

**Agilent 53181A  
Component Level  
Information**

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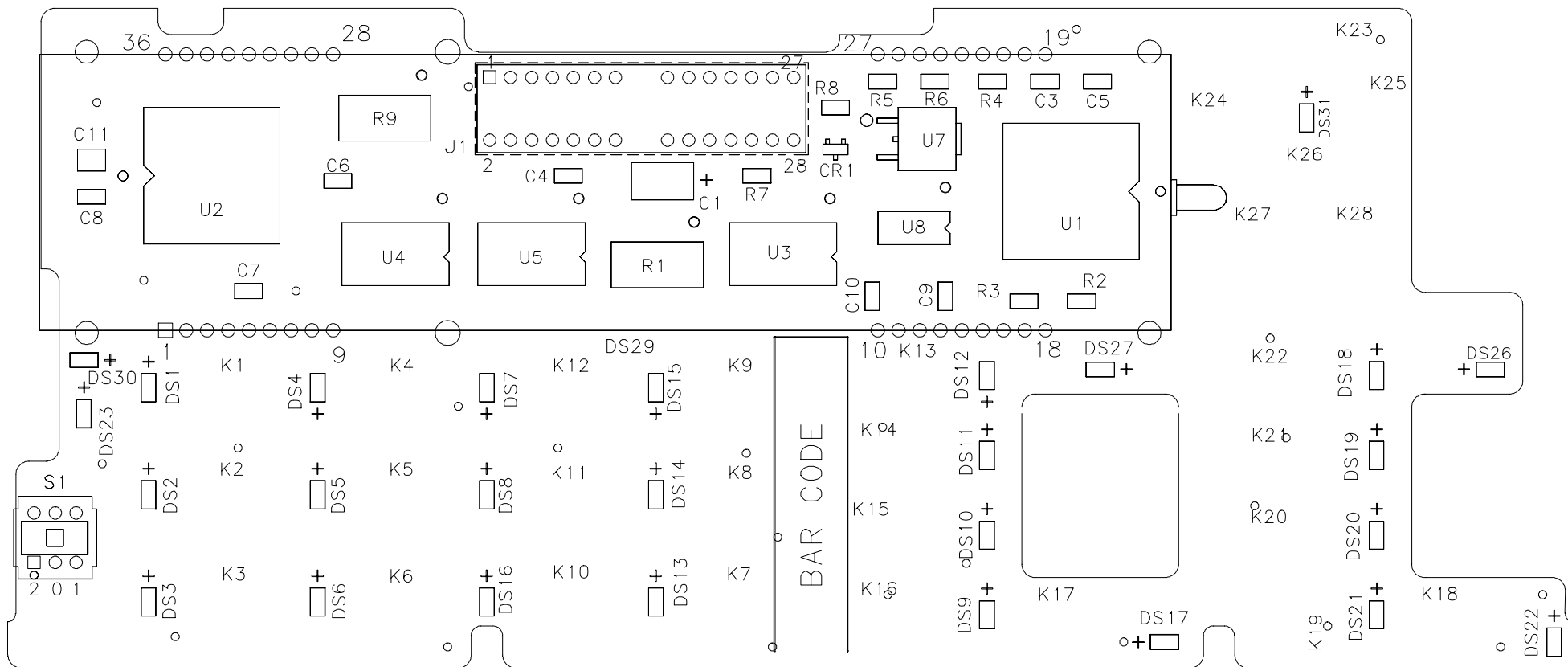
# Agilent 53181A Frequency Counter Component Level Information

**Information in this packet applies to the following assemblies:**

- 1. 53181-68002 PC Assembly (Front Panel)**
- 2. 53181-68004 PC Assembly (Main Board)**
- 3. 53181-68024 PC Assembly (Main Board)**

**The following is included in this packet:**

- 1. Component locators**
- 2. Schematics**
- 3. Parts lists with Agilent and manufacturer's part numbers**



**Agilent 53131A  
Universal Counter**

**53131-68002  
Front Panel**

**Component Locator**



### 53131-68002 Parts List

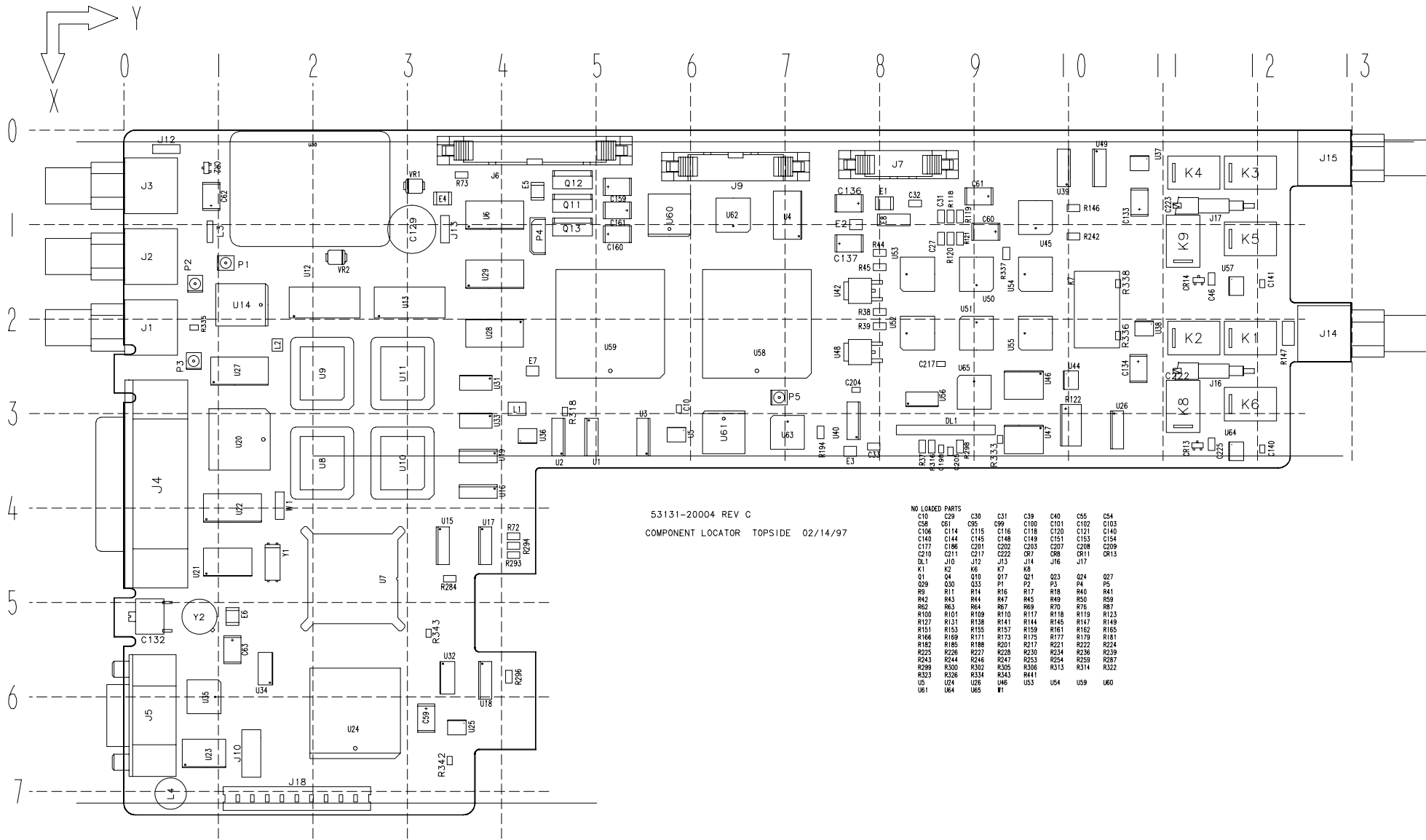
NOTE: This PC assembly is used in the 53131A, 53132A and 53181A. You may have no-load parts locations on your assembly and not all parts listed in this parts list are present on your assembly.

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
C1	1	0180-4228	CAP-FXD 47uF +-20PCT 10V TA	TAJD476M010 293D476X0010D2WE3 49MC476D010M0AS ESVD1A476M	AVX VISHAY VISHAY BC COMPONENTS NEC ELECTRONICS
C11	1	0160-7438	CAP-FXD 0.01uF +-10pct 500 V CER X7R	12107C103KAT A 501S41W103KV6	AVX JOHANSON DIELECTRICS
C3-10	8	0160-6736	CAP-FXD 0.01uF +-10pct 50 V CER X7R	12065C103KAT A C1206C103K5RAC C3216X7R1H103K GRM316R71H103KD01D VJ1206Y103KXAMT	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING VISHAY
CR1	1	1906-0291	DIODE-DUAL 70V 100MA T0-236AA	BAV99 BAV99 BAV99LT1G BAV99____X_ BAV99	PHILIPS FAIRCHILD SEMICONDUCTOR ON SEMICONDUCTOR INFINEON TECHNOLOGIES NXP
DS1-23, DS26, DS27, DS30, DS31	28	1990-1518	LED-LAMP GREEN COLOR LUM-INT 5MCD IF 30MA-MAX BVR 5V	LG T670-L1M2-1 SMLC-GC AA3528SGC	OSRAM BIVAR KINGBRIGHT AMERICAN
DS29	1	5040-0023	Display Vac-Flor	INB-12MM53T	SAMSUNG
R1, R9	2	1810-1064	NET-RES 15 10.0K OHM 16-PIN	767161103G SOMC-16-01-103G 4816P-2-103LF	CTS VISHAY BOURNS
R2, R3, R5	3	0699-1433	RESISTOR 562 +-1pct .125W TKF TC=0+-100	CRCW1206562RFKE_ RK73H2BT_5620F MCR18__F5620 232272465621	VISHAY KOA ROHM YAGEO
R4	1	0699-1387	RESISTOR 6.81K +-1pct .125W TKF TC=0+-100	CRCW12066K81FKE_ RK73H2BT_6811F 232272466812L MCR18__F6811	VISHAY KOA YAGEO ROHM

### 53131-68002 Parts List

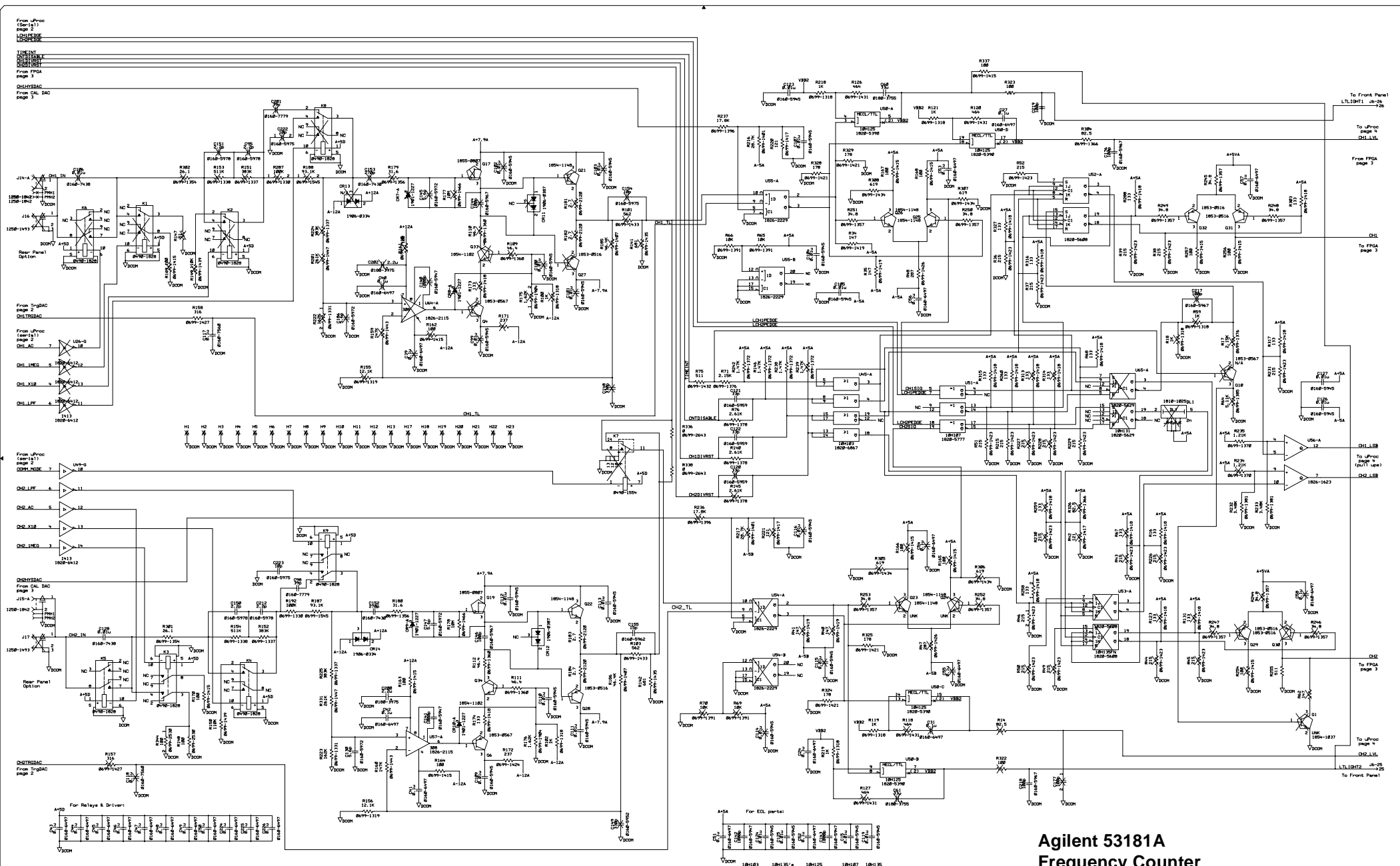
NOTE: This PC assembly is used in the 53131A, 53132A and 53181A. You may have no-load parts locations on your assembly and not all parts listed in this parts list are present on your assembly.

