, L5, R3, W5
	49A0025-000	Allen Bradley	IC H4, M2, X3
	49A0039-000	Texas Instruments SN74H00N	IC L2, T4, T5, U4, X4, X5
	49A0042-000	Texas Instruments SN74H01N	IC D4, D5, V3, V4
	49A0082-001	Texas Instruments SN74H74N	IC N2, N3, N4, R4
	49A0090-001	Texas Instruments SN7495N	IC B5, C3, C4, S3, S4
	49A0093-001	Texas Instruments SN74H50N	IC F2, F3, F4, F5, H3, R2, S2, V2, V5

Card P/N and Name	Varian P/N	Manufacturer and P/N	Reference Designation
	49A0094-001	Texas Instruments SN74H21N	IC U2
	49A0096-000	Texas Instruments SN74181N	IC H2
	49A0098-000	Texas Instruments SN74H62N	IC E2, E3, E4, E5
	49A0104-000	Motorola MC3001P	IC A4, T2, T3, U5, W2
	49A0105-000	Motorola MC3002P	IC M3, U3, W3
	49A0106-000	Texas Instruments SN74H53N	IC B2, B3, B4, C2, D2, L3, L4, M4, M5, W4
	49A0554-001	Texas Instruments SN74H10N	IC A3, N5, R5
44P0449-000, Control I	49A0019-000	Texas Instruments SN74H40N	IC S4, W3
	49A0022-000	Texas Instruments SN74H11N	IC B2, M2, S3
	49A0023-000	Texas Instruments SN74H04N	IC A4, B5, C5, D2, F3, L2, M3, N2, U2
	49A0039-000	Texas Instruments SN74H00N	IC B3, E5, F2, K2, K3, L5, N5, S2, S5, T3
	49A0056-000	Texas Instruments SN74H20N	IC D5, N4, T2, W4
	49A0060-000	Texas Instruments SN74H30N	IC D3, D4, H3, N3
	49A0082-001	Texas Instruments SN74H74N	IC X4

Card P/N and Name	Varian P/N	Manufacturer and P/N	Reference Designation
	49A0093-001	Texas Instruments SN74H50N	IC U4, V5
	49A0098-000	Texas Instruments SN74H62N	IC U3, U5
	49A0099-000	Texas Instruments SN74H108N	IC E2, F4, F5, H2, M4, M5, X5
	49A0104-000	Motorola MC3001P	IC A3, A5, E3, E4, H4, H5, K4, L3, L4, T4, X3
	49A0105-000	Motorola MC3002P	IC W5
	49A0106-000	Texas Instruments SN74H53N	IC V2, V3, V5, W2
	49A0554-001	Texas Instruments SN74H10N	IC B4, C2, C3, K5, R3, R4, R5, T5
44P0450-000, Control II	49A0007-000	Texas Instruments SN7400N	IC B4, B5, F4, L3
	49A0019-000	Texas Instruments SN74H40N	IC S2, T2
	49A0022-000	Texas Instruments SN74H11N	IC L5, U2
	49A0023-000	Texas Instruments SN74H04N	IC D4, U4, V4
	49A0039-000	Texas Instruments SN74H00N	IC A3, F5, K5, S4, U3, U5, V3, V5, W4

Card P/N and Name	Varian P/N	Manufacturer and P/N	Reference Designation
	49A0040-000	Texas Instruments SN7404N	IC H4, H5,
	49A0042-000	Texas Instruments SN74H01N	IC R4
	49A0056-000	Texas Instruments SN74H20N	IC D5, K3
	49A0081-001	Texas Instruments SN7403N	IC F2, H3
	49A0082-001	Texas Instruments SN74H74N	IC L2, N2
	49A0093-001	Texas Instruments SN74H50N	IC M5, N5
	49A0094-001	Texas Instruments SN74H21N	IC A5, E5, K4, W2
	49A0095-000	Texas Instruments SN74H52N	IC A4
	49A0098-000	Texas Instruments SN74H62N	IC M4, N4, W5
	49A0099-000	Texas Instruments SN74H108N	ICD3, E3, F3, H2, K2, R2, R3, S3, T3, W3
	49A0104-000	Motorola MC3001P	IC D2, E4, T4, T5, X3
	49A0105-000	Motorola MC3002P	IC M3, R5, S5
	49A0106-000	Texas Instruments SN74H53N	IC L4, X5

Card P/N and Name	Varian P/N	Manufacturer and P/N	Reference Designation
	49A0524-000	Fairchild U6E960129	IC C3
	49A0554-001	Texas Instruments SN74H10N	IC B3, M3
	49A0575-000	Texas Instruments SN7405J	IC B2
44P0506-000 Sense Inhibit	49A0022-000	Texas Instruments SN74H11N	IC4, 5, 7, 9, 10, 12
	49A0032-000	Texas Instruments SN7402N	IC2
	49A0042-000	Texas Instruments SN74H01N	IC1, 3, 6, 8, 11
	49A0080-000	Texas Instruments SN7524N	IC101, 201, 401, 501, 701, 801, 1001, 1101
	76A2369-000	Fairchild 2N2369A	Q301, 302, 303, 304, 601, 602, 603, 604, 901, 902, 903, 904, 1201, 1202, 1203, 1204
	77S1017-000	Varian	CR101, 102, 103, 104, 201, 202, 203, 204, 301, 302, 303, 304, 401, 402, 403, 404, 501, 502, 503, 504, 601, 602, 603, 604, 701, 702, 703, 704, 801, 802, 803, 804, 901, 902, 903, 904, 1001, 1002, 1003, 1004, 1101, 1102, 1103, 1104, 1201, 1202, 1203, 1204

