

**Agilent 53131A  
Component Level  
Information**

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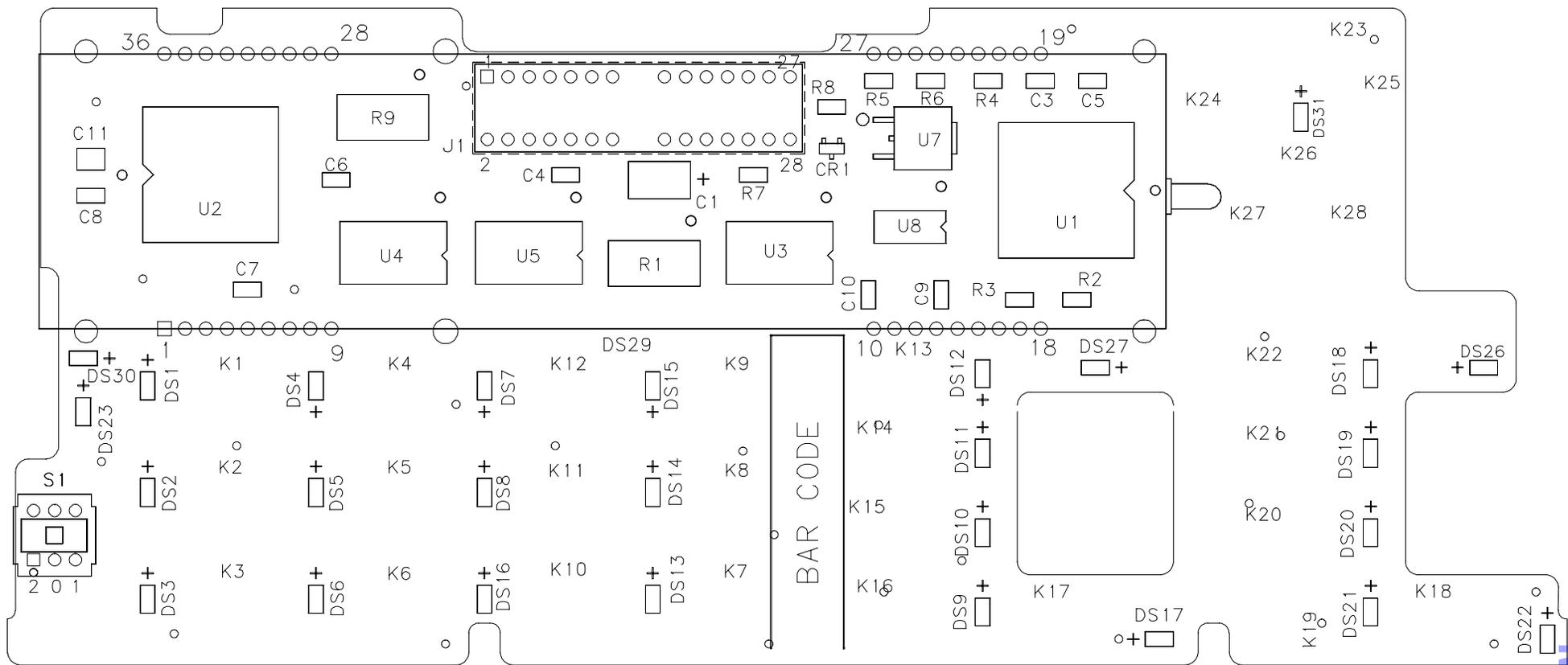
# Agilent 53131A Universal Counter Component Level Information

Information in this packet applies to the following assemblies:

1. 53131-68002 PC Assembly (Front Panel)
2. 53131-68004 PC Assembly (Main Board)
3. 53131-68024 PC Assembly (Main Board)

The following is included in this packet:

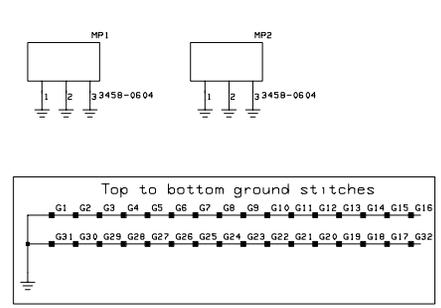
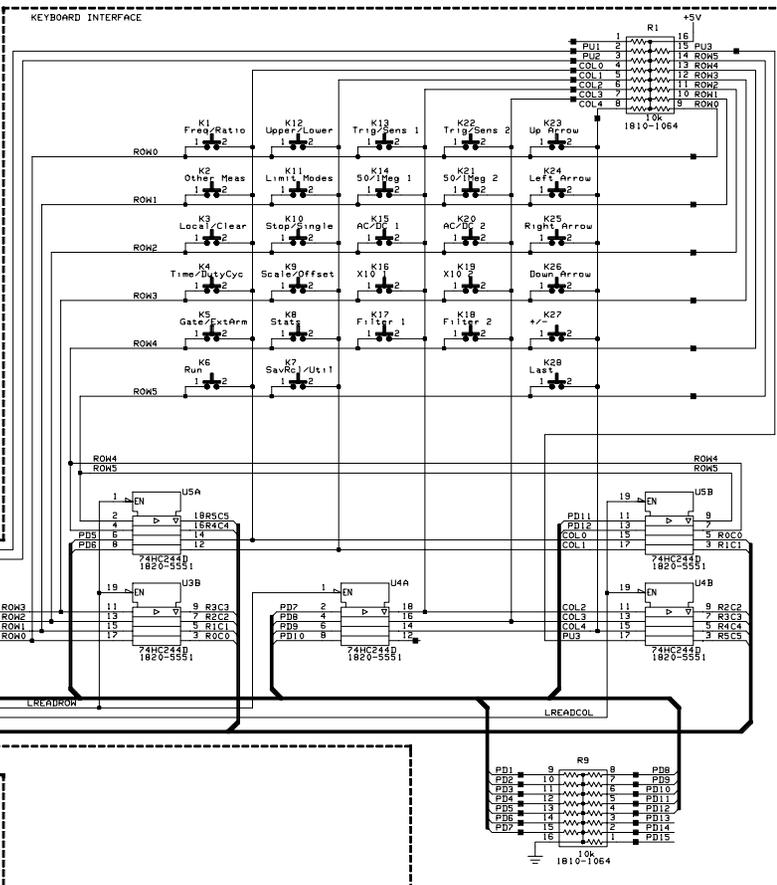
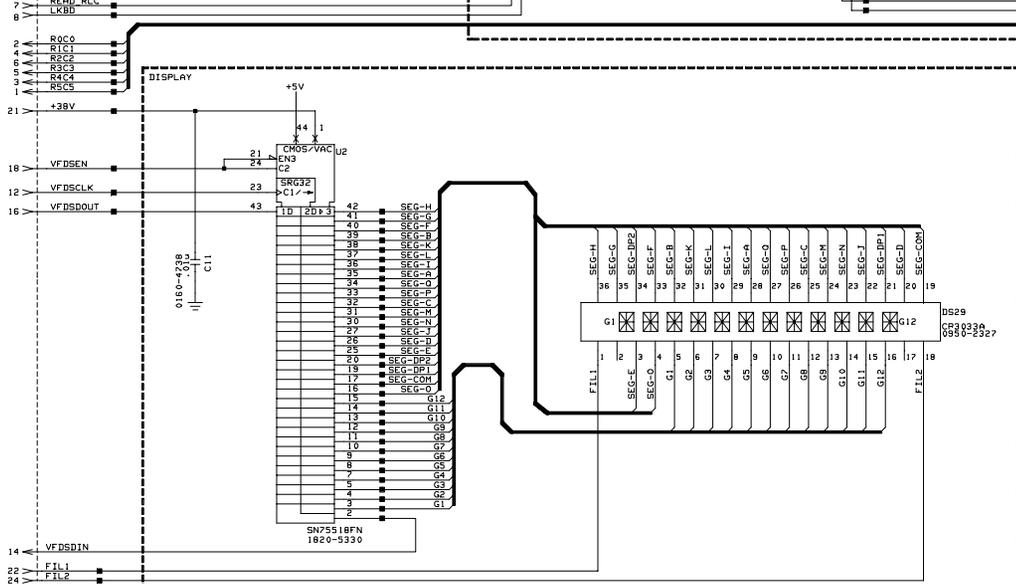
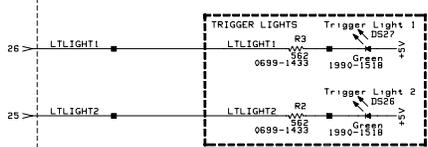
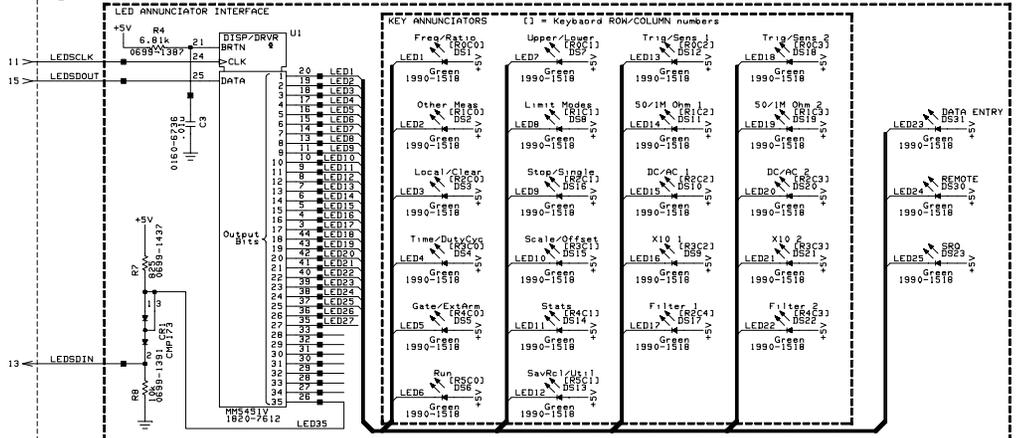
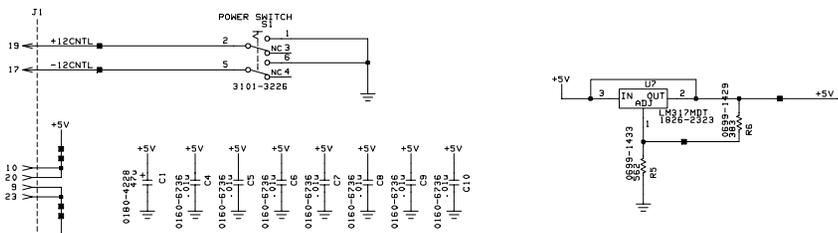
1. Component locators
2. Schematics
3. Parts lists with Agilent and manufacturer's part numbers