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R6	1	0699-1429	RESISTOR 383 +-1pct .125W TKF TC=0+-100	MCR18-F-3830 RK73H2BT3830F CRCW06031471F 232270464221	ROHM KOA VISHAY YAGEO
R7	1	0699-1437	RESISTOR 825 +-1pct .125W TKF TC=0+-100	CRCW1206825RFKE_ RK73H2BT_8250F MCR18__F8250 232272468251	VISHAY KOA ROHM YAGEO
R8	1	0699-1391	RESISTOR 10K +-1pct .125W TKF TC=0+-100	CRCW120610K0FKE_ RK73H2BT_1002F MCR18__F1002 232272461003L	VISHAY KOA ROHM YAGEO
S1	1	3101-3226	SWITCH-PB DPDT ALTNG .1A 50 VAC	PVA2-EE-H1	ITT INDUSTRIES
U1	1	1820-7612	IC INTERFACE DRVR NMOS DISPLAY LED	M5451Q MM5451BV	STMICROELECTRONICS MICREL
U2	1	1820-5330	IC INTERFACE DRVR BIPOLAR DISPLAY	HV518PJ	SUPERTEX
U3-U5	3	1820-5551	IC DRVR CMOS/HC LINE OCTL	74HC244D MM74HC244WMX SN74HC244DW MC74HC244ADWG 74HC244D	PHILIPS FAIRCHILD SEMICONDUCTOR TEXAS INSTRUMENTS ON SEMICONDUCTOR NXP
U7	1	1826-2323	IC PWR MGT-V-REG-ADJ-POS 1.2/37V 3 PINS	LM317MDT LM317MDTG	STMICROELECTRONICS ON SEMICONDUCTOR
U8	1	1820-5938	IC GATE CMOS/ACT NAND QUAD 2-INP	MC74ACT00DG SN74ACT00D 74ACT00SCX	ON SEMICONDUCTOR TEXAS INSTRUMENTS FAIRCHILD SEMICONDUCTOR
	1	8120-6143	CA - ASSY 28 AWG	80-6105-1907-8 8120-6143	3M LEEMAH ELECTRONICS
	1	5180-0101	Shield-ESD	5180-0101	PARADIGM METAL INDUSTRIES



**Agilent 53181A  
Frequency Counter**

**53181-68004  
Main Board**

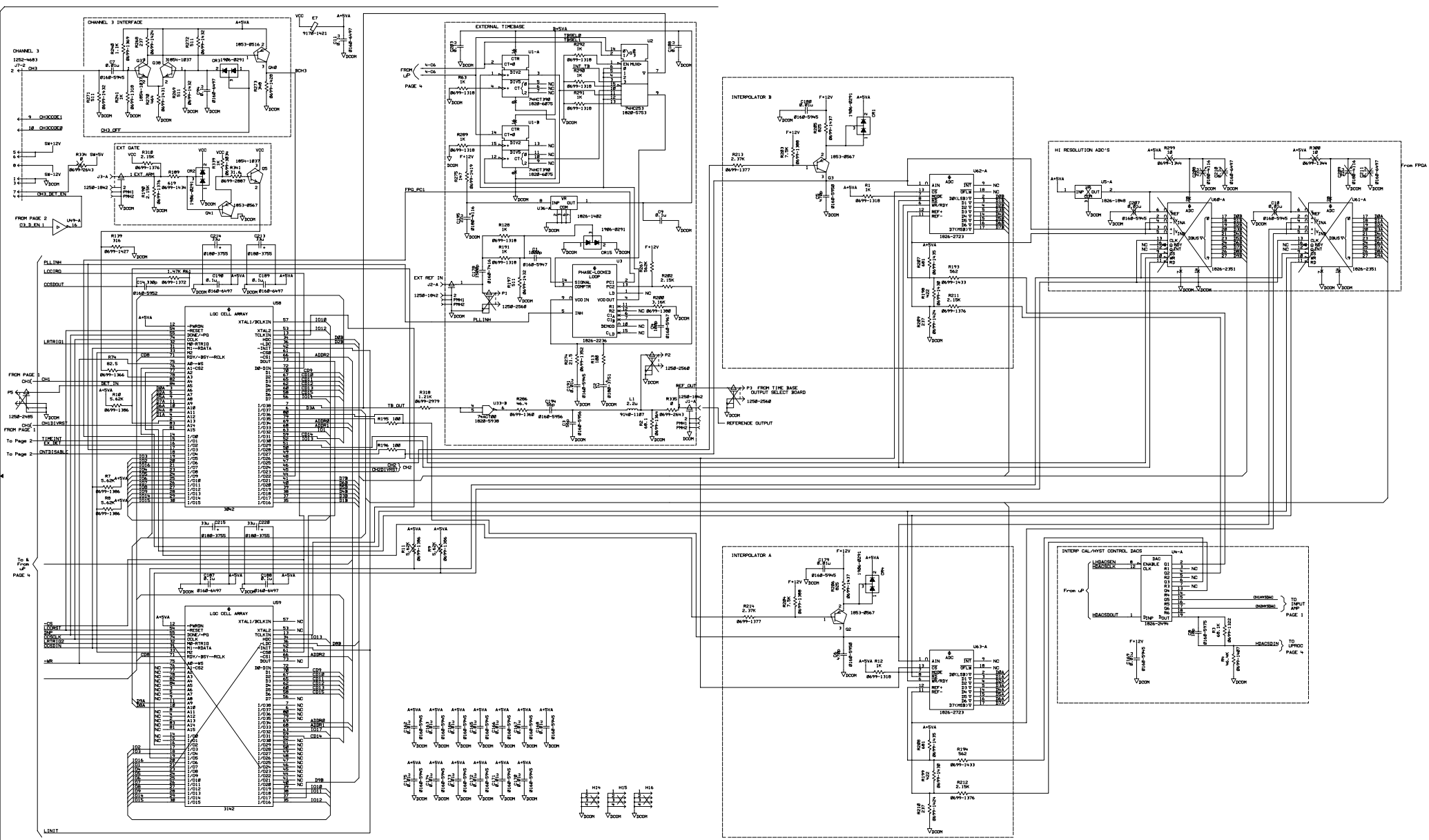


**Agilent 53181A  
Frequency Counter**

**53181-68004  
Main Board**

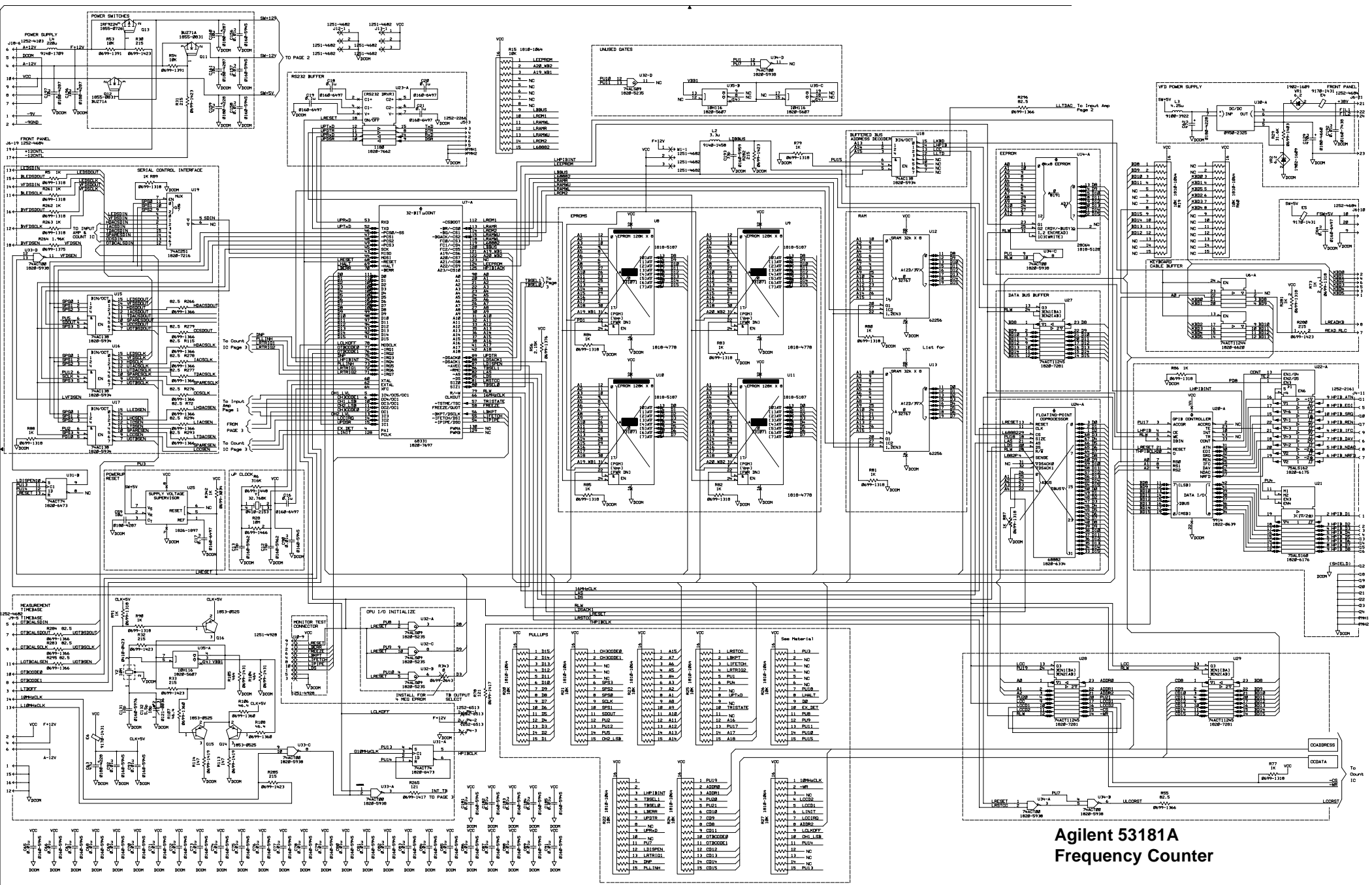






Agilent 53181A  
Frequency Counter

53181-68004  
Main Board



**Agilent 53181A  
Frequency Counter**

**53181-68004  
Main Board**

**53181-68004 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
C1, C141, C142, C143	4	0160-5947	CAP-FXD 1000pF +-10pct 50 V CER X7R	08055C102KAT A C0805C102K5RAC C2012X7R1H102K GRM216R71H102KA01D	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING
C117	1	0160-7560	CAP-FXD 0.1uF +-20pct 16 V CER X7R	0805YC104MAT C0805C104M4RAC C2012X7R1C104M GRM219R71C104MA01D VJ0805Y104MXJMT	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING VISHAY
C12, C13, C155	3	0160-5962	CAP-FXD 15pF +-5pct 50 V CER C0G	08055A150JAT A C0805C150J5GAC C2012COG1H150J GRM2165C1H150JD01D	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING
C121, C122, C193	3	0160-5959	CAP-FXD 33pF +-5pct 50 V CER C0G	08055A330JAT A C0805C330J5GAC C2012COG1H330J GRM2165C1H330JD01D	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING
C128, C192	2	0160-7438	CAP-FXD 0.01uF +-10pct 500 V CER X7R	12107C103KAT A 501S41W103KV6	AVX JOHANSON DIELECTRICS
C129	1	0180-4660	CAP-FXD 470uF +-20pct 63 V AL-ELCLTLT	KME63VB471M12X25LL	NIPPON CHEMI-CON
C130, C147	2	0160-5972	CAP-FXD 5.6pF 50 V CER C0G	08055A5R6DATA C0805C569D5GAC C2012COG1H5R6D GRM2165C1H5R6DD01D	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING
C131	1	0160-5976	CAP-FXD 12pF +-5pct 50 V CER C0G	08051A120JAT A C0805C120J5GAC C2012COG1H120J GRM2165C1H120JD01D	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING
C132	1	0121-0036	CAP-VAR 18pF 5.5pF 350 V CER	538-091-A-5.5-18	TUSONIX
C133, C134, C135, C195, C216	5	0180-4116	CAP-FXD 22uF +-20PCT 20V TA	TAJD226M020 293D226X0020D2E3 ESVD1D226M SK2-1D226M-RD0	AVX VISHAY NEC TOKIN ELNA

**53181-68004 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
C14, C198, C199, C204, C205, C206	6	0160-5952	CAP-FXD 330pF +-5pct 50 V CER C0G	08055A331JAT A C0805C331J5GAC C2012COG1H331J GRM2165C1H331JA01D	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING
C150, C212	2	0160-5978	CAP-FXD 2.2pF 50 V CER C0G	08055A2R2DATA C0805C229D5GAC C2012COG1H2R2C GRM2165C1H2R2CD01D	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING
C152	1	0160-7430	CAP-FXD 270pF +-5pct 500 V CER C0G	12107A271JAT A 501S41N271JV6	AVX JOHANSON DIELECTRICS
C178	1	0160-7416	CAP-FXD 1500pF +-10pct 50 V CER X7R	C0805C152K5RAC C2012X7R1H152KT	KEMET ELECTRONICS TDK
C2	1	0180-3751	CAP-FXD 1uF +-20PCT 35V TA	TAJB105M035 293D105X0035B2E3 ESVB21V105M SK-1V105M-RB	AVX VISHAY NEC ELECTRONICS ELNA
C28, C36, C200	3	0180-3975	CAP-FXD 2.2uF +-20PCT 20V TA	TAJB225M020 293D225X0020B2E3 49MC225B020M0AS ESVB21D225M T491B225M020AS	AVX VISHAY VISHAY BC COMPONENTS NEC ELECTRONICS KEMET ELECTRONICS
C3, C194	2	0160-5956	CAP-FXD 56pF +-5pct 50 V CER C0G	08055A560JAT A C0805C560J5GAC C2012COG1H560J GRM2165C1H560JD01D	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING
C4, C146, C176, C218	4	0160-5967	CAP-FXD 100pF +-5pct 50 V CER C0G	08055A101JAT A C0805C101J5GAC C2012COG1H101J GRM2165C1H101JA01D VJ0805A101JXAMT	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING VISHAY

**53181-68004 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
C5, C6	2	0160-5950	CAP-FXD 470pF +-5pct 50 V CER C0G	08055A471JAT A C0805C471J5GAC C2012COG1H471J GRM2165C1H471JA01D VJ0805A471JXAMT	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING VISHAY
C59, C136, C137, C160, C161, C196, C197	7	0180-4287	CAP-FXD 10uF +-20PCT 35V TA	TAJD106M035 293D106X0035D2WE3 ESVD1V106M	AVX VISHAY NEC ELECTRONICS
C60, C213, C214, C215, C220	5	0180-3755	CAP-FXD 33uF +-20PCT 10V TA	TAJD336M010 293D336X0010D2E3 ESVD1A336M T491D336M010AS	AVX VISHAY NEC ELECTRONICS KEMET ELECTRONICS
C62	1	0180-4977	CAP-FXD 330uF +-20PCT 10V TA SMT	T510X337M010AS TPME337M010R0035	KEMET ELECTRONICS AVX
C63, C138, C139, C159	4	0180-4228	CAP-FXD 47uF +-20PCT 10V TA	TAJD476M010 293D476X0010D2WE3 49MC476D010M0AS ESVD1A476M	AVX VISHAY VISHAY BC COMPONENTS NEC ELECTRONICS
C7, C15, C65-C93, C96, C97, C104, C105, C107, C109-C113, C119, C123-C127, C156-C158, C162-C175, C179-C185, C191	72	0160-5945	CAP-FXD 0.01uF +-10pct 50 V CER X7R	08055C103KAT A 223858016627 C0805C103K5RAC C2012X7R1H103K GRM216R71H103KA01J VJ0805Y103KXAMT	AVX YAGEO KEMET ELECTRONICS TDK MURATA MANUFACTURING VISHAY
C8, C223	2	0160-5975	CAP-FXD 10pF +-5pct 50 V CER C0G	08055A100JAT A C0805C100J5GAC GRM2165C1H100JD01D	AVX KEMET ELECTRONICS MURATA MANUFACTURING
C9, C11, C16-C27, C32-C35, C37, C38, C41-C53, C56, C57, C64, C94, C108, C187-C190, C203, C224-C226	46	0160-6497	CAP-FXD 0.1uF +-10pct 50 V CER X7R	12065C104KAT A 2238 581 15649 C1206C104K5RAC C3216X7R1H104KT GRM319R71H104KA01D VJ1206Y104KXAMT	AVX YAGEO KEMET ELECTRONICS TDK MURATA MANUFACTURING VISHAY
C98	1	0160-7779	CAP-FXD 39pF +-5PCT 500 V CER C0G 1206	12067A390JAT_A 501R18N390JV6_	AVX JOHANSON DIELECTRICS