Card P/N and Name	Varian P/N	Manufacturer and P/N	Reference Designation
44P0518-000 Heat Sink	76N3055-000	RCA 2N3055	Q1, 2
44P0528-000 Regulator	49A0103-001	Fairchild U5R7723393	IC1, 2, 3, 4
	64A0023-000	Beckman 89PR2K	R5, 17, 32, 42
	76A0007-000	RCA 2N3054	Q1, 2, 3, 5
	76A2904-000	Motorola 2N2904	Q4
	77A0004-000	Motorola 1N746A	CR1, 2, 6
	77N0751-000	Texas Instruments 1N751A	CR3
	77N4003-000	Motorola 1N4003	CR4, 5
44P0578-000 Driver/Sink Switch	49A0032-000	Texas Instruments SN7402N	IC1, 3
	49A0041-000	Texas Instruments SN74H51N	IC4, 7, 8
	49A0044-000	Texas Instruments SN7442N	IC2, 5, 9, 11
	49A0118-000	Texas Instruments SN7427N	IC6, 10
	49A0119-000	Motorola MHQ5859	A102, 104, 202, 204, 302, 304, 402, 404, 502, 504, 602, 604, 702, 704, 802, 804

<u>Card P/N and Name</u>	<u>Varian P/N</u>	<u>Manufacturer and P/N</u>	<u>Reference Designation</u>
	64A0025-000	Fenival Elect. KA33J1	RT1, 2
	76A0002-000	Texas Instruments 2N3725A	Q25
	76S1046-000	VDM	Q22, 26
	76A2369-000	Fairchild 2N2369	Q1, 2, 5, 9, 12, 13, 14, 17, 18,
	76A2904-000	Motorola 2N2904	Q23
	76A2907-000	Texas Instruments 2N2907	Q3, 4, 6, 7, 8, 10, 11, 15, 16, 19, 20
	76A3640-000	Texas Instruments 2N3640	Q21, 24
	77N0751-000	Texas Instruments 1N751A	CR7, 10, 11, 12, 13, 14
	77S1017-000	VDM	CR1 through 6, 101 through 116, 201 through 216, 301 through 316, 401 through 416, 501 through 524, 601 through 624, 701 through 724, 801 through 824, 828, 829
	80A0028-000		A101, 103, 201, 203, 301, 303, 401, 403, 501, 503, 601, 603, 701, 703, 801, 803

Card P/N and Name	Varian P/N	Manufacturer and P/N	Reference Designation
44P0579-000 Memory Timing and Register	49A0000-000	Texas Instruments SN7475N	IC1, 2, 3, 4
	49A0012-000	Texas Instruments SN7474N	IC7, 9, 10, 12, 13, 15, 16, 19
	49A0019-000	Texas Instruments SN74H40N	IC23, 24
	49A0020-000	Texas Instruments SN74H72N	IC35, 36
	49A0023-000	Texas Instruments SN74H04N	IC32
	49A0039-000	Texas Instruments SN74H00N	IC5, 6, 29
	49A0041-000	Texas Instruments SN74H51N	IC27, 30, 31
	49A0056-000	Texas Instruments SN74H20N	IC22
	49A0061-000	Texas Instruments SN74H05J	IC8, 11, 14, 17, 18, 21
	49A0079-000	Texas Instruments SN74H54N	IC26, 28
	49A0128-000	Texas Instruments SN7438N	IC34
	49A0138-000	Texas Instruments SN7437N	IC33
	49A0554-001	Texas Instruments SN74H10N	IC25
	64A0000-004	Bourns 275-1-102	R4
77S1017-000	VDM	CRI	

Card P/N and Name	Varian P/N	Manufacturer and P/N	Reference Designation
	80A0039-001	PCA Electronics EP6141	DL1
44P0580-000 Capacitor Card	76A0009-000	Motorola MR751	CR1 through 6
44P0582-000 Power Supply Card	76A0009-000	Motorola MR 751	CR12, 13, 14
44P0583-000 Regulator 2	49A0103-001	Fairchild U5R7723393	IC1, 2
	64A0023-000	Beckman 89PR2K	R6, 16, 23
	76A0007-000	RCA 2N3054	Q4
	76A0009-000	Motorola MR 751	CR5
	76A2222-000	Texas Instruments 2N2222	Q2, 3
	76A2907-000	Motorola 2N2907	Q1
	77A0004-014	Motorola 1N746A	CR4
	77S1017-000	VDM	CR3
	77A4003-000	Motorola 1N4003	CR1, 2
44P0586-000 AC Power	62A0002-000	Littelfuse 312.500	F1
	77N4003-000	Motorola 1N4003	CR7, CR15
	80A0042-000	Wood Transformer to VDM spec.	T2
	82A0028-000	Potter Brumfield KUP11A15	K1