**Agilent 53131A  
Universal Counter**

**53131-68002  
Front Panel**

**Component Locator**



TOP VIEW

ROCO	2	J1	1	R5C5
RIC1	4		3	R4C4
RC2	6		5	R3C3
LKBD	8		7	READ_RLC
+5V	10		9	GND
VFDSCLK	12		11	LEDSCLK
VFSDIN	14		13	LESDIN
VFSDOUT	16		15	LESDOUT
VFSEN	18		17	-12CNTL
+5V	20		19	+12CNTL
FIL1	22		21	+38V
FIL2	24		23	GND
LTLIGHT1	26		25	LTLIGHT2
	28		27	

8120-6143

Agilent 53131A  
Universal Counter  
53131-68002  
Front Panel

## 53131-68002 Parts List

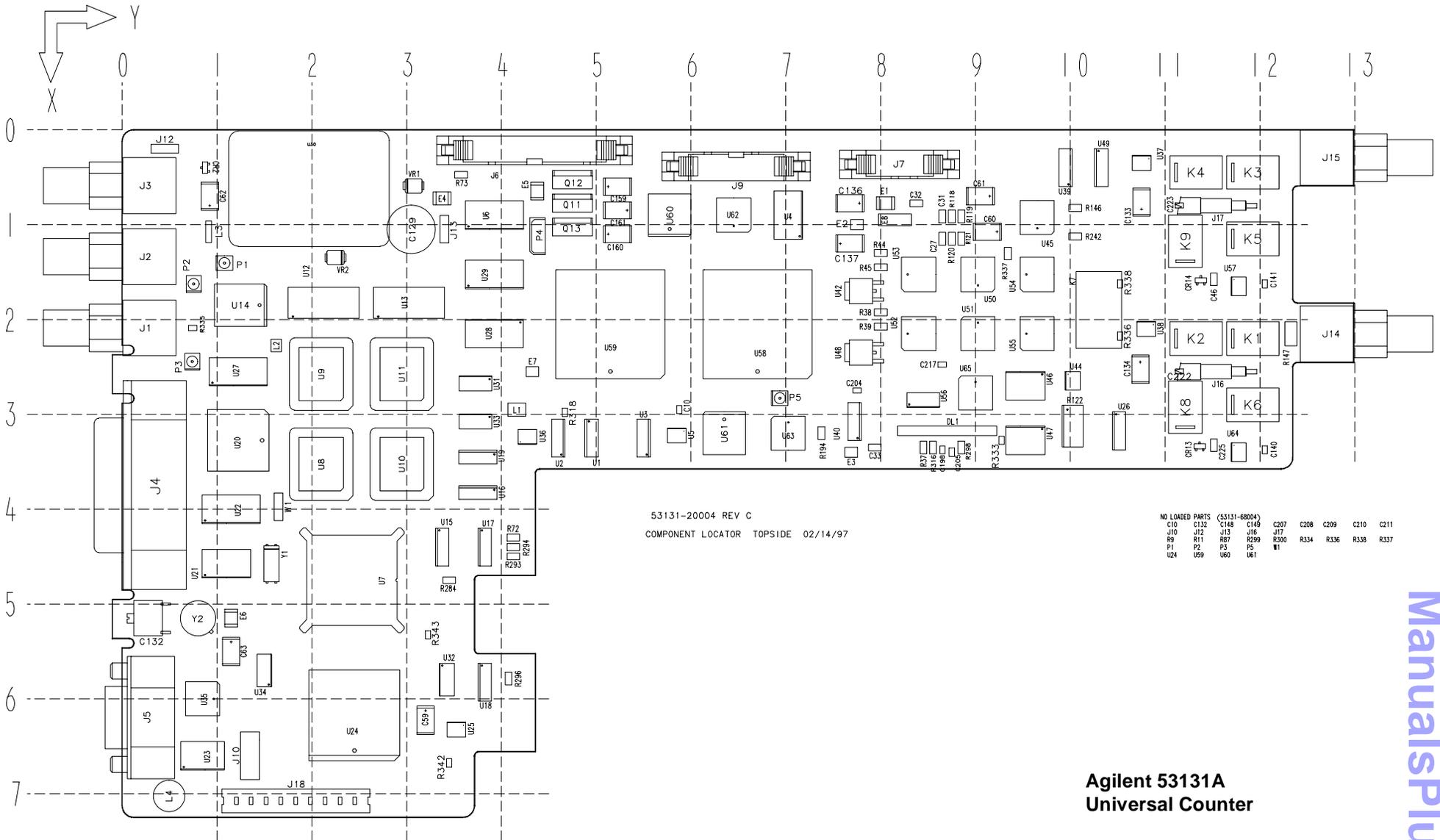
NOTE: This PC assembly is used in the 53131A, 53132A and 53181A. You may have no-load parts locations on your assembly and not all parts listed in this parts list are present on your assembly.