**53181-68004 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
CR1, CR2, CR3, CR4, CR15	5	1906-0291	DIODE-DUAL 70V 100MA T0-236AA	BAV99 BAV99 BAV99LT1G BAV99____X_ BAV99	PHILIPS FAIRCHILD SEMICONDUCTOR ON SEMICONDUCTOR INFINEON TECHNOLOGIES NXP
CR12	1	1906-0387	DIODE-DUAL 30V TO-236AB (SOT-23)	MMBD1703A	FAIRCHILD SEMICONDUCTOR
CR14	1	1906-0334	DIODE-DUAL 200V 200MA T0-236AA	MMBD1503A	FAIRCHILD SEMICONDUCTOR
CR9, CR10	2	1901-1227	DIODE-SWITCHING 75V 200MA 6NS TO-236	BAS16 BAS16 BAS16LT1G BAS16	PHILIPS VISHAY ON SEMICONDUCTOR NXP
E1, E4, E5, E6	4	9170-1431	CORE-SHIELDING BEAD	HF50ACB-453215	TDK
E2, E3, E7	3	9170-1421	CORE-SHIELDING BEAD IMAX 1500MA	MI1210K600R-10	STEWART
E8	1	9170-1463	CORE-SHIELDING BEAD	4330-030-36301 2743021447	FERROXCUBE USA FAIR RITE PRODUCTS
J1, J2, J3, J15	4	1250-1842	CONNECTOR-RF BNC FEMALE PC-W-STDFS	31-5506 5227677-1	AMPHENOL TYCO ELECTRONICS AMP
J18	1	1252-4103	CONN-POST TYPE .156-PIN-SPCG-MTG-END	643886-2	TYCO ELECTRONICS AMP
J4	1	1252-2161	CONN-RECT MICRORBN 24-CKT 24-CONT	5554923-2	TYCO ELECTRONICS AMP
J5	1	1252-2266	CONN-RECT D-SUBMIN 9-CKT 9-CONT	5788793-1 DM10123-D5	TYCO ELECTRONICS AMP HON HAI PRECISION INDUSTRY
J6	1	1252-4684	CONN-POST TYPE .100-PIN-SPCG-MTG-END	N3429-6202RB	3M
J7	1	1252-4683	CONN-POST TYPE .100-PIN-SPCG-MTG-END	N3793-6202RB	3M
J9	1	1252-4682	CONN-POST TYPE .100-PIN-SPCG-MTG-END	N3408-6202RB	3M
K3, K4, K5, K9	4	0490-1828	RELAY 2C 5VDC-COIL 2A 30VDC	TQ2SA-5V G6H-2F-DC5	MATSUSHITA OMRON
L1	1	9140-1107	INDUCTOR 2.2uH +-5pct 3.4W-mmX4.8LG-mm	SMRF1812-221J	GOWANDA ELECTRONICS
L2	1	9140-1458	INDUCTOR 3.3uH +-5pct 2.8W-mmX3.4LG-mm	NLV32T-3R3J -PF KL32T__3R3J	TDK KOA
L3	1	9100-3922	INDUCTOR FIXED Z GREATER THAN 1200 OH	99ZSPA45165 51-088	TECHNITROL GOWANDA ELECTRONICS
L4	1	9140-1709	INDUCTOR FIXED 220uH +-10PCT 9D-mm Q 20	6000-221K-RC	J.W. MILLER MAGNETICS
MP1	1	53131-20004	BOARD BLANK		
Q11, Q12	2	1855-0831	TRANSISTOR MOSFET N-CHAN E-MODE TO-2	NTP18N06LG	ON SEMICONDUCTOR
Q13	1	1855-0726	TRANSISTOR MOSFET P-CHAN E-MODE TO-2	IRF9Z24PBF	INTERNATIONAL RECTIFIER

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Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
Q14, Q15, Q16	3	1853-0525	TRANSISTOR PNP SI TO-236AA PD=200MW	MMBT2907 PMBT2907A MMBT2907ALT1G PMBT2907A	FAIRCHILD SEMICONDUCTOR PHILIPS ON SEMICONDUCTOR NXP
Q19	1	1855-0807	TRANSISTOR J-FET N-CHAN D-MODE SOT-23	BF511 BF511	PHILIPS NXP
Q2, Q3, Q6, Q41	4	1853-0567	TRANSISTOR PNP SI SOT-23 (TO-236AB)	MMBT3906 SST3906T116 MMBT3906LT1G	FAIRCHILD SEMICONDUCTOR ROHM ON SEMICONDUCTOR
Q22, Q25, Q26	3	1854-1148	TRANSISTOR NPN SI SOT-23 (TO-236AB)	MMBTH10 MMBTH10LT1G	FAIRCHILD SEMICONDUCTOR ON SEMICONDUCTOR
Q28, Q31, Q32, Q40	4	1853-0516	TRANSISTOR PNP SI SOT-23 (TO-236AB)	MMBTH81	FAIRCHILD SEMICONDUCTOR
Q34	1	1854-1102	TRANSISTOR NPN SI SOT-23 (TO-236AB)	MMBTH24	FAIRCHILD SEMICONDUCTOR
Q5, Q37, Q38	3	1854-1037	TRANSISTOR NPN SI TO-236AA PD=350MW	MMBT3904 SST3904T116 MMBT3904LT1G	FAIRCHILD SEMICONDUCTOR ROHM ON SEMICONDUCTOR
R1, R5, R12, R63, R73, R77, R79-R86, R88-R99, R102, R119, R121, R128, R191, R218, R219, R241, R261-R263, R281, R289- R292, R298	43	0699-1318	RESISTOR 1K +-1pct .125W TKF TC=0+-100	CRCW12061K00FKE_ RK73H2BT_1001F MCR18__F1001 232272461002L	VISHAY KOA ROHM YAGEO
R103, R193, R194	3	0699-1433	RESISTOR 562 +-1pct .125W TKF TC=0+-100	CRCW1206562RFKE_ RK73H2BT_5620F MCR18__F5620 232272465621	VISHAY KOA ROHM YAGEO
R104, R105, R120, R126, R270	5	0699-1431	RESISTOR 464 +-1pct .125W TKF TC=0+-100	CRCW1206464RFKE_ RK73H2BT_4640F MCR18__F4640 232272464641	VISHAY KOA ROHM YAGEO
R106, R107, R108, R111, R112, R286	6	0699-1360	RESISTOR 46.4 +-1pct .125W TKF TC=0+-100	CRCW120646R4FKE_ RK73H2BT_46R4F MCR18__F46R4 232272464649	VISHAY KOA ROHM YAGEO



**53181-68004 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R116	1	0699-1503	RESISTOR 0 CWM	CRCW12060000ZSE_ RK73Z2BT MCR18__J000 232271191005	VISHAY KOA ROHM YAGEO
R122	1	1810-1139	NET-RES 8 10.0K OHM 16-PIN	GM8A-03-1002-D-B TOMC-1603-1002D	TT ELECTRONICS VISHAY
R124, R125	2	0699-1382	RESISTOR 3.83K +-1pct .125W TKF TC=0+-100	CRCW12063K83FKE_ RK73H2BT_3831F MCR18__F3831 232272463832L	VISHAY KOA ROHM YAGEO
R13, R129, R130, R163, R164, R167, R168, R170, R195, R196, R256, R257, R337	13	0699-1415	RESISTOR 100 +-1pct .125W TKF TC=0+-100	CRCW1206100RFKE_ RK73H2BT_1000F MCR18__F1000 232272461001L	VISHAY KOA ROHM YAGEO
R132, R133	2	0699-1361	RESISTOR 51.1 +-1pct .125W TKF TC=0+-100	CRCW120651R1FKE_ RK73H2BT_51R1F MCR18__F51R1 232272465119	VISHAY KOA ROHM YAGEO
R134, R135, R136, R301	4	0699-1354	RESISTOR 26.1 +-1pct .125W TKF TC=0+-100	CRCW120626R1FKE_ RK73H2BT_26R1F MCR18__F26R1 232272462619	VISHAY KOA ROHM YAGEO
R139, R158	2	0699-1427	RESISTOR 316 +-1pct .125W TKF TC=0+-100	CRCW1206316RFKE_ RK73H2BT_3160F MCR18__F3160 232272463161	VISHAY KOA ROHM YAGEO
R142, R207, R208	3	0699-1435	RES-FXD 681 OHM +-1PCT .125W TC 0+-100	CRCW1206681RFKE_ RK73H2BT_6810F MCR18__F6810 232272466811	VISHAY KOA ROHM YAGEO
R143, R264	2	0699-1375	RESISTOR 1.96K +-1pct .125W TKF TC=0+-100	CRCW12061K96FKE_ RK73H2BT_1961F MCR18__F1961 232272461962L	VISHAY KOA ROHM YAGEO

**53181-68004 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R148, R344	2	0699-2530	RESISTOR 100 +-1pct .25W TKF TC=0+-100	CRCW1210100RFKE_ RK73H2ET_1000F MCR25___F1000	VISHAY KOA ROHM
R15, R19, R20, R21, R22, R23, R24, R25, R26, R27, R60	11	1810-1064	NET-RES 15 10.0K OHM 16-PIN	767161103G SOMC-16-01-103G 4816P-2-103LF	CTS VISHAY BOURNS
R150	1	0699-1439	RESISTOR 110K +-1pct .125W TKF TC=0+-100	CRCW1206110KFKE_ RK73H2BT_1103F MCR18___F1103 232272461104L	VISHAY KOA ROHM YAGEO
R152, R225	2	0699-1337	RESISTOR 383K +-1pct .125W TKF TC=0+-100	CRCW1206383KFKE_ RK73H2BT_3833F MCR18___F3833 232272463834	VISHAY KOA ROHM YAGEO
R154	1	0699-1338	RESISTOR 511K +-1pct .125W TKF TC=0+-100	CRCW1206511KFKE_ RK73H2BT_5113F MCR18___F5113 232272465114	VISHAY KOA ROHM YAGEO
R156	1	0699-1319	RESISTOR 12.1K +-1pct .125W TKF TC=0+-100	CRCW120612K1FKE_ RK73H2BT_1212F MCR18___F1212 232272461213L	VISHAY KOA ROHM YAGEO
R16, R68, R174, R258, R260, R288, R303, R315, R316, R317, R327	11	0699-1418	RESISTOR 133 +-1pct .125W TKF TC=0+-100	CRCW1206133RFKE_ RK73H2BT_1330F MCR18___F1330 232272461331	VISHAY KOA ROHM YAGEO
R160	1	0699-1443	RESISTOR 147K +-1pct .125W TKF TC=0+-100	CRCW1206147KFKE_ RK73H2BT_1473F MCR18___F1473 232272461474	VISHAY KOA ROHM YAGEO
R172, R209, R210, R268	4	0699-1424	RESISTOR-FXD 237 +-1pct .25W TC 0+-100 12	CRCW1206237RFKE_ RK73H2BT_2370F MCR18___F2370	VISHAY KOA ROHM

**53181-68004 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R176	1	0699-1904	RESISTOR 1.62K +-1pct .125W TKF TC=0+-100	CRCW12061K62FKE_ RK73H2BT_1621F MCR18__F1621 232272461622L	VISHAY KOA ROHM YAGEO
R180	1	0699-1356	RESISTOR 31.6 +-1pct .25W TKF TC=0+-100	CRCW120631R6FKE_ RK73H2BT_31R6F MCR18__F31R6 232272463169	VISHAY KOA ROHM YAGEO
R183, R184	2	0699-2120	RESISTOR 2.7 +-5pct .125W TKF TC=0+-200	MCR18__J2R7	ROHM
R187	1	0699-1545	RESISTOR 93.1K +-1PCT .125W TKF TC=0+-10	CRCW120693K1FKE_ RK73H2BT_9312F MCR18__F9312 232272469313	VISHAY KOA ROHM YAGEO
R189, R307, R308	3	0699-1434	RES-FXD 619 OHM +-1PCT 0.125W TC 0+-100	CRCW1206619RFKE_ RK73H2BT_6190F MCR18__F6190 232272466191	VISHAY KOA ROHM YAGEO
R192	1	0699-1330	RESISTOR 100K +-1pct .125W TKF TC=0+-100	CRCW1206100KFKE_ RK73H2BT_1003F MCR18__F1003 232272461004L	VISHAY KOA ROHM YAGEO
R198, R199	2	0699-1430	RESISTOR 422 +-1pct .125W TKF TC=0+-100	CRCW1206422RFKE_ RK73H2BT_4220F MCR18__F4220 232272464221	VISHAY KOA ROHM YAGEO
R2	1	0699-1364	RESISTOR 68.1 +-1pct .125W TKF TC=0+-100	CRCW120668R1FKE_ RK73H2BT_68R1F MCR18__F68R1 232272466819	VISHAY KOA ROHM YAGEO
R200	1	0699-1380	RESISTOR 3.16K +-1pct .125W TKF TC=0+-100	CRCW12063K16FKE_ RK73H2BT_3161F MCR18__F3161 232272463162	VISHAY KOA ROHM YAGEO

**53181-68004 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R203, R204	2	0699-1388	RESISTOR 7.5K +-1pct .125W TKF TC=0+-100	CRCW12067K50FKE_ RK73H2BT_7501F MCR18__F7501 232272467502	VISHAY KOA ROHM YAGEO
R205, R206	2	0699-1437	RESISTOR 825 +-1pct .125W TKF TC=0+-100	CRCW1206825RFKE_ RK73H2BT_8250F MCR18__F8250 232272468251	VISHAY KOA ROHM YAGEO
R213, R214	2	0699-1377	RESISTOR 2.37K +-1pct .125W TKF TC=0+-100	CRCW12062K37FKE_ RK73H2BT_2371F MCR18__F2371 232272462372L	VISHAY KOA ROHM YAGEO
R216	1	0699-1401	RESISTOR 28.7K +-1pct .125W TKF TC=0+-100	CRCW120628K7FKE_ RK73H2BT_2872F MCR18__F2872 232272462873	VISHAY KOA ROHM YAGEO
R223	1	0699-1331	RESISTOR 162K +-1pct .125W TKF TC=0+-100	CRCW1206162KFKE_ RK73H2BT_1623F MCR18__F1623 232272461624L	VISHAY KOA ROHM YAGEO
R232, R233	2	0699-1381	RESISTOR 3.48K +-1pct .125W TKF TC=0+-100	CRCW12063K48FKE_ RK73H2BT_3481F MCR18__F3481 232272463482	VISHAY KOA ROHM YAGEO
R235	1	0699-1370	RESISTOR 1.21K +-1pct .125W TKF TC=0+-100	CRCW12061K21FK E_ RK73H2BT_1211F MCR18__F1211 232272461212	VISHAY KOA ROHM YAGEO
R237	1	0699-1396	RESISTOR 17.8K +-1pct .125W TKF TC=0+-100	CRCW120617K8FKE_ RK73H2BT_1782F MCR18__F1782 232272461783L	VISHAY KOA ROHM YAGEO

**53181-68004 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R240	1	0699-1369	RESISTOR 1.1K +-1pct .125W TKF TC=0+-100	CRCW12061K10FKE_ RK73H2BT_1101F MCR18__F1101 232272461102L	VISHAY KOA ROHM YAGEO
R245, R248, R249, R250, R251	5	0699-1357	RESISTOR 34.8 +-1pct .125W TKF TC=0+-100	CRCW120634R8FKE_ RK73H2BT_34R8F MCR18__F34R8 232272463489	VISHAY KOA ROHM YAGEO
R267	1	0699-1456	RESISTOR 562K +-1pct .125W TKF TC=0+-100	CRCW1206562KFKE_ RK73H2BT_5623F MCR18__F5623 232272465624L	VISHAY KOA ROHM YAGEO
R273	1	0699-1428	RESISTOR 348 +-1pct .125W TKF TC=0+-100	CRCW1206348RFKE_ RK73H2BT_3480F MCR18__F3480 232272463481	VISHAY KOA ROHM YAGEO
R274	1	0699-1352	RESISTOR 21.5 +-1pct .125W TKF TC=0+-100	CRCW120621R5FKE_ RK73H2BT_21R5F MCR18__F21R5 232272462159	VISHAY KOA ROHM YAGEO
R28, R178	2	0699-1466	RESISTOR 10M +-10pct .125W TKF TC=0+-200	CRCW1206106KJNE_ RK73B2BT_106J MCR18__K106 232271161106	VISHAY KOA ROHM YAGEO
R29	1	0699-1403	RESISTOR 31.6K +-1pct .125W TKF TC=0+-100	CRCW120631K6FKE_ RK73H2BT_3162F MCR18__F3162 232272463163L	VISHAY KOA ROHM YAGEO
R3	1	0699-1322	RESISTOR 68.1K +-1pct .125W TKF TC=0+-100	CRCW120668K1FKE_ RK73H2BT_6812F MCR18__F6812 232272466813	VISHAY KOA ROHM YAGEO

**53181-68004 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R30, R31, R32, R33, R36, R37, R38, R39, R46, R51, R52, R215, R229, R231, R280, R282, R285	17	0699-1423	RESISTOR 215 +-1pct .125W TKF TC=0+-100	CRCW1206215RFKE_ RK73H2BT_2150F MCR18__F2150 232272462151L	VISHAY KOA ROHM YAGEO
R318	1	0699-2979	RESISTOR 1.21K +-1pct .1W TKF TC=0+-100	CRCW08051K21FKE_ RK73H2AT_1211F MCR10__F1211 232273461212 MC08051211-FT	VISHAY KOA ROHM YAGEO RCD COMPONENTS
R324, R325, R328, R329	4	0699-1421	RESISTOR 178 +-1pct .125W TKF TC=0+-100	CRCW1206178RFKE_ RK73H2BT_1780F MCR18__F1780 232272461781	VISHAY KOA ROHM YAGEO
R331	1	0699-1447	RESISTOR 261K +-1pct .125W TKF TC=0+-100	CRCW1206261KFKE_ RK73H2BT_2613F MCR18__F2613 232272462614	VISHAY KOA ROHM YAGEO
R333, R335, R336, R338	4	0699-2643	RES-FXD 0 OHM +-5PCT .1W TC 0+-300	CRCW08050000ZSE_ CR21-000-ZL MCR10__J000 RK73Z2AT 232273091002L ZC0805-TW	VISHAY ASJ ROHM KOA YAGEO RCD COMPONENTS
R339, R342	2	0699-3034	RESISTOR 1K +-1pct .1W TKF TC 0+-100	CRCW08051K00FKE_ RK73H2AT_1001F 232273461002L MCR10__F1001 MC08051001-FT	VISHAY KOA YAGEO ROHM RCD COMPONENTS
R34, R35, R113, R114, R275	5	0699-1419	RESISTOR 147 +-1pct .125W TKF TC=0+-100	CRCW1206147RFKE_ RK73H2BT_1470F MCR18__F1470 232272461471L	VISHAY KOA ROHM YAGEO
R341	1	0699-2887	RESISTOR 31.6 +-1pct .1W TKF TC=0+-100	CRCW080531R6FKE_ RK73H2AT_31R6F MCR10__F31R6 MC080531R6-FT	VISHAY KOA ROHM RCD COMPONENTS

**53181-68004 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R4, R186	2	0699-1407	RESISTOR 46.4K +-1pct .125W TKF TC=0+-100	CRCW120646K4FKE_ RK73H2BT_4642F MCR18__F4642 232272464643	VISHAY KOA ROHM YAGEO
R48	1	0699-1426	RESISTOR 287 +-1pct .125W TKF TC=0+-100	CRCW1206287RFKE_ RK73H2BT_2870F MCR18__F2870 232272462871	VISHAY KOA ROHM YAGEO
R53, R54, R65, R66	4	0699-1391	RESISTOR 10K +-1pct .125W TKF TC=0+-100	CRCW120610K0FKE_ RK73H2BT_1002F MCR18__F1002 232272461003L	VISHAY KOA ROHM YAGEO
R55, R72, R74, R115, R266, R276, R277, R278, R279, R283, R284, R293, R294, R295, R296, R304	16	0699-1366	RESISTOR 82.5 +-1pct .125W TKF TC=0+-100	CRCW120682R5FKE_ RK73H2BT_82R5F MCR18__F82R5 232272468259	VISHAY KOA ROHM YAGEO
R56, R57, R58, R71, R190, R202, R211, R212, R310	9	0699-1376	RESISTOR 2.15K +-1pct .125W TKF TC=0+-100	CRCW12062K15FKE_ RK73H2BT_2151F MCR18__F2151 232272462152	VISHAY KOA ROHM YAGEO
R6	1	0699-1448	RESISTOR 316K +-1pct .125W TKF TC=0+-100	CRCW1206316KFKE_ RK73H2BT_3163F MCR18__F3163 232272463164	VISHAY KOA ROHM YAGEO
R61, R146, R238, R242, R312	5	0699-1372	RESISTOR 1.47K +-1pct .125W TKF TC=0+-100	CRCW12061K47FKE_ RK73H2BT_1471F MCR18__F1471 232272461472	VISHAY KOA ROHM YAGEO
R7, R8, R10	3	0699-1386	RESISTOR 5.62K +-1pct .125W TKF TC=0+-100	CRCW12065K62FKE_ RK73H2BT_5621F MCR18__F5621 232272465622L	VISHAY KOA ROHM YAGEO

**53181-68004 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R75, R137, R197, R255, R269, R271, R272	7	0699-1432	RESISTOR 511 +-1pct .125W TKF TC=0+-100	CRCW1206511RFKE_ RK73H2BT_5110F MCR18__F5110 232272465111L	VISHAY KOA ROHM YAGEO
R76, R140	2	0699-1378	RESISTOR 2.61K +-1pct .125W TKF TC=0+-100	CRCW12062K61FKE_ RK73H2BT_2611F MCR18__F2611 232272462612L	VISHAY KOA ROHM YAGEO
R78, R220, R265	3	0699-1417	RESISTOR 121 +-1pct .125W TKF TC=0+-100	CRCW1206121RFKE_ RK73H2BT_1210F MCR18__F1210 232272461211	VISHAY KOA ROHM YAGEO
U1	1	1820-6075	IC CNTR CMOS/HCT DECD ASYNCHRO	74HCT390D 74HCT390D	PHILIPS NXP
U12, U13	2	1818-4218	IC SRAM 256K-BIT 70-NS CMOS 28-SOIC	CY62256NLL-70SNXC	CYPRESS SEMICONDUCTOR
U14	1	1818-5128	IC 64K-BIT EEPROM 200-NS CMOS	AT28C64B-15JU	ATMEL
U15, U16, U17, U18	4	1820-5934	IC DCDR-DEMUXR CMOS/AC BIN 8-TO-1-LINE	MC74AC138DR2G	ON SEMICONDUCTOR
U19	1	1820-7216	IC MUXR/DATA-SEL CMOS/AC 8-TO-1-LINE	74AC251SCX.	FAIRCHILD SEMICONDUCTOR
U2	1	1820-5753	IC MUXR/DATA-SEL 4-TO-1-LINE 16-SOIC	74HC253D 74HC253D	PHILIPS NXP
U20	1	1822-0639	IC HPIB CONTROLLER	14063-501	AMIS SEMICONDUCTOR
U21	1	1820-6176	IC INTERFACE XCVR BIPOLAR BUS OCTL	SN75ALS160DW	TEXAS INSTRUMENTS
U22	1	1820-6175	IC INTERFACE XCVR BIPOLAR BUS OCTL	SN75ALS162DW	TEXAS INSTRUMENTS
U23	1	1820-7662	IC INTFC DRVR/RCVR BIPOLAR DUAL 18-SOIC	LT1180ACSW	LINEAR TECHNOLOGY
U25	1	1826-1897	IC PWR MGT-VS-SUPVR/CONT	TL7705ACD1/A TL7705ACD	STMICROELECTRONICS TEXAS INSTRUMENTS
U27, U28, U29	3	1820-7281	IC TRANSCEIVER CMOS/ACL BUS OCTL	74ACT11245DW	TEXAS INSTRUMENTS
U3	1	1826-2236	IC PL LOOP LP SINGLE 16 PIN PLSTC-SOIC	74HCT7046AD 74HCT7046AD	PHILIPS NXP
U30	1	0950-2325	DC-DC-CONV 12 VDC NOM INP; DL-OUT	E2577VF	ENDICOTT RESEARCH GROUP
U31	1	1820-6473	IC FF CMOS/ACT D-TYPE POS-EDGE-TRIG	MC74ACT74DG SN74ACT74D 74ACT74SCX	ON SEMICONDUCTOR TEXAS INSTRUMENTS FAIRCHILD SEMICONDUCTOR
U32	1	1820-5235	IC GATE TTL/ALS AND QUAD 2-INP	DM74ALS09MX	FAIRCHILD SEMICONDUCTOR