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



NO. LOADED PARTS (53131-68004)

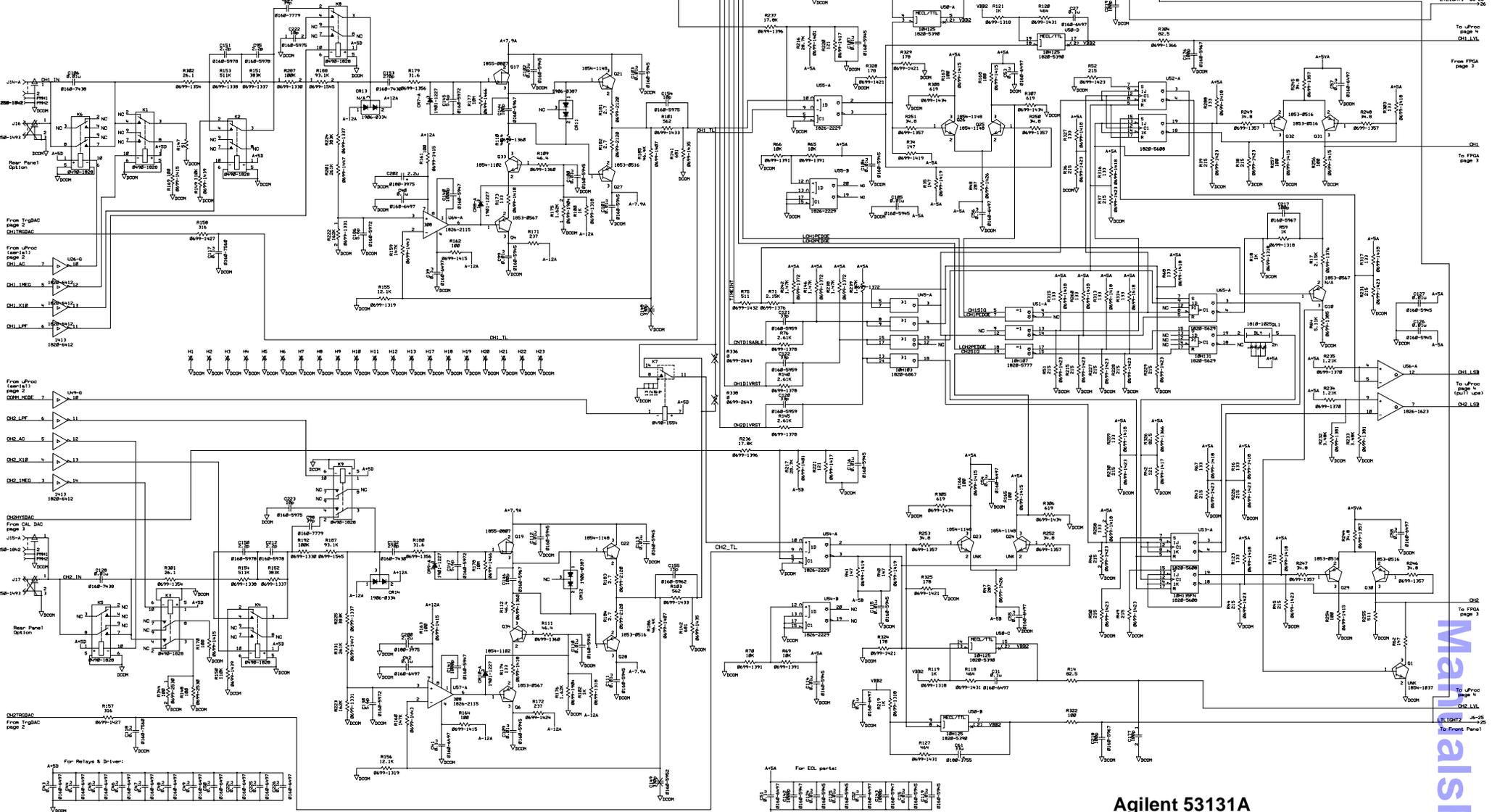
C10	C132	C148	C149	C207	C208	C209	C210	C211
J10	J12	J13	J16	J17	R334	R336	R338	R337
R9	R11	R67	R99	R300				
P1	P2	P3	P5	W1				
U24	U59	U60	U61					

**Agilent 53131A  
Universal Counter**

**53131-68004  
Main Board**

**Component Locator**

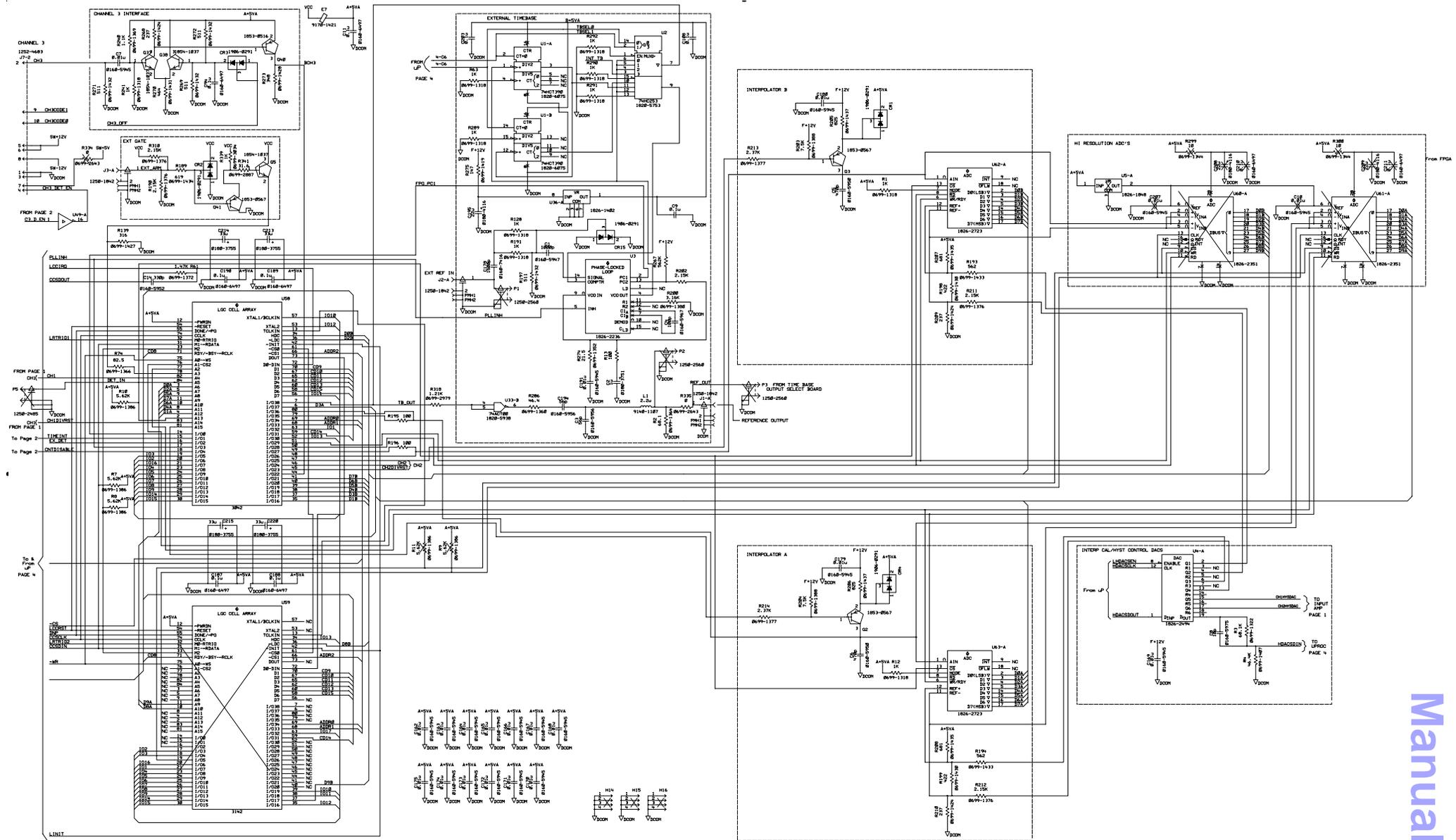
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# Agilent 53131A Universal Counter