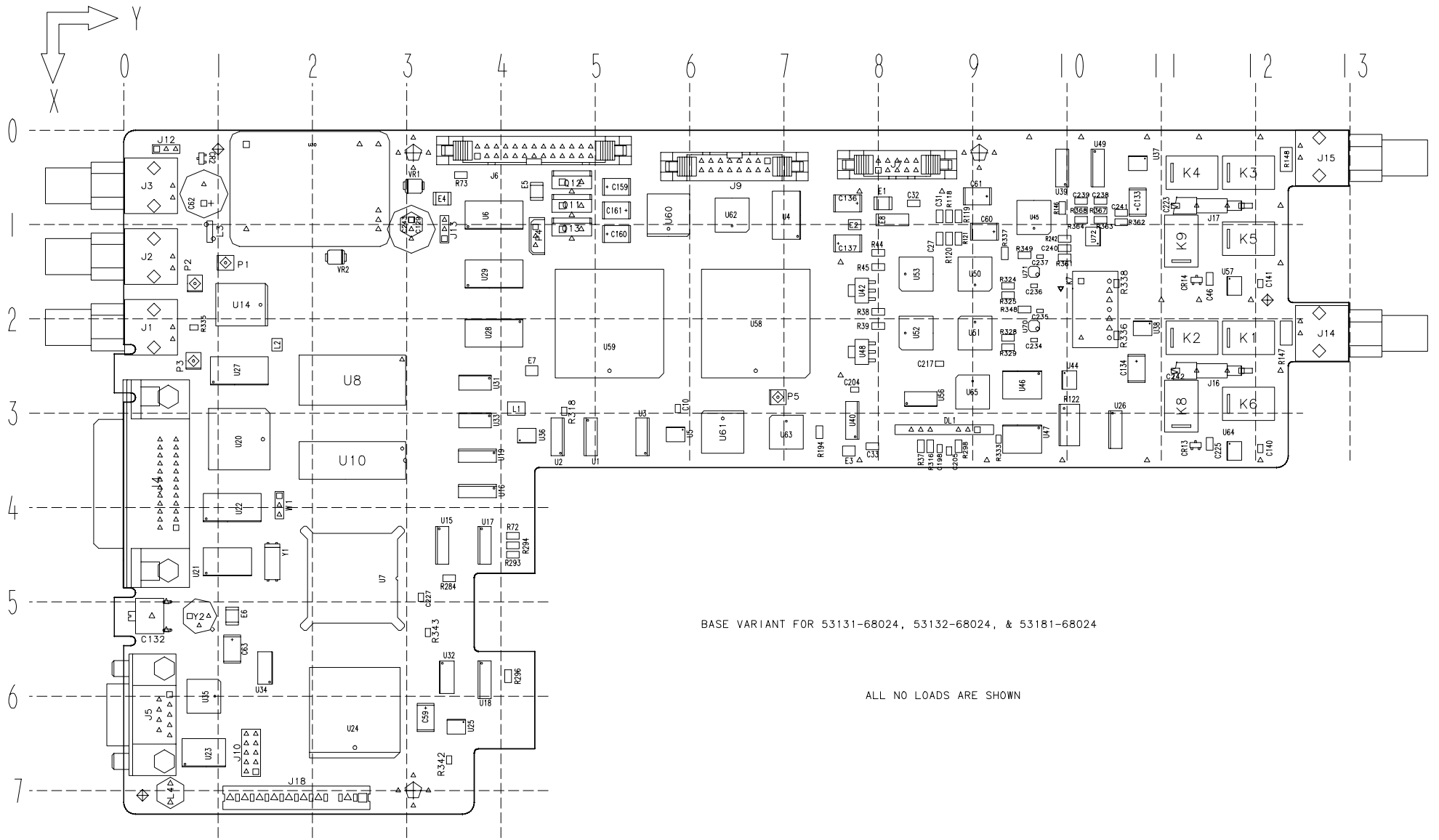


**53181-68004 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
U33, U34	2	1820-5938	IC GATE CMOS/ACT NAND QUAD 2-INP	MC74ACT00DG SN74ACT00D 74ACT00SCX	ON SEMICONDUCTOR TEXAS INSTRUMENTS FAIRCHILD SEMICONDUCTOR
U35	1	1820-5607	IC RCVR ECL/10KH LINE TPL	MC10H116FNG	ON SEMICONDUCTOR
U36	1	1826-1402	IC PWR MGT-V-REG-FXD-POS 4.8/5.2V 8 PINS	UA78L05ACD MC78L05ACDR2G LM78L05ACM NOPB	TEXAS INSTRUMENTS ON SEMICONDUCTOR NATIONAL SEMICONDUCTOR
U37, U38	2	1826-1601	IC PWR MGT-V-REF-ADJ 2.5/36V 8 PINS	TL431CD LM431ACMNOPB	TEXAS INSTRUMENTS NATIONAL SEMICONDUCTOR
U39, U40	2	1820-6277	IC SHF-RGTR CMOS/HC SYNC/ASYN SERIAL	MC74HC595ADG MM74HC595M N74HC595D SN74HC595D N74HC595D	ON SEMICONDUCTOR FAIRCHILD SEMICONDUCTOR PHILIPS TEXAS INSTRUMENTS NXP
U4	1	1826-2494	D/A 6-BIT 20-P-SOIC CMOS		
U42, U48	2	1826-1738	IC PWR MGT-V-REG-FXD-NEG -4.8/-5.2V 3	MC79M05CDTG	ON SEMICONDUCTOR
U44	1	1826-2420	IC OP AMP LOW-POWER-BIPOLAR-DUAL 8-SC	AD706JRZ	ANALOG DEVICES
U45	1	1820-6867	IC GATE ECL/10KH OR QUAD 2-INP	MC10H103FN_G	ON SEMICONDUCTOR
U47	1	1826-2722	D/A 12-BIT 16-P-SOIC CMOS	AD7243AR	ANALOG DEVICES
U49	1	1820-6412	TRANSISTOR ARRAY 16-PIN PLSTC SURFACE	ULN2003AD MC1413DG	TEXAS INSTRUMENTS ON SEMICONDUCTOR
U50	1	1820-5390	IC XLTR ECL/10KH ECL-TO-TTL QUAD	MC10H125FNG	ON SEMICONDUCTOR
U51	1	1820-5777	IC GATE ECL/10KH EXCL-OR/NOR TPL 2-INP	MC10H107FN_G	ON SEMICONDUCTOR
U52	1	1820-5608	IC FF ECL/10KH J-K M/S POS-EDGE-TRIG	MC10H135FNG	ON SEMICONDUCTOR
U55	1	1826-2229	IC COMPARATOR HS DUAL 20 PIN PLCC	AD96687BPZ	ANALOG DEVICES
U56	1	1826-1623	IC COMPARATOR GP DUAL 14 PIN PLSTC-SO	LM319M-NOPB	NATIONAL SEMICONDUCTOR
U57	1	1826-2115	IC OP AMP LOW-BIAS-H-IMPD SINGLE 8 PIN	LT1008S8	LINEAR TECHNOLOGY
U58	1	1821-1489	IC PLD FPGA UNPRGMD CMOS 3042	XC3042A-7PC84C	XILINX
U6	1	1820-6620	IC DRVR CMOS/ACL BUS OCTL	74ACT11244DW	TEXAS INSTRUMENTS
U62, U63	2	1826-2723	A/D 8-BIT 20-PLCC CMOS	TLC0820ACFN	TEXAS INSTRUMENTS
U7	1	1820-7697	IC MODULAR MICROCONTROLLER;16MHZ	MC68331CEH16	FREESCALE SEMICONDUCTOR
VR1, VR2	2	1902-1609	DIODE-ZNR 6.2V 5pct PD=1.5W IR=5UA	1SMB5920BT3G	ON SEMICONDUCTOR
XU8, XU9, XU10, XU11	4	1200-1593	SOCKET-IC-PLCC 32-CONT RECTGLR J-LEAD	3-822516-7 69802-_32	TYCO ELECTRONICS AMP FCI FRAMATOME BERG
Y1	1	0410-2153	CRYSTAL-QUARTZ 32.768 KHZ	FSMLF-327 Q13MC4051000200	FOX ELECTRONICS EPSON TOYOCOM

**53181-68004 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
Y2	1	0410-0423	PRECISION BULK MODE-AT FREQ=10.0 MHZ	020-0933-0 0410-0423 BK3-1B-10MHZ XTS-153	CTS FCP BLILEY ELECTRIC COMPANY VECTRON

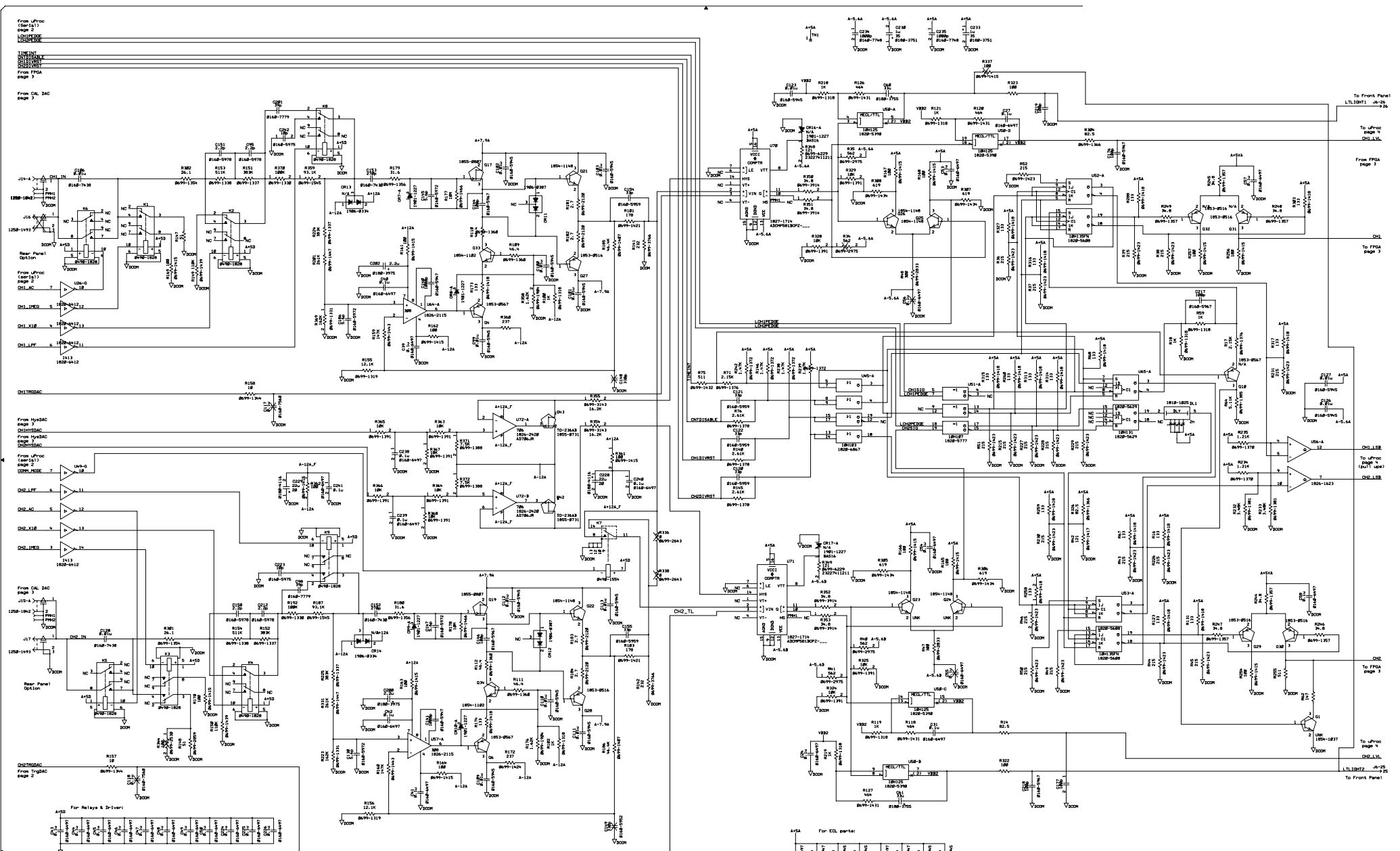


BASE VARIANT FOR 53131-68024, 53132-68024, & 53181-68024

ALL NO LOADS ARE SHOWN

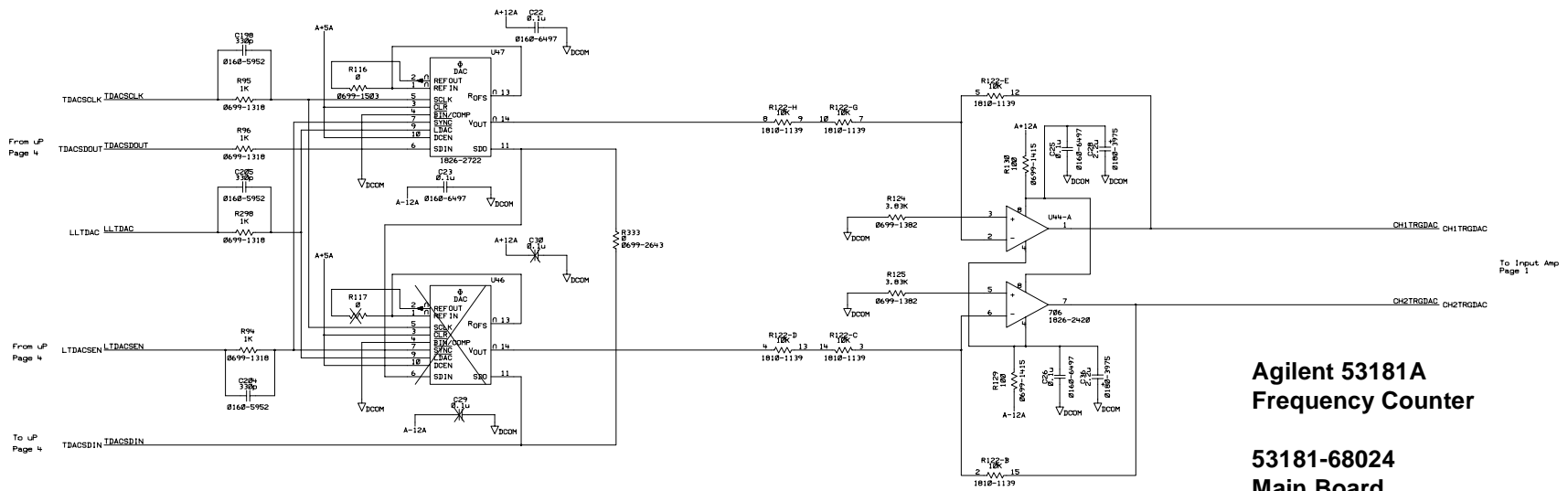
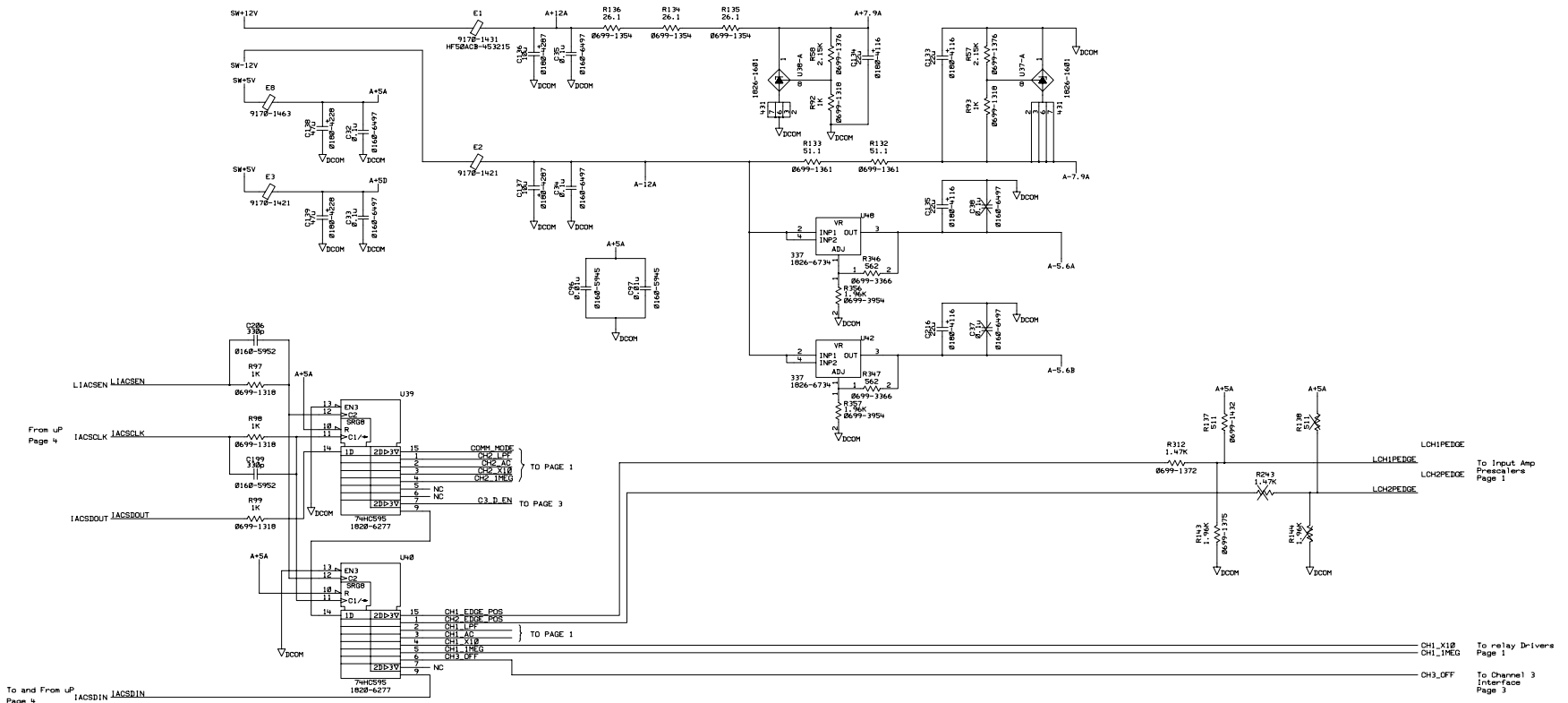
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Frequency Counter**

**53181-68024  
Component Locator**



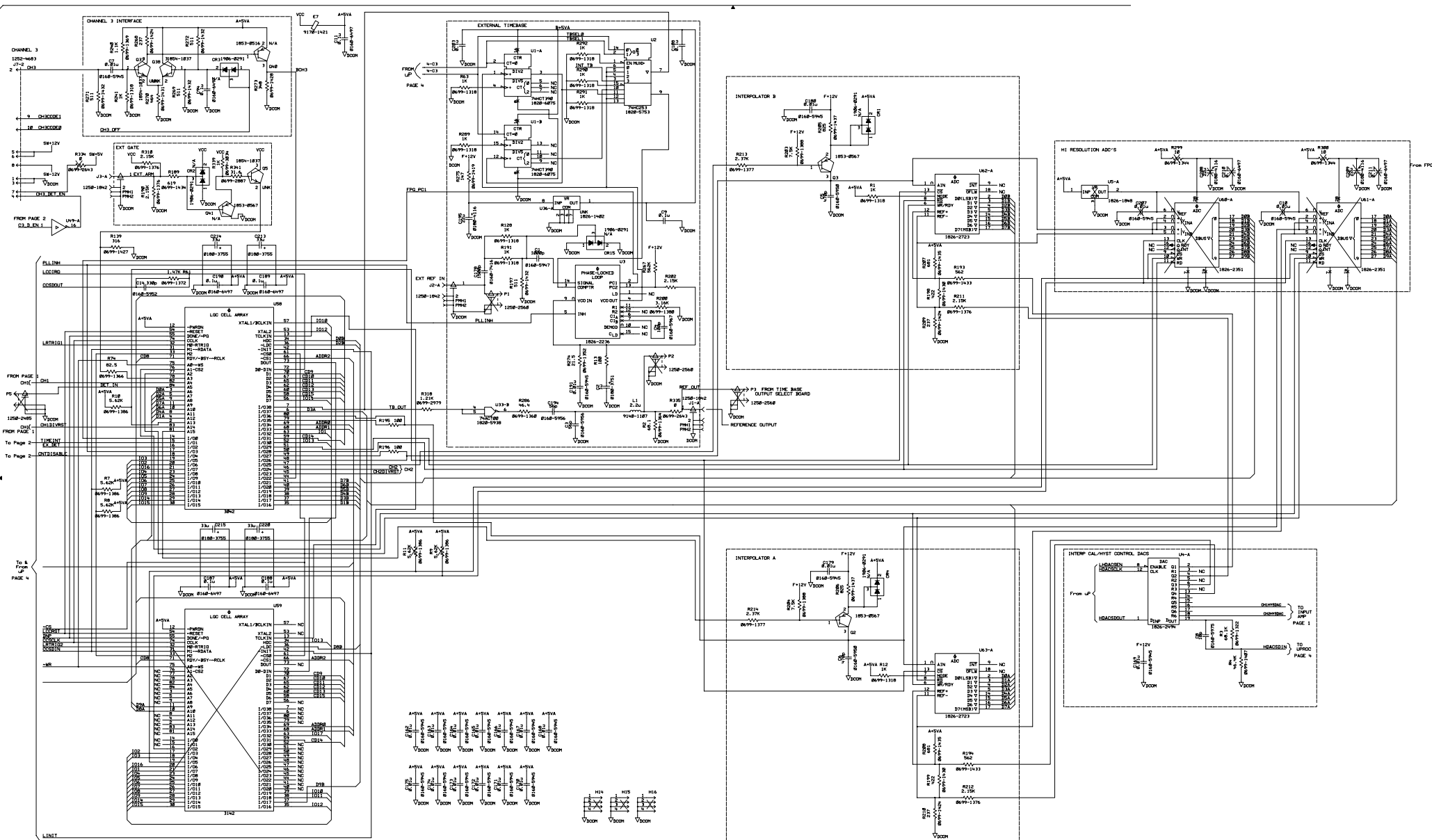
**Agilent 53181A  
Frequency Counter**

**53181-68024  
Main Board**



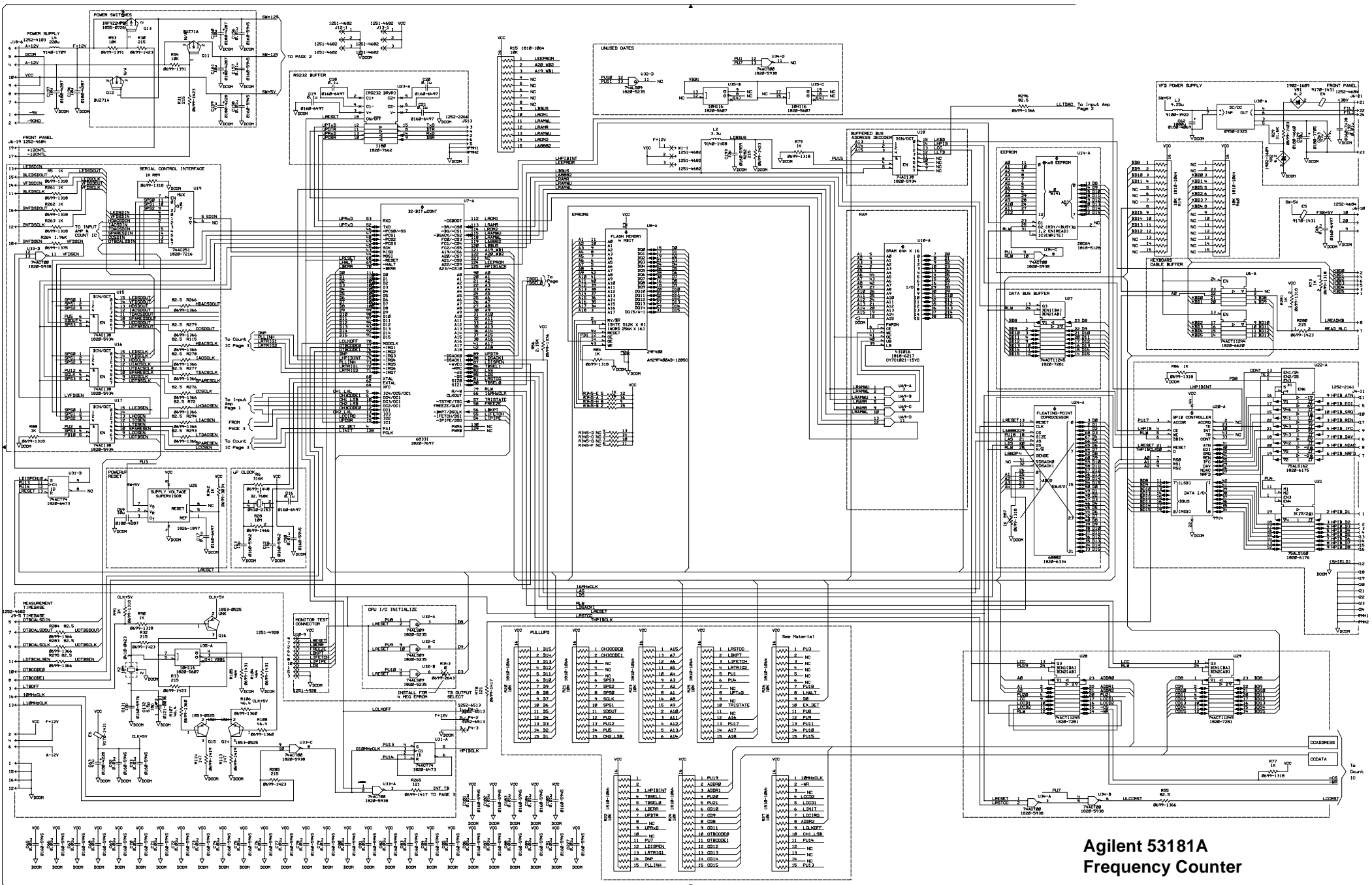
**Agilent 53181A  
Frequency Counter**

**53181-68024  
Main Board**



**Agilent 53181A  
Frequency Counter**

**53181-68024  
Main Board**



**Agilent 53181A  
Frequency Counter**

**53181-68024  
Main Board**

**53181-68024 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
C1, C140, C141, C142, C143	5	0160-5947	CAP-FXD 1000pF +-10pct 50 V CER X7R	08055C102KAT A C0805C102K5RAC C2012X7R1H102K GRM216R71H102KA01D	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING
C2, C230, C231, C232, C233	5	0180-3751	CAP-FXD 1uF +-20PCT 35V TA	TAJB105M035 293D105X0035B2E3 ESVB21V105M SK-1V105M-RB	AVX VISHAY NEC ELECTRONICS ELNA
C3, C194	2	0160-5956	CAP-FXD 56pF +-5pct 50 V CER C0G	08055A560JAT A C0805C560J5GAC C2012COG1H560J GRM2165C1H560JD01D	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING
C5, C6	2	0160-5950	CAP-FXD 470pF +-5pct 50 V CER C0G	08055A471JAT A C0805C471J5GAC C2012COG1H471J GRM2165C1H471JA01D VJ0805A471JXAMT	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING VISHAY
C4, C144, C146, C176, C177, C217, C218, C219	8	0160-5967	CAP-FXD 100pF +-5pct 50 V CER C0G	08055A101JAT A C0805C101J5GAC C2012COG1H101J GRM2165C1H101JA01D VJ0805A101JXAMT	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING VISHAY
C7, C15, C65-C93, C96, C97, C99-C103, C109-C113, C119, C123-C127, C156-C158, C162-C175, C179-C185, C191, C227	75	0160-5945	CAP-FXD 0.01uF +-10pct 50 V CER X7R	08055C103KAT A 223858016627 C0805C103K5RAC C2012X7R1H103K GRM216R71H103KA01J VJ0805Y103KXAMT	AVX YAGEO KEMET ELECTRONICS TDK MURATA MANUFACTURING VISHAY
C8, C223, C242	3	0160-5975	CAP-FXD 10pF +-5pct 50 V CER C0G	08055A100JAT A C0805C100J5GAC GRM2165C1H100JD01D	AVX KEMET ELECTRONICS MURATA MANUFACTURING



**53181-68024 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
C9, C11, C16-C27, C31-C35, C39-C54, C57, C58, C64, C94, C108, C187-C190, C203, C224-C226, C238-C241	52	0160-6497	CAP-FXD 0.1uF +-10pct 50 V CER X7R	12065C104KAT A 2238 581 15649 C1206C104K5RAC C3216X7R1H104KT GRM319R71H104KA01D VJ1206Y104KXAMT	AVX YAGEO KEMET ELECTRONICS TDK MURATA MANUFACTURING VISHAY
C12, C13	2	0160-5962	CAP-FXD 15pF +-5pct 50 V CER C0G	08055A150JAT A C0805C150J5GAC C2012COG1H150J GRM2165C1H150JD01D	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING
C14, C198, C199, C204, C205, C206	6	0160-5952	CAP-FXD 330pF +-5pct 50 V CER C0G	08055A331JAT A C0805C331J5GAC C2012COG1H331J GRM2165C1H331JA01D	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING
C28, C36, C200, C202	4	0180-3975	CAP-FXD 2.2uF +-20PCT 20V TA	TAJB225M020 293D225X0020B2E3 49MC225B020M0AS ESVB21D225M T491B225M020AS	AVX VISHAY VISHAY BC COMPONENTS NEC ELECTRONICS KEMET ELECTRONICS
C59, C136, C137, C160, C161, C196, C197	7	0180-4287	CAP-FXD 10uF +-20PCT 35V TA	TAJD106M035 293D106X0035D2WE3 ESVD1V106M	AVX VISHAY NEC ELECTRONICS
C60, C61, C213, C214, C215, C220	6	0180-3755	CAP-FXD 33uF +-20PCT 10V TA	TAJD336M010 293D336X0010D2E3 ESVD1A336M T491D336M010AS	AVX VISHAY NEC ELECTRONICS KEMET ELECTRONICS
C62	1	0180-4069	CAP-FXD 1000uF +-20pct 25 V AL-ELCTLT	SME25VB102M12X20FT	NIPPON CHEMI-CON
C63, C138, C139, C159	4	0180-4228	CAP-FXD 47uF +-20PCT 10V TA	TAJD476M010 293D476X0010D2WE3 49MC476D010M0AS ESVD1A476M	AVX VISHAY VISHAY BC COMPONENTS NEC ELECTRONICS
C98, C201	2	0160-7779	CAP-FXD 39pF +-5PCT 500 V CER C0G 1206	12067A390JAT_A 501R18N390JV6_	AVX JOHANSON DIELECTRICS

**53181-68024 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
C95, C150, C151, C212	4	0160-5978	CAP-FXD 2.2pF 50 V CER C0G	08055A2R2DATA C0805C229D5GAC C2012COG1H2R2C GRM2165C1H2R2CD01D	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING
C106, C128, C192	3	0160-7438	CAP-FXD 0.01uF +-10pct 500 V CER X7R	12107C103KAT A 501S41W103KV6	AVX JOHANSON DIELECTRICS
C120, C121, C122, C154, C155, C193	6	0160-5959	CAP-FXD 33pF +-5pct 50 V CER C0G	08055A330JAT A C0805C330J5GAC C2012COG1H330J GRM2165C1H330JD01D	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING
C129	1	0180-4660	CAP-FXD 470uF +-20pct 63 V AL-ELCTLT	KME63VB471M12X25LL	NIPPON CHEMI-CON
C130, C145, C147, C186	4	0160-5972	CAP-FXD 5.6pF 50 V CER C0G	08055A5R6DATA C0805C569D5GAC C2012COG1H5R6D GRM2165C1H5R6DD01D	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING
C132	1	0121-0036	CAP-VAR 18pF 5.5pF 350 V CER	538-091-A-5.5-18	TUSONIX
C131	1	0160-5976	CAP-FXD 12pF +-5pct 50 V CER C0G	08051A120JAT A C0805C120J5GAC C2012COG1H120J GRM2165C1H120JD01D	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING
C133, C134, C135, C195, C216, C228, C229	7	0180-4116	CAP-FXD 22uF +-20PCT 20V TA	TAJD226M020 293D226X0020D2E3 ESVD1D226M SK2-1D226M-RD0	AVX VISHAY NEC TOKIN ELNA
C152, C153	2	0160-7430	CAP-FXD 270pF +-5pct 500 V CER C0G	12107A271JAT A 501S41N271JV6	AVX JOHANSON DIELECTRICS
C178	1	0160-7416	CAP-FXD 1500pF +-10pct 50 V CER X7R	C0805C152K5RAC C2012X7R1H152KT	KEMET ELECTRONICS TDK
CR1, CR2, CR3, CR4, CR15	5	1906-0291	DIODE-DUAL 70V 100MA T0-236AA	BAV99 BAV99 BAV99LT1G BAV99____X_ BAV99	PHILIPS FAIRCHILD SEMICONDUCTOR ON SEMICONDUCTOR INFINEON TECHNOLOGIES NXP

**53181-68024 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
C234, C235, C236, C237	4	0160-7748	CAP-FXD 1000pF +-10PCT 50V CER X7R 0603	06035C102KAT 223858615614 C0603C102K5RAC C1608X7R1H102KT GRM188R71H102KA01D VJ0603Y102KXA	AVX YAGEO KEMET ELECTRONICS TDK MURATA MANUFACTURING VISHAY
CR7, CR8, CR9, CR10, CR16, CR17	6	1901-1227	DIODE-SWITCHING 75V 200MA 6NS TO-236	BAS16 BAS16 BAS16LT1G BAS16	PHILIPS VISHAY ON SEMICONDUCTOR NXP
CR11, CR12	2	1906-0387	DIODE-DUAL 30V TO-236AB (SOT-23)	MMBD1703A	FAIRCHILD SEMICONDUCTOR
DL1	1	1810-1025	DELAY LINE PASSIVE DEVICE W/SINGLE	DL1L5XK200S	SUSUMU
CR13, CR14	2	1906-0334	DIODE-DUAL 200V 200MA T0-236AA	MMBD1503A	FAIRCHILD SEMICONDUCTOR
E1, E4, E5, E6	4	9170-1431	CORE-SHIELDING BEAD	HF50ACB-453215	TDK
E2, E3, E7	3	9170-1421	CORE-SHIELDING BEAD IMAX 1500MA	MI1210K600R-10	STEWART
E8	1	9170-1463	CORE-SHIELDING BEAD	4330-030-36301 2743021447	FERROXCUBE USA FAIR RITE PRODUCTS
J1, J2, J3, J14, J15	5	1250-1842	CONNECTOR-RF BNC FEMALE PC-W-STDFS	31-5506 5227677-1	AMPHENOL TYCO ELECTRONICS AMP
J4	1	1252-2161	CONN-RECT MICRORBN 24-CKT 24-CONT	5554923-2	TYCO ELECTRONICS AMP
J5	1	1252-2266	CONN-RECT D-SUBMIN 9-CKT 9-CONT	5788793-1 DM10123-D5	TYCO ELECTRONICS AMP HON HAI PRECISION INDUSTRY
J6	1	1252-4684	CONN-POST TYPE .100-PIN-SPCG-MTG-END	N3429-6202RB	3M
J7	1	1252-4683	CONN-POST TYPE .100-PIN-SPCG-MTG-END	N3793-6202RB	3M
J9	1	1252-4682	CONN-POST TYPE .100-PIN-SPCG-MTG-END	N3408-6202RB	3M
J17	1	1250-1493	TERMINATION-COAX CA CRP-COAX-CA	9-226176-1	TYCO ELECTRONICS AMP
J18	1	1252-4103	CONN-POST TYPE .156-PIN-SPCG-MTG-END	643886-2	TYCO ELECTRONICS AMP
K1-K6, K8, K9	8	0490-1828	RELAY 2C 5VDC-COIL 2A 30VDC	TQ2SA-5V G6H-2F-DC5	MATSUSHITA OMRON
K7	1	0490-1554	RELAY 1C 5VDC-COIL 0.5A 30VAC/DC	G6Y-1-DC5	OMRON
L1	1	9140-1107	INDUCTOR 2.2uH +-5pct 3.4W-mmX4.8LG-mm	SMRF1812-221J	GOWANDA ELECTRONICS
L2	1	9140-1458	INDUCTOR 3.3uH +-5pct 2.8W-mmX3.4LG-mm	NLV32T-3R3J -PF KL32T__3R3J	TDK KOA
L3	1	9100-3922	INDUCTOR FIXED Z GREATER THAN 1200 OHMS 120 TO 650	99ZSPA45165 51-088	TECHNITROL GOWANDA ELECTRONICS