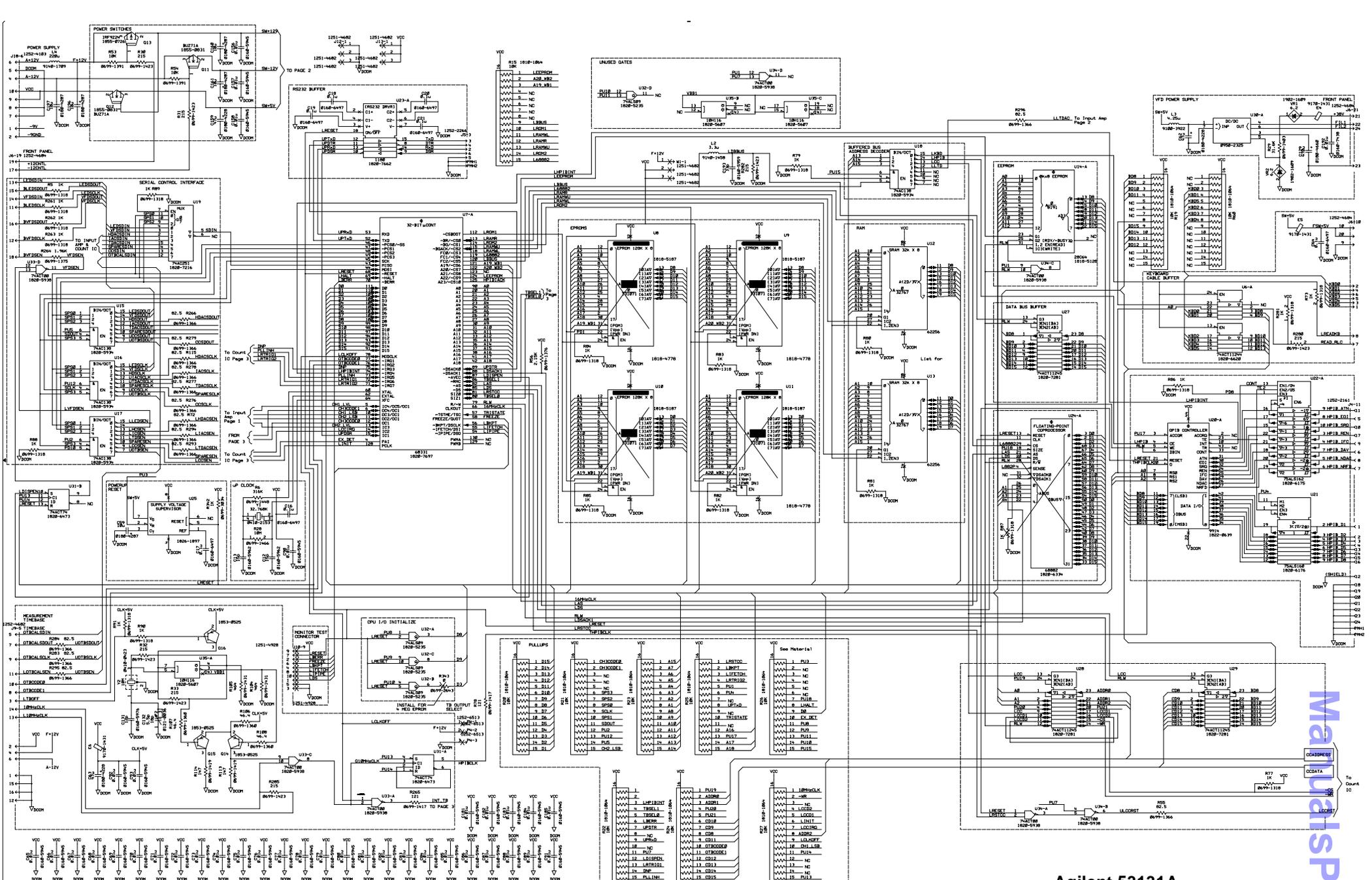
## 53131-68004 Main Board





**Agilent 53131A  
Universal Counter**

**53131-68004  
Main Board**



Agilent 53131A  
Universal Counter

53131-68004  
Main Board

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## 53131-68004 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
C106, C128, C192	3	0160-7438	CAP-FXD 0.01uF +-10pct 500 V CER X7R	12107C103KAT A 501S41W103KV6	AVX JOHANSON DIELECTRICS
C117, C118	2	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 COG	08055A150JAT A C0805C150J5GAC C2012COG1H150J GRM2165C1H150JD01D	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING
C120, C121, C122, C193	4	0160-5959	CAP-FXD 33pF +-5pct 50 V CER COG	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 COG	08055A5R6DATA C0805C569D5GAC C2012COG1H5R6D GRM2165C1H5R6DD01D	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING
C131	1	0160-5976	CAP-FXD 12pF +-5pct 50 V CER COG	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

## 53131-68004 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
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
C2	1	0180-3751	CAP-FXD 1uF +-20PCT 35V TA	TAJB105M035 293D105X0035B2E3 ESVB21V105M SK-1V105M-RB	AVX VISHAY NEC ELECTRONICS ELNA
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
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, 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
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

53131-68004 Parts List

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
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	0180-4977	CAP-FXD 330uF +-20PCT 10V TA SMT	TPME337M010_0035 T510X337M010AS	AVX KEMET ELECTRONICS
C63, C138, C139, C159	1	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, C99-C105, C107, C109-C116, C119, C123-C127, C156-C158, C162-C175, C179-C185, C191	80	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, C154, C222, C223	4	0160-5975	CAP-FXD 10pF +-5pct 50 V CER C0G	08055A100JAT A C0805C100J5GAC GRM2165C1H100JD01D	AVX KEMET ELECTRONICS MURATA MANUFACTURING
C9, C11, C16-C27, C29-C35, C37-C58, C64, C94, C108, C187-C190, C203, C224-C226	54	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
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
C98, C201	2	0160-7779	CAP-FXD 39pF +-5PCT 500 V CER C0G 1206	12067A390JAT_A 501R18N390JV6_	AVX JOHANSON DIELECTRICS
CR11, CR12	2	1906-0387	DIODE-DUAL 30V TO-236AB (SOT-23)	MMBD1703A	FAIRCHILD SEMICONDUCTOR
CR13, CR14	2	1906-0334	DIODE-DUAL 200V 200MA T0-236AA	MMBD1503A	FAIRCHILD SEMICONDUCTOR