**53181-68024 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
Q2-Q4, Q6, Q10, Q41	6	1853-0567	TRANSISTOR PNP SI SOT-23 (TO-236AB)	MMBT3906 SST3906T116 MMBT3906LT1G	FAIRCHILD SEMICONDUCTOR ROHM ON SEMICONDUCTOR
Q1, Q5, Q37, Q38	4	1854-1037	TRANSISTOR NPN SI TO-236AA PD=350MW	MMBT3904 SST3904T116 MMBT3904LT1G	FAIRCHILD SEMICONDUCTOR ROHM ON SEMICONDUCTOR
L4	1	9140-1709	INDUCTOR FIXED 220uH +-10PCT 9D-mm Q 20	6000-221K-RC	J.W. MILLER MAGNETICS
Q11, Q12	2	1855-0831	TRANSISTOR MOSFET N-CHAN E-MODE TO-220 SI	NTP18N06LG	ON SEMICONDUCTOR
Q13	1	1855-0726	TRANSISTOR MOSFET P-CHAN E-MODE TO-220AB	IRF9Z24PBF	INTERNATIONAL RECTIFIER
Q14, Q15, Q16	3	1853-0525	TRANSISTOR PNP SI TO-236AA PD=200MW	MMBT2907 PMBT2907A MMBT2907ALT1G PMBT2907A	FAIRCHILD SEMICONDUCTOR PHILIPS ON SEMICONDUCTOR NXP
Q17, Q19	2	1855-0807	TRANSISTOR J-FET N-CHAN D-MODE SOT-23	BF511 BF511	PHILIPS NXP
Q21-Q26	6	1854-1148	TRANSISTOR NPN SI SOT-23 (TO-236AB)	MMBTH10 MMBTH10LT1G	FAIRCHILD SEMICONDUCTOR ON SEMICONDUCTOR
Q42, Q43	2	1855-0731	TRANSISTOR J-FET P-CHAN D-MODE TO-236AA	MMBFJ175 PMBFJ175 MMBFJ175L__G PMBFJ175	FAIRCHILD SEMICONDUCTOR PHILIPS ON SEMICONDUCTOR NXP
Q33, Q34	2	1854-1102	TRANSISTOR NPN SI SOT-23 (TO-236AB)	MMBTH24	FAIRCHILD SEMICONDUCTOR
Q27-Q32, Q40	7	1853-0516	TRANSISTOR PNP SI SOT-23 (TO-236AB)	MMBTH81	FAIRCHILD SEMICONDUCTOR
R1, R5, R12, R18, R59, R63, R73, R77, R79, R84, R86, R88-R100, R102, R119, R121, R128, R191, R218, R219, R241, R261-R263, R281, R289-R292, R298	41	0699-1318	RESISTOR 1K +-1pct .125W TKF TC=0+-100	CRCW12061K00FKE_ RK73H2BT_1001F MCR18__F1001 232272461002L	VISHAY KOA ROHM YAGEO
R2	1	0699-1364	RESISTOR 68.1 +-1pct .125W TKF TC=0+-100	CRCW120668R1FKE_ RK73H2BT_68R1F MCR18__F68R1 232272466819	VISHAY KOA ROHM YAGEO

**53181-68024 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R3	1	0699-1322	RESISTOR 68.1K +-1pct .125W TKF TC=0+-100	CRCW120668K1FKE_ RK73H2BT_6812F MCR18__F6812 232272466813	VISHAY KOA ROHM YAGEO
R4, R185, R186	3	0699-1407	RESISTOR 46.4K +-1pct .125W TKF TC=0+-100	CRCW120646K4FKE_ RK73H2BT_4642F MCR18__F4642 232272464643	VISHAY KOA ROHM YAGEO
R6	1	0699-1448	RESISTOR 316K +-1pct .125W TKF TC=0+-100	CRCW1206316KFKE_ RK73H2BT_3163F MCR18__F3163 232272463164	VISHAY KOA ROHM YAGEO
R7, R8, R10	3	0699-1386	RESISTOR 5.62K +-1pct .125W TKF TC=0+-100	CRCW12065K62FKE_ RK73H2BT_5621F MCR18__F5621 232272465622L	VISHAY KOA ROHM YAGEO
R13, R129, R130, R161-R170, R195, R196, R254, R256, R257, R322, R323, R361, R362	22	0699-1415	RESISTOR 100 +-1pct .125W TKF TC=0+-100	CRCW1206100RFKE_ RK73H2BT_1000F MCR18__F1000 232272461001L	VISHAY KOA ROHM YAGEO
R14, R55, R72, R74, R115, R266, R276-R279, R283, R284, R293-R296, R304, R326	18	0699-1366	RESISTOR 82.5 +-1pct .125W TKF TC=0+-100	CRCW120682R5FKE_ RK73H2BT_82R5F MCR18__F82R5 232272468259	VISHAY KOA ROHM YAGEO
R15, R19-R27, R60	11	1810-1064	NET-RES 15 10.0K OHM 16-PIN	767161103G SOMC-16-01-103G 4816P-2-103LF	CTS VISHAY BOURNS
R16, R67, R68, R123, R131, R173, R174, R258- R260, R288, R303, R313- R317, R327	18	0699-1418	RESISTOR 133 +-1pct .125W TKF TC=0+-100	CRCW1206133RFKE_ RK73H2BT_1330F MCR18__F1330 232272461331	VISHAY KOA ROHM YAGEO
R17, R56, R57, R58, R71, R190, R202, R211, R212, R310	10	0699-1376	RESISTOR 2.15K +-1pct .125W TKF TC=0+-100	CRCW12062K15FKE_ RK73H2BT_2151F MCR18__F2151 232272462152	VISHAY KOA ROHM YAGEO

**53181-68024 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R28, R177, R178	3	0699-1466	RESISTOR 10M +-10pct .125W TKF TC=0+-200	CRCW1206106KJNE_ RK73B2BT_106J MCR18__K106 232271161106	VISHAY KOA ROHM YAGEO
R29	1	0699-1403	RESISTOR 31.6K +-1pct .125W TKF TC=0+-100	CRCW120631K6FKE_ RK73H2BT_3162F MCR18__F3162 232272463163L	VISHAY KOA ROHM YAGEO
R30-R33, R36, R37, R38, R39, R43-R46, R49- R52, R215, R226-R231, R280, R282, R285	26	0699-1423	RESISTOR 215 +-1pct .125W TKF TC=0+-100	CRCW1206215RFKE_ RK73H2BT_2150F MCR18__F2150 232272462151L	VISHAY KOA ROHM YAGEO
R35, R40, R41	3	0699-2975	RESISTOR 562 +-1pct .1W TKF TC=0+-100	CRCW0805562RFKE_ RK73H2AT_5620F MCR10__F5620 232273465621 MC08055620-FT	VISHAY KOA ROHM YAGEO RCD COMPONENTS
R42, R78, R265	3	0699-1417	RESISTOR 121 +-1pct .125W TKF TC=0+-100	CRCW1206121RFKE_ RK73H2BT_1210F MCR18__F1210 232272461211	VISHAY KOA ROHM YAGEO
R47, R48	2	0699-2833	RESISTOR 300 +-0.1pct .125W TF TC=0+-25	RN732BT_3000B25 BLU-1206 300R .1% 25PPM PTN1206E3000BB PCF-W1206LF-03-3000-B- --	KOA RCD COMPONENTS VISHAY TT ELECTRONICS
R53, R54, R324, R325, R328, R329, R363, R364, R365, R366, R367, R368	12	0699-1391	RESISTOR 10K +-1pct .125W TKF TC=0+-100	CRCW120610K0FKE_ RK73H2BT_1002F MCR18__F1002 232272461003L	VISHAY KOA ROHM YAGEO
R61, R146, R238, R239, R242, R312	6	0699-1372	RESISTOR 1.47K +-1pct .125W TKF TC=0+-100	CRCW12061K47FKE_ RK73H2BT_1471F MCR18__F1471 232272461472	VISHAY KOA ROHM YAGEO

**53181-68024 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R62, R113, R114, R275	4	0699-1419	RESISTOR 147 +-1pct .125W TKF TC=0+-100	CRCW1206147RFKE_ RK73H2BT_1470F MCR18__F1470 232272461471L	VISHAY KOA ROHM YAGEO
R75, R137, R197, R255, R269, R271, R272	7	0699-1432	RESISTOR 511 +-1pct .125W TKF TC=0+-100	CRCW1206511RFKE_ RK73H2BT_5110F MCR18__F5110 232272465111L	VISHAY KOA ROHM YAGEO
R64	1	0699-1385	RES-FXD 5.11K +-1PCT .125W TC 0+-100	CRCW12065K11FKE_ RK73H2BT_5111F MCR18__F5111 232272465112L	VISHAY KOA ROHM YAGEO
R76, R140, R145	3	0699-1378	RESISTOR 2.61K +-1pct .125W TKF TC=0+-100	CRCW12062K61FKE_ RK73H2BT_2611F MCR18__F2611 232272462612L	VISHAY KOA ROHM YAGEO
R101, R103	2	0699-1421	RESISTOR 178 +-1pct .125W TKF TC=0+-100	CRCW1206178RFKE_ RK73H2BT_1780F MCR18__F1780 232272461781	VISHAY KOA ROHM YAGEO
R104, R105, R118, R120, R126, R127, R270	7	0699-1431	RESISTOR 464 +-1pct .125W TKF TC=0+-100	CRCW1206464RFKE_ RK73H2BT_4640F MCR18__F4640 232272464641	VISHAY KOA ROHM YAGEO
R106-R112, R286	8	0699-1360	RESISTOR 46.4 +-1pct .125W TKF TC=0+-100	CRCW120646R4FKE_ RK73H2BT_46R4F MCR18__F46R4 232272464649	VISHAY KOA ROHM YAGEO
R122	1	1810-1139	NET-RES 8 10.0K OHM 16-PIN	GM8A-03-1002-D-B TOMC-1603-1002D	TT ELECTRONICS VISHAY
R116	1	0699-1503	RESISTOR 0 CWM	CRCW12060000ZSE_ RK73Z2BT MCR18__J000 232271191005	VISHAY KOA ROHM YAGEO

**53181-68024 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R124, R125	2	0699-1382	RESISTOR 3.83K +-1pct .125W TKF TC=0+-100	CRCW12063K83FKE_ RK73H2BT_3831F MCR18___F3831 232272463832L	VISHAY KOA ROHM YAGEO
R134-R136, R301, R302	5	0699-1354	RESISTOR 26.1 +-1pct .125W TKF TC=0+-100	CRCW120626R1FKE_ RK73H2BT_26R1F MCR18___F26R1 232272462619	VISHAY KOA ROHM YAGEO
R132, R133	2	0699-1361	RESISTOR 51.1 +-1pct .125W TKF TC=0+-100	CRCW120651R1FKE_ RK73H2BT_51R1F MCR18___F51R1 232272465119	VISHAY KOA ROHM YAGEO
R139	1	0699-1427	RESISTOR 316 +-1pct .125W TKF TC=0+-100	CRCW1206316RFKE_ RK73H2BT_3160F MCR18___F3160 232272463161	VISHAY KOA ROHM YAGEO
R141, R142	2	0699-3766	RESISTOR 232 +-0.1pct .125W TF TC=0+-25	RN732BT_2320B25 BLU-1206 2320 .1% 25PPM MCA1206-25 0, 1% P5 232R PTN1206E2320BB PCF-W1206LF-03-2320-B- -	KOA RCD COMPONENTS VISHAY BC COMPONENTS VISHAY TT ELECTRONICS
R143, R264	2	0699-1375	RESISTOR 1.96K +-1pct .125W TKF TC=0+-100	CRCW12061K96FKE_ RK73H2BT_1961F MCR18___F1961 232272461962L	VISHAY KOA ROHM YAGEO
R149, R150	2	0699-1439	RESISTOR 110K +-1pct .125W TKF TC=0+-100	CRCW1206110KFKE_ RK73H2BT_1103F MCR18___F1103 232272461104L	VISHAY KOA ROHM YAGEO
R147, R148	2	0699-2859	RES-FXD 51 OHM +-5PCT 1W TC 0+-200	CRCW251251R0JNE_ RK73B3AT_510J MCR100___J510	VISHAY KOA ROHM



**53181-68024 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R151, R152, R224, R225	4	0699-1337	RESISTOR 383K +-1pct .125W TKF TC=0+-100	CRCW1206383KFKE_ RK73H2BT_3833F MCR18___F3833 232272463834	VISHAY KOA ROHM YAGEO
R153, R154	2	0699-1338	RESISTOR 511K +-1pct .125W TKF TC=0+-100	CRCW1206511KFKE_ RK73H2BT_5113F MCR18___F5113 232272465114	VISHAY KOA ROHM YAGEO
R155, R156	2	0699-1319	RESISTOR 12.1K +-1pct .125W TKF TC=0+-100	CRCW120612K1FKE_ RK73H2BT_1212F MCR18___F1212 232272461213L	VISHAY KOA ROHM YAGEO
R157, R158	2	0699-1344	RESISTOR 10 +-1pct .125W TKF TC=0+-100	CRCW120610R0FKE_ RK73H2BT_10R0F MCR18___F10R0 232272461009L	VISHAY KOA ROHM YAGEO
R159, R160	2	0699-1443	RESISTOR 147K +-1pct .125W TKF TC=0+-100	CRCW1206147KFKE_ RK73H2BT_1473F MCR18___F1473 232272461474	VISHAY KOA ROHM YAGEO
R172, R209, R210, R268, R360	5	0699-1424	RESISTOR-FXD 237 +-1pct .25W TC 0+-100 1206	CRCW1206237RFKE_ RK73H2BT_2370F MCR18___F2370	VISHAY KOA ROHM
R176, R358	2	0699-1904	RESISTOR 1.62K +-1pct .125W TKF TC=0+-100	CRCW12061K62FKE_ RK73H2BT_1621F MCR18___F1621 232272461622L	VISHAY KOA ROHM YAGEO
R179, R180	2	0699-1356	RESISTOR 31.6 +-1pct .25W TKF TC=0+-100	CRCW120631R6FKE_ RK73H2BT_31R6F MCR18___F31R6 232272463169	VISHAY KOA ROHM YAGEO
R181-R184	4	0699-2120	RESISTOR 2.7 +-5pct .125W TKF TC=0+-200	MCR18___J2R7	ROHM