## 53131-68004 Parts List

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
CR1-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
CR7, CR8, CR9, CR10	4	1901-1227	DIODE-SWITCHING 75V 200MA 6NS TO-236	BAS16 BAS16 BAS16LT1G BAS16	PHILIPS VISHAY ON SEMICONDUCTOR NXP
DL1	1	1810-1025	DELAY LINE PASSIVE DEVICE W/SINGLE	DL1L5XK200S	SUSUMU
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
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
K1, K2, K3, K4, K5, 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 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
LBL1	1	7121-7612	LBL-LNE-PTR LBL WOUND OUTSD 1.25X.25-IN	T1K-318064-10-9	TYCO INTERNATIONAL
LBL2, LBL3	2	7121-8049	LBL-LNE-PTR; .25-IN-WD X .50-IN-LG ; LABEL-	7121-8049	EPC IDENTIFICATION SYSTEMS

53131-68004 Parts List

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
LBL4	1	7121-5459	LABEL-ANTISTATIC 2-IN-WD 3-IN-LG PPR	7121-5459 9035	SPECIALTY ENTERPRISES SANMINA-SCI
Q1, Q5, Q37, Q38	4	1854-1037	TRANSISTOR NPN SI TO-236AA PD=350MW	MMBT3904 SST3904T116 MMBT3904LT1G	FAIRCHILD SEMICONDUCTOR ROHM ON SEMICONDUCTOR
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
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
Q2, Q3, Q4, Q6, Q10, Q41	6	1853-0567	TRANSISTOR PNP SI SOT-23 (TO-236AB)	MMBT3906 SST3906T116 MMBT3906LT1G	FAIRCHILD SEMICONDUCTOR ROHM ON SEMICONDUCTOR
Q21, Q22, Q23, Q24, Q25, Q26	6	1854-1148	TRANSISTOR NPN SI SOT-23 (TO-236AB)	MMBTH10 MMBTH10LT1G	FAIRCHILD SEMICONDUCTOR ON SEMICONDUCTOR
Q27, Q28, Q29, Q30, Q31, Q32, Q40	7	1853-0516	TRANSISTOR PNP SI SOT-23 (TO-236AB)	MMBTH81	FAIRCHILD SEMICONDUCTOR
Q33, Q34	2	1854-1102	TRANSISTOR NPN SI SOT-23 (TO-236AB)	MMBTH24	FAIRCHILD SEMICONDUCTOR
R1, R5, R12, R18, R59, R63, R73, R77, R79-R86, R88-R100, R102, R119, R121, R128, R191, R218, R219, R241, R261, R262, R263, R281, R289-R292, R298	46	0699-1318	RESISTOR 1K +-1pct .125W TKF TC=0+-100	CRCW12061K00FKE_ RK73H2BT_1001F MCR18__F1001 232272461002L	VISHAY KOA ROHM YAGEO
R101, R103, R193, R194	4	0699-1433	RESISTOR 562 +-1pct .125W TKF TC=0+-100	CRCW1206562RFKE_ RK73H2BT_5620F MCR18__F5620 232272465621	VISHAY KOA ROHM YAGEO

53131-68004 Parts List

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
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
R116, R117	2	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, R161-R170, R195, R196, R254, R256, R257, R322, R323	20	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, R302	5	0699-1354	RESISTOR 26.1 +-1pct .125W TKF TC=0+-100	CRCW120626R1FKE_ RK73H2BT_26R1F MCR18__F26R1 232272462619	VISHAY KOA ROHM YAGEO
R139, R157, R158	3	0699-1427	RESISTOR 316 +-1pct .125W TKF TC=0+-100	CRCW1206316RFKE_ RK73H2BT_3160F MCR18__F3160 232272463161	VISHAY KOA ROHM YAGEO

53131-68004 Parts List

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R14, R55, R72, R74, R115, R266, R276, R277, R278, R279, R283, R284, R293, R294, R295, 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
R141, R142, R207, R208	4	0699-1435	RES-FXD 681 OHM +-1PCT .125W TC 0+-100	CRCW1206681RFKE_ RK73H2BT_6810F MCR18__F6810 232272466811	VISHAY KOA ROHM YAGEO
R143, R144, R264	3	0699-1375	RESISTOR 1.96K +-1pct .125W TKF TC=0+-100	CRCW12061K96FKE_ RK73H2BT_1961F MCR18__F1961 232272461962L	VISHAY KOA ROHM YAGEO
R147	1	0699-2859	RES-FXD 51 OHM +-5PCT 1W TC 0+-200	CRCW251251R0JNE_ RK73B3AT__510J MCR100__J510	VISHAY KOA ROHM
R148, R344	2	0699-2530	RESISTOR 100 +-1pct .25W TKF TC=0+-100	CRCW1210100RFKE_ RK73H2ET_1000F MCR25__F1000	VISHAY KOA ROHM
R149, R150	2	0699-1439	RESISTOR 110K +-1pct .125W TKF TC=0+-100	CRCW1206110KFKE_ RK73H2BT_1103F MCR18__F1103 232272461104L	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
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

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Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
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
R159, R160	2	0699-1443	RESISTOR 147K +-1pct .125W TKF TC=0+-100	CRCW1206147KFKE_ RK73H2BT_1473F MCR18__F1473 232272461474	VISHAY KOA ROHM YAGEO
R16, R67, R68, R123, R131, R173, R174, R258, R259, R260, R288, R303, R313, R314, R315, R316, 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
R171, R172, R209, R210, R268	5	0699-1424	RESISTOR-FXD 237 +-1pct .25W TC 0+-100 12	CRCW1206237RFKE_ RK73H2BT_2370F MCR18__F2370	VISHAY KOA ROHM
R175, R176	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, R182, R183, R184	4	0699-2120	RESISTOR 2.7 +-5pct .125W TKF TC=0+-200	MCR18__J2R7	ROHM

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Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R187, R188	2	0699-1545	RESISTOR 93.1K +-1PCT .125W TKF TC=0+-100	CRCW120693K1FKE_ RK73H2BT_9312F MCR18__F9312 232272469313	VISHAY KOA ROHM YAGEO
R189, R305, R306, R307, R308	5	0699-1434	RES-FXD 619 OHM +-1PCT 0.125W TC 0+-100	CRCW1206619RFKE_ RK73H2BT_6190F MCR18__F6190 232272466191	VISHAY KOA ROHM YAGEO
R192, R287	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
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
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	2	0699-1388	RESISTOR 7.5K +-1pct .125W TKF TC=0+-100	CRCW12067K50FKE_ RK73H2BT_7501F MCR18__F7501 232272467502	VISHAY KOA ROHM YAGEO

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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
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, R217	2	0699-1401	RESISTOR 28.7K +-1pct .125W TKF TC=0+-100	CRCW120628K7FKE_ RK73H2BT_2872F MCR18__F2872 232272462873	VISHAY KOA ROHM YAGEO
R222, R223	2	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
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
R236, R237	2	0699-1396	RESISTOR 17.8K +-1pct .125W TKF TC=0+-100	CRCW120617K8FKE_ RK73H2BT_1782F MCR18__F1782 232272461783L	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

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Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R244-R253	10	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, 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
R3	1	0699-1322	RESISTOR 68.1K +-1pct .125W TKF TC=0+-100	CRCW120668K1FKE_ RK73H2BT_6812F MCR18__F6812 232272466813	VISHAY KOA ROHM YAGEO
R30-R33, R36-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

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Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
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
R335	1	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, R40, R41, R62, R113, R114, R275	8	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
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