**53181-68024 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R187, R359	2	0699-1545	RESISTOR 93.1K +-1PCT .125W TKF TC=0+-100	CRCW120693K1FKE_ RK73H2BT_9312F MCR18__F9312 232272469313	VISHAY KOA ROHM YAGEO
R189, R305-R308	5	0699-1434	RES-FXD 619 OHM +-1PCT 0.125W TC 0+-100 1206	CRCW1206619RFKE_ RK73H2BT_6190F MCR18__F6190 232272466191	VISHAY KOA ROHM YAGEO
R193, R194	2	0699-1433	RESISTOR 562 +-1pct .125W TKF TC=0+-100	CRCW1206562RFKE_ RK73H2BT_5620F MCR18__F5620 232272465621	VISHAY KOA ROHM YAGEO
R192, R370	2	0699-1330	RESISTOR 100K +-1pct .125W TKF TC=0+-100	CRCW1206100KFKE_ RK73H2BT_1003F MCR18__F1003 232272461004L	VISHAY KOA ROHM YAGEO
R198, R199	2	0699-1430	RESISTOR 422 +-1pct .125W TKF TC=0+-100	CRCW1206422RFKE_ RK73H2BT_4220F MCR18__F4220 232272464221	VISHAY KOA ROHM YAGEO
R200	1	0699-1380	RESISTOR 3.16K +-1pct .125W TKF TC=0+-100	CRCW12063K16FKE_ RK73H2BT_3161F MCR18__F3161 232272463162	VISHAY KOA ROHM YAGEO
R201, R331	2	0699-1447	RESISTOR 261K +-1pct .125W TKF TC=0+-100	CRCW1206261KFKE_ RK73H2BT_2613F MCR18__F2613 232272462614	VISHAY KOA ROHM YAGEO
R203, R204, R371, R372	4	0699-1388	RESISTOR 7.5K +-1pct .125W TKF TC=0+-100	CRCW12067K50FKE_ RK73H2BT_7501F MCR18__F7501 232272467502	VISHAY KOA ROHM YAGEO

**53181-68024 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R205, R206	2	0699-1437	RESISTOR 825 +-1pct .125W TKF TC=0+-100	CRCW1206825RFKE_ RK73H2BT_8250F MCR18__F8250 232272468251	VISHAY KOA ROHM YAGEO
R207, R208	2	0699-1435	RES-FXD 681 OHM +-1PCT .125W TC 0+-100	CRCW1206681RFKE_ RK73H2BT_6810F MCR18__F6810 232272466811	VISHAY KOA ROHM YAGEO
R213, R214	2	0699-1377	RESISTOR 2.37K +-1pct .125W TKF TC=0+-100	CRCW12062K37FKE_ RK73H2BT_2371F MCR18__F2371 232272462372L	VISHAY KOA ROHM YAGEO
R223, R369	2	0699-1331	RESISTOR 162K +-1pct .125W TKF TC=0+-100	CRCW1206162KFKE_ RK73H2BT_1623F MCR18__F1623 232272461624L	VISHAY KOA ROHM YAGEO
R234, R235	2	0699-1370	RESISTOR 1.21K +-1pct .125W TKF TC=0+-100	CRCW12061K21FK E_ RK73H2BT_1211F MCR18__F1211 232272461212	VISHAY KOA ROHM YAGEO
R232, R233	2	0699-1381	RESISTOR 3.48K +-1pct .125W TKF TC=0+-100	CRCW12063K48FKE_ RK73H2BT_3481F MCR18__F3481 232272463482	VISHAY KOA ROHM YAGEO
R240	1	0699-1369	RESISTOR 1.1K +-1pct .125W TKF TC=0+-100	CRCW12061K10FKE_ RK73H2BT_1101F MCR18__F1101 232272461102L	VISHAY KOA ROHM YAGEO
R244-R249	6	0699-1357	RESISTOR 34.8 +-1pct .125W TKF TC=0+-100	CRCW120634R8FKE_ RK73H2BT_34R8F MCR18__F34R8 232272463489	VISHAY KOA ROHM YAGEO

**53181-68024 Parts List**

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R267	1	0699-1456	RESISTOR 562K +-1pct .125W TKF TC=0+-100	CRCW1206562KFKE_ RK73H2BT_5623F MCR18__F5623 232272465624L	VISHAY KOA ROHM YAGEO
R273	1	0699-1428	RESISTOR 348 +-1pct .125W TKF TC=0+-100	CRCW1206348RFKE_ RK73H2BT_3480F MCR18__F3480 232272463481	VISHAY KOA ROHM YAGEO
R274	1	0699-1352	RESISTOR 21.5 +-1pct .125W TKF TC=0+-100	CRCW120621R5FKE_ RK73H2BT_21R5F MCR18__F21R5 232272462159	VISHAY KOA ROHM YAGEO
R318	1	0699-2979	RESISTOR 1.21K +-1pct .1W TKF TC=0+-100	CRCW08051K21FKE_ RK73H2AT_1211F MCR10__F1211 232273461212 MC08051211-FT	VISHAY KOA ROHM YAGEO RCD COMPONENTS
R333, R335	2	0699-2643	RES-FXD 0 OHM +-5PCT .1W TC 0+-300	CRCW08050000ZSE_ CR21-000-ZL MCR10__J000 RK73Z2AT 232273091002L ZC0805-TW	VISHAY ASJ ROHM KOA YAGEO RCD COMPONENTS
R339, R342	2	0699-3034	RESISTOR 1K +-1pct .1W TKF TC 0+-100	CRCW08051K00FKE_ RK73H2AT_1001F 232273461002L MCR10__F1001 MC08051001-FT	VISHAY KOA YAGEO ROHM RCD COMPONENTS
R341	1	0699-2887	RESISTOR 31.6 +-1pct .1W TKF TC=0+-100	CRCW080531R6FKE_ RK73H2AT_31R6F MCR10__F31R6 MC080531R6-FT	VISHAY KOA ROHM RCD COMPONENTS
R345	1	1810-1380	NET-RES 8 1.0K OHM 16-PIN	4816P-001-102 767163102G SOMC1603-102G	BOURNS CTS VISHAY

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Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R346, R347	2	0699-3366	RESISTOR 562 +-1pct .065W TKF TC=0+-200	CRCW0603562RFKE_ RK73H1JT_5620F 232270465621L MCR03___FX5650	VISHAY KOA YAGEO ROHM
R348, R349	2	0699-6229	RESISTOR 121 0.1 pct .125W TC=0+-25	RN732BT_1210B25 RR1632P1210B BLU-1206-1210OHM 0.1%25PPM	KOA SUSUMU RCD COMPONENTS
R350-R353	4	0699-3914	RESISTOR 34.8 +-1pct .063W TKF TC=0+-200	CRCW060334R8FKE_ RK73H1JT_34R8F MCR03___FX34R8 232270463489	VISHAY KOA ROHM YAGEO
R354, R355	2	0699-3143	RESISTOR 16.2K +-0.1pct .1W TF TC=0+-25	RN732AT_1622B25 RR1220P1622B	KOA SUSUMU
R356, R357	2	0699-3954	RESISTOR 1.96K +-1pct .063W TKF TC=0+-200	CRCW06031K96FKE_ RK73H1JT_1961F 232270461962L MCR03___FX1961	VISHAY KOA YAGEO ROHM
U1	1	1820-6075	IC CNTR CMOS/HCT DECD ASYNCHRO	74HCT390D 74HCT390D	PHILIPS NXP
U2	1	1820-5753	IC MUXR/DATA-SEL 4-TO-1-LINE 16-SOIC	74HC253D 74HC253D	PHILIPS NXP
U3	1	1826-2236	IC PL LOOP LP SINGLE 16 PIN PLSTC-SOIC	74HCT7046AD 74HCT7046AD	PHILIPS NXP
U4	1	1826-2494	D/A 6-BIT 20-P-SOIC CMOS		
U6	1	1820-6620	IC DRVR CMOS/ACL BUS OCTL	74ACT11244DW	TEXAS INSTRUMENTS
U8	1	53181-80060	PROGRAMMED IC 4M-BIT FLASH 120-NS CMOS, RAW		
U8a	1	1818-6109	IC 4M-BIT FLASH 120-NS CMOS	AM29F400BB-120SD	SPANSION
U7	1	1820-7697	IC MODULAR MICROCONTROLLER;16MHZ	MC68331CEH16	FREESCALE SEMICONDUCTOR
U10	1	1818-6217	IC 1M-BIT SRAM 15-NS CMOS 44-SOJ	IDT71016S15Y	IDT
U14	1	1818-5128	IC 64K-BIT EEPROM 200-NS CMOS	AT28C64B-15JU	ATMEL
U15, U16, U17, U18	4	1820-5934	IC DCDR-DEMUXR CMOS/AC BIN 8-TO-1-LINE	MC74AC138DR2G	ON SEMICONDUCTOR
U19	1	1820-7216	IC MUXR/DATA-SEL CMOS/AC 8-TO-1-LINE	74AC251SCX.	FAIRCHILD SEMICONDUCTOR
U21	1	1820-6176	IC INTERFACE XCVR BIPOLAR BUS OCTL	SN75ALS160DW	TEXAS INSTRUMENTS
U22	1	1820-6175	IC INTERFACE XCVR BIPOLAR BUS OCTL	SN75ALS162DW	TEXAS INSTRUMENTS
U23	1	1820-7662	IC INTFC DRVR/RCVR BIPOLAR DUAL 18-SOIC	LT1180ACSW	LINEAR TECHNOLOGY

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Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
U25	1	1826-1897	IC PWR MGT-VS-SUPVR/CONT	TL7705ACD1/A TL7705ACD	STMICROELECTRONICS TEXAS INSTRUMENTS
U26, U49	2	1820-6412	TRANSISTOR ARRAY 16-PIN PLSTC SURFACE	ULN2003AD MC1413DG	TEXAS INSTRUMENTS ON SEMICONDUCTOR
U27, U28, U29	3	1820-7281	IC TRANSCEIVER CMOS/ACL BUS OCTL	74ACT11245DW	TEXAS INSTRUMENTS
U30	1	0950-2325	DC-DC-CONV 12 VDC NOM INP; DL-OUT	E2577VF	ENDICOTT RESEARCH GROUP
U31	1	1820-6473	IC FF CMOS/ACT D-TYPE POS-EDGE-TRIG	MC74ACT74DG SN74ACT74D 74ACT74SCX	ON SEMICONDUCTOR TEXAS INSTRUMENTS FAIRCHILD SEMICONDUCTOR
U32	1	1820-5235	IC GATE TTL/ALS AND QUAD 2-INP	DM74ALS09MX	FAIRCHILD SEMICONDUCTOR
U33, U34	2	1820-5938	IC GATE CMOS/ACT NAND QUAD 2-INP	MC74ACT00DG SN74ACT00D 74ACT00SCX	ON SEMICONDUCTOR TEXAS INSTRUMENTS FAIRCHILD SEMICONDUCTOR
U36	1	1826-1402	IC PWR MGT-V-REG-FXD-POS 4.8/5.2V 8 PINS	UA78L05ACD MC78L05ACDR2G LM78L05ACM NOPB	TEXAS INSTRUMENTS ON SEMICONDUCTOR NATIONAL SEMICONDUCTOR
U35	1	1820-5607	IC RCVR ECL/10KH LINE TPL	MC10H116FNG	ON SEMICONDUCTOR
U37, U38	2	1826-1601	IC PWR MGT-V-REF-ADJ 2.5/36V 8 PINS	TL431CD LM431ACMNOPB	TEXAS INSTRUMENTS NATIONAL SEMICONDUCTOR
U39, U40	2	1820-6277	IC SHF-RGTR CMOS/HC SYNC/ASYN SERIAL-IN	MC74HC595ADG MM74HC595M N74HC595D SN74HC595D N74HC595D	ON SEMICONDUCTOR FAIRCHILD SEMICONDUCTOR PHILIPS TEXAS INSTRUMENTS NXP
U42, U48	2	1826-6734	IC PWR MGT-V-REG-ADJ-NEG 4-SOT-223	LM337IMP NOPB	NATIONAL SEMICONDUCTOR
U44, U72	2	1826-2420	IC OP AMP LOW-POWER-BIPOLAR-DUAL 8-SOIC	AD706JRZ	ANALOG DEVICES
U45	1	1820-6867	IC GATE ECL/10KH OR QUAD 2-INP	MC10H103FN_G	ON SEMICONDUCTOR
U47	1	1826-2722	D/A 12-BIT 16-P-SOIC CMOS	AD7243AR	ANALOG DEVICES
U50	1	1820-5390	IC XLTR ECL/10KH ECL-TO-TTL QUAD	MC10H125FNG	ON SEMICONDUCTOR
U51	1	1820-5777	IC GATE ECL/10KH EXCL-OR/NOR TPL 2-INP	MC10H107FN_G	ON SEMICONDUCTOR
U52, U53	2	1820-5608	IC FF ECL/10KH J-K M/S POS-EDGE-TRIG	MC10H135FNG	ON SEMICONDUCTOR
U56	1	1826-1623	IC COMPARATOR GP DUAL 14 PIN PLSTC-SOIC	LM319M-NOPB	NATIONAL SEMICONDUCTOR
U57, U64	2	1826-2115	IC OP AMP LOW-BIAS-H-IMPD SINGLE 8 PIN	LT1008S8	LINEAR TECHNOLOGY
U58	1	1821-1489	IC PLD FPGA UNPRGMD CMOS 3042	XC3042A-7PC84C	XILINX
U62, U63	2	1826-2723	A/D 8-BIT 20-PLCC CMOS	TLC0820ACFN	TEXAS INSTRUMENTS
U65	1	1820-5629	IC FF ECL/10KH D-M/S POS-EDGE-TRIG	MC10H131FNG	ON SEMICONDUCTOR

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Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
U69	1	1820-5940	IC GATE CMOS/ACT AND QUAD 2-INP	MC74ACT08DG 74ACT08SCX.	ON SEMICONDUCTOR FAIRCHILD SEMICONDUCTOR
U70, U71	2	1827-1714	IC V COMPTR ULTRAFAST SiGe 16-LFCSP	ADCMP581BCPZ-____	ANALOG DEVICES
VR1, VR2	2	1902-1609	DIODE-ZNR 6.2V 5pct PD=1.5W IR=5UA	1SMB5920BT3G	ON SEMICONDUCTOR
Y1	1	0410-2153	CRYSTAL-QUARTZ 32.768 KHZ	FSMLF-327 Q13MC4051000200	FOX ELECTRONICS EPSON TOYOCOM
Y2	1	0410-0423	PRECISION BULK MODE-AT FREQ=10.0 MHZ	020-0933-0 0410-0423 BK3-1B-10MHZ XTS-153	CTS FCP BLILEY ELECTRIC COMPANY VECTRON
U20	1	1822-0639	IC GPIB CONTROLLER	14063-501	AMIS SEMICONDUCTOR

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