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Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R42, R78, R220, R221, R265	5	0699-1417	RESISTOR 121 +-1pct .125W TKF TC=0+-100	CRCW1206121RFKE_ RK73H2BT_1210F MCR18__F1210 232272461211	VISHAY KOA ROHM YAGEO
R47, R48	2	0699-1426	RESISTOR 287 +-1pct .125W TKF TC=0+-100	CRCW1206287RFKE_ RK73H2BT_2870F MCR18__F2870 232272462871	VISHAY KOA ROHM YAGEO
R53, R54, R65, R66, R69, R70	6	0699-1391	RESISTOR 10K +-1pct .125W TKF TC=0+-100	CRCW120610K0FKE_ RK73H2BT_1002F MCR18__F1002 232272461003L	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, R239, R242, R243, R312	7	0699-1372	RESISTOR 1.47K +-1pct .125W TKF TC=0+-100	CRCW12061K47FKE_ RK73H2BT_1471F MCR18__F1471 232272461472	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
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
R75, R137, R138, R197, R255, R269, R271, R272	8	0699-1432	RESISTOR 511 +-1pct .125W TKF TC=0+-100	CRCW1206511RFKE_ RK73H2BT_5110F MCR18__F5110 232272465111L	VISHAY KOA ROHM YAGEO

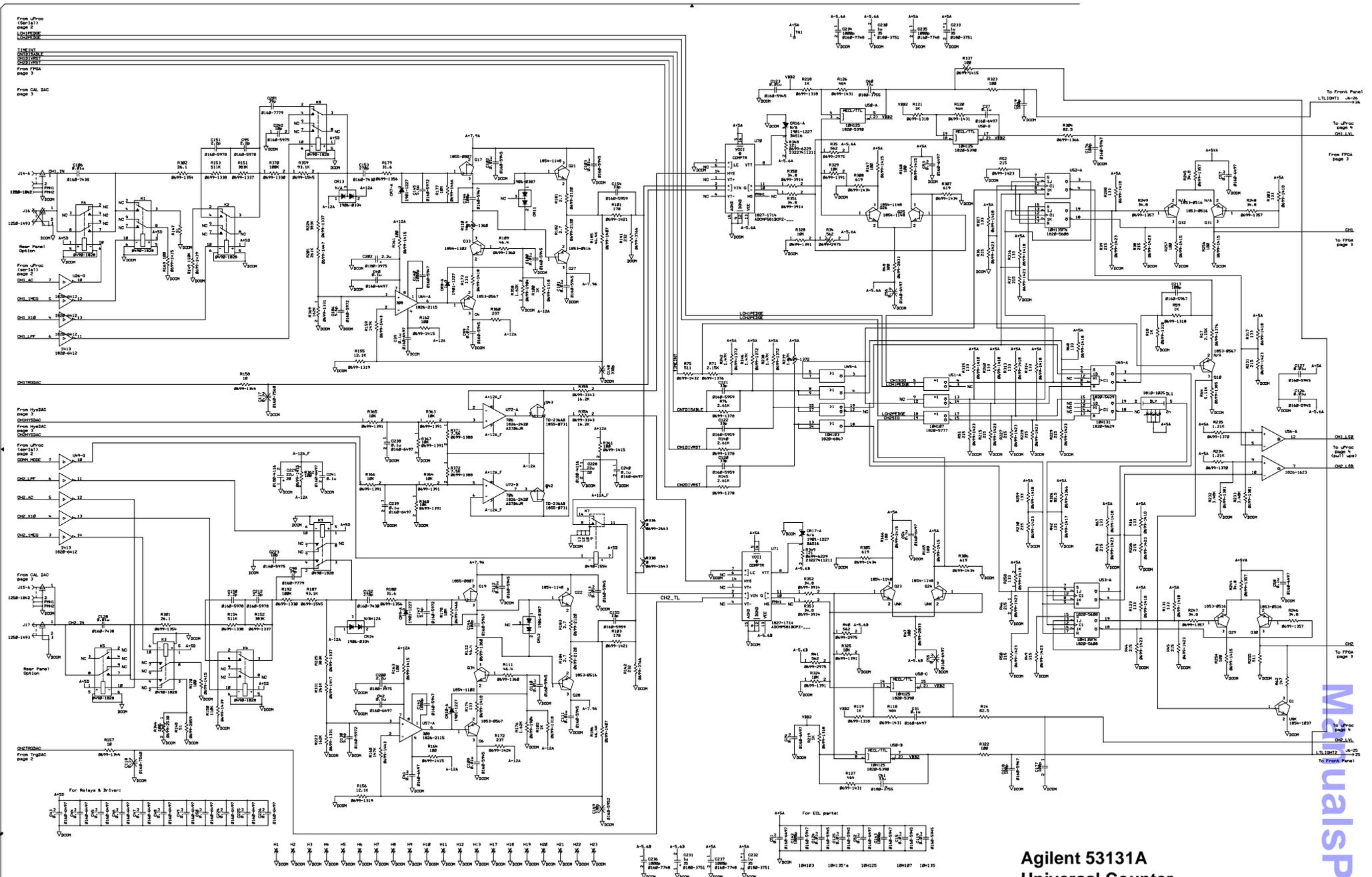
## 53131-68004 Parts List

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
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
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
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
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
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

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Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
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/ASYNCR 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-SO	AD706JRZ	ANALOG DEVICES
U45	1	1820-6867	IC GATE ECL/10KH OR QUAD 2-INP	MC10H103FN_G	ON SEMICONDUCTOR
U46, U47	2	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
U54, U55	2	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, U64	2	1826-2115	IC OP AMP LOW-BIAS-H-IMPED 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
U65	1	1820-5629	IC FF ECL/10KH D-M/S POS-EDGE-TRIG	MC10H131FNG	ON SEMICONDUCTOR
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
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

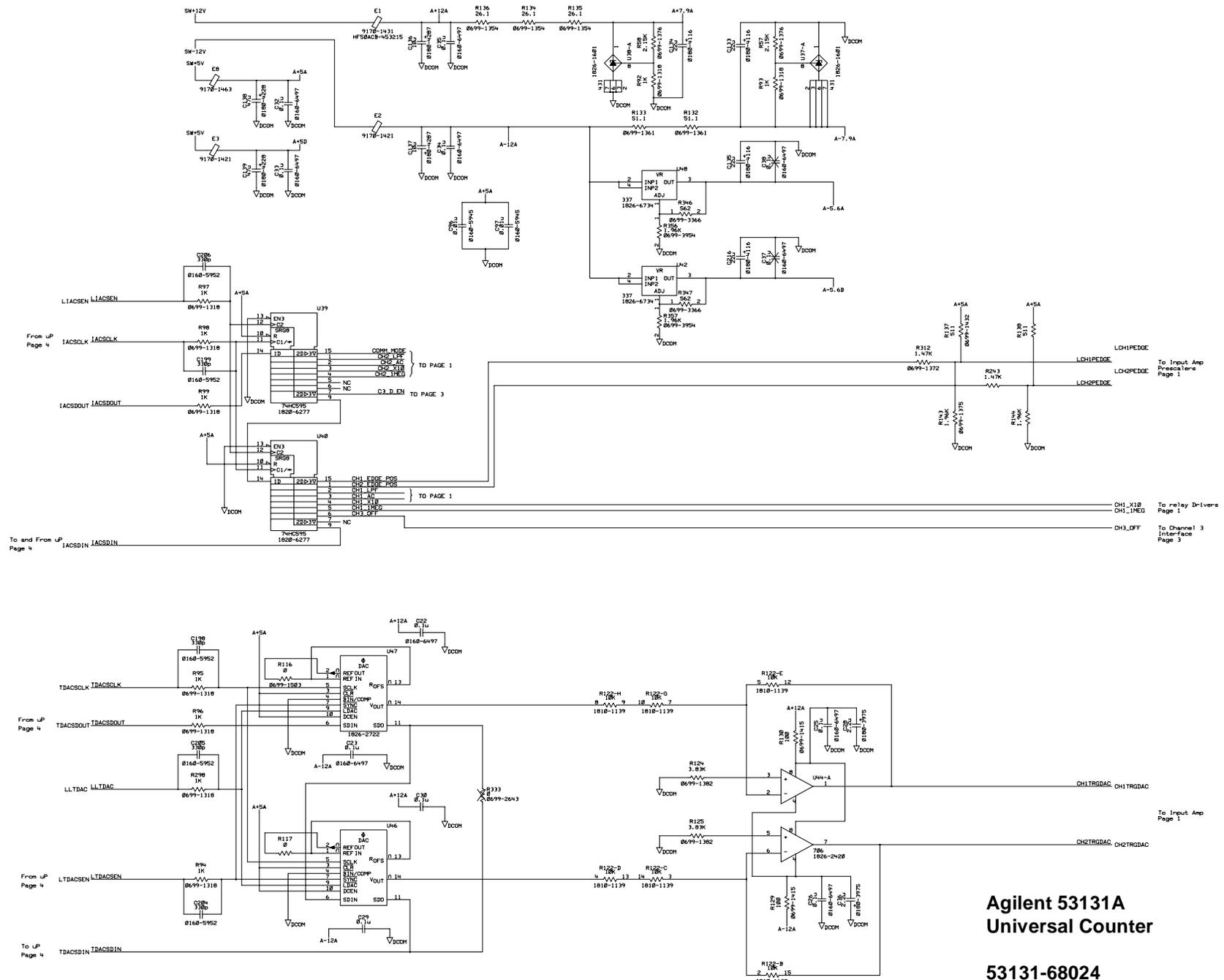




Agilent 53131A  
Universal Counter

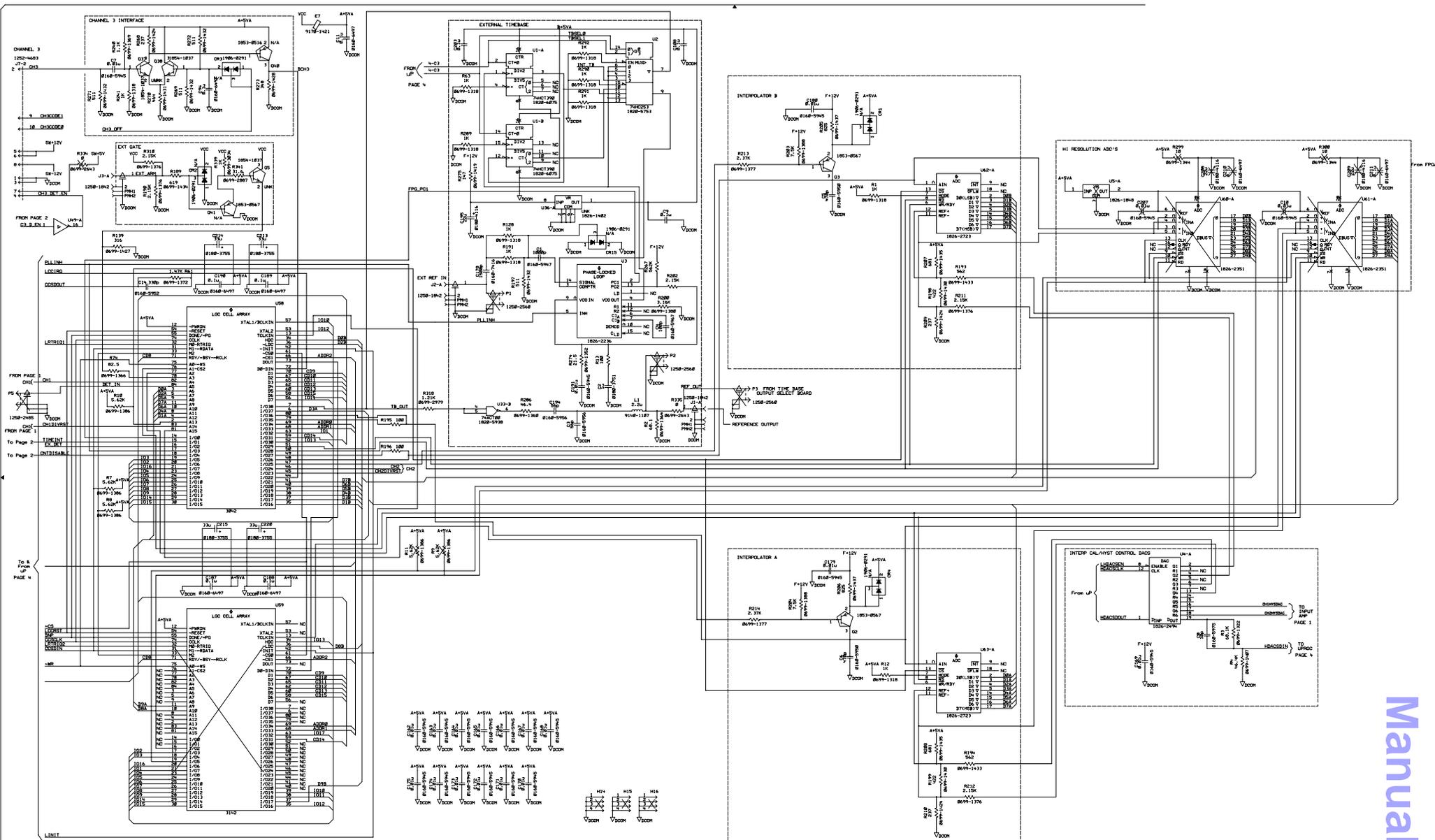
53131-68024  
Main Board

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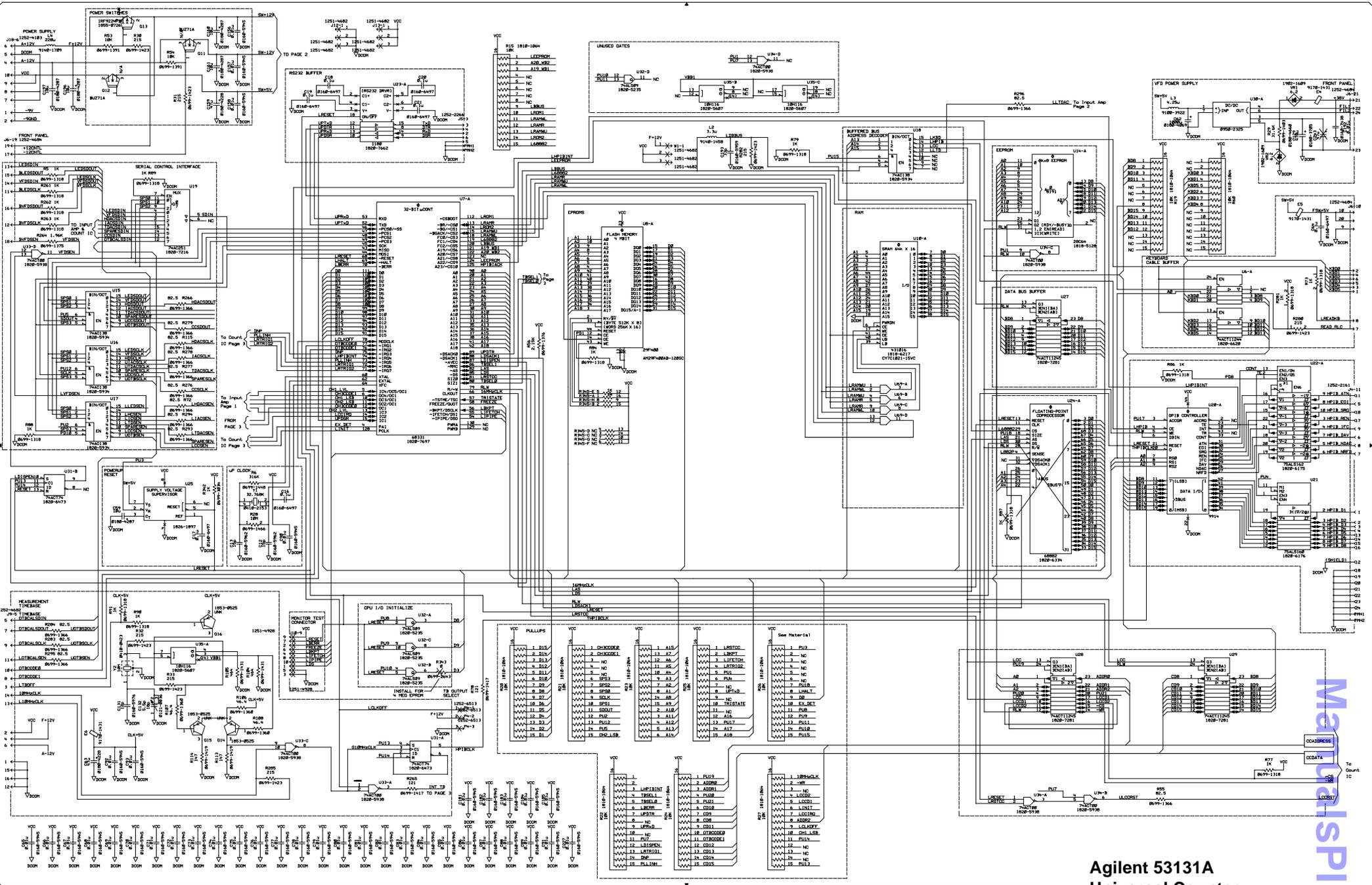
**Agilent 53131A  
Universal Counter**

**53131-68024  
Main Board**



**Agilent 53131A  
Universal Counter**

**53131-68024  
Main Board**



Agilent 53131A  
Universal Counter

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## 53131-68024 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
C106, C128, C192	3	0160-7438	CAP-FXD 0.01uF +-10pct 500 V CER X7R	12107C103KAT A 501S41W103KV6	AVX JOHANSON DIELECTRICS
C12, C13	2	0160-5962	CAP-FXD 15pF +-5pct 50 V CER C0G	08055A150JAT A C0805C150J5GAC C2012COG1H150J GRM2165C1H150JD01D	AVX KEMET ELECTRONICS TDK MURATA MANUFACTURING
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
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, C228, C229	7	0180-4116	CAP-FXD 22uF +-20PCT 20V TA	TAJD226M020 293D226X0020D2E3 ESVD1D226M SK2-1D226M-RD0	AVX VISHAY NEC TOKIN ELNA
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
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

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Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
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
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
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
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, 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
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, 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-ELCLTL	SME25VB102M12X20FT	NIPPON CHEMI-CON

## 53131-68024 Parts List

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
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, 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
C9, C11, C16-C27, C29-C35, C39-C54, C57, C58, C64, C94, C108, C187-C190, C203, C224-C226, C238- C241	54	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
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
C98, C201	2	0160-7779	CAP-FXD 39pF +-5PCT 500 V CER C0G 1206	12067A390JAT_A 501R18N390JV6_	AVX JOHANSON DIELECTRICS
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
CR11, CR12	2	1906-0387	DIODE-DUAL 30V T0-236AB (SOT-23)	MMBD1703A	FAIRCHILD SEMICONDUCTOR
CR13, CR14	2	1906-0334	DIODE-DUAL 200V 200MA T0-236AA	MMBD1503A	FAIRCHILD SEMICONDUCTOR
CR7, CR8, CR9, CR10, CR16, CR17	6	1901-1227	DIODE-SWITCHING 75V 200MA 6NS T0-236	BAS16 BAS16 BAS16LT1G BAS16	PHILIPS VISHAY ON SEMICONDUCTOR NXP
DL1	1	1810-1025	DELAY LINE PASSIVE DEVICE W/SINGLE	DL1L5XK200S	SUSUMU
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

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Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
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
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
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
K1, K2, K3, K4, K5, 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 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
Q1, Q5, Q37, Q38	4	1854-1037	TRANSISTOR NPN SI TO-236AA PD=350MW	MMBT3904 SST3904T116 MMBT3904LT1G	FAIRCHILD SEMICONDUCTOR ROHM ON SEMICONDUCTOR
Q11, Q12	2	1855-0831	TRANSISTOR MOSFET N-CHAN E-MODE TO-22	NTP18N06LG	ON SEMICONDUCTOR
Q13	1	1855-0726	TRANSISTOR MOSFET P-CHAN E-MODE TO-22	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
Q2, Q3, Q4, Q6, Q10, Q41	6	1853-0567	TRANSISTOR PNP SI SOT-23 (TO-236AB)	MMBT3906 SST3906T116 MMBT3906LT1G	FAIRCHILD SEMICONDUCTOR ROHM ON SEMICONDUCTOR

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Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
Q21, Q22, Q23, Q24, Q25, Q26	6	1854-1148	TRANSISTOR NPN SI SOT-23 (TO-236AB)	MMBTH10 MMBTH10LT1G	FAIRCHILD SEMICONDUCTOR ON SEMICONDUCTOR
Q27, Q28, Q29, Q30, Q31, Q32, Q40	7	1853-0516	TRANSISTOR PNP SI SOT-23 (TO-236AB)	MMBTH81	FAIRCHILD SEMICONDUCTOR
Q33, Q34	2	1854-1102	TRANSISTOR NPN SI SOT-23 (TO-236AB)	MMBTH24	FAIRCHILD SEMICONDUCTOR
Q42, Q43	2	1855-0731	TRANSISTOR J-FET P-CHAN D-MODE TO-236A	MMBFJ175 PMBFJ175 MMBFJ175L__G PMBFJ175	FAIRCHILD SEMICONDUCTOR PHILIPS ON SEMICONDUCTOR NXP
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
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
R116, R117	2	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

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Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
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
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-R301, R302	5	0699-1354	RESISTOR 26.1 +-1pct .125W TKF TC=0+-100	CRCW120626R1FKE_ RK73H2BT_26R1F MCR18__F26R1 232272462619	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
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
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, R144, R264	3	0699-1375	RESISTOR 1.96K +-1pct .125W TKF TC=0+-100	CRCW12061K96FKE_ RK73H2BT_1961F MCR18__F1961 232272461962L	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
R149, R150	2	0699-1439	RESISTOR 110K +-1pct .125W TKF TC=0+-100	CRCW1206110KFKE_ RK73H2BT_1103F MCR18__F1103 232272461104L	VISHAY KOA ROHM YAGEO

53131-68024 Parts List

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
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
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
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-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
R172, R209, R210, R268, R360	5	0699-1424	RESISTOR-FXD 237 +-1pct .25W TC 0+-100 12	CRCW1206237RFKE_ RK73H2BT_2370F MCR18__F2370	VISHAY KOA ROHM

53131-68024 Parts List

Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
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, R182, R183, R184	4	0699-2120	RESISTOR 2.7 +-5pct .125W TKF TC=0+-200	MCR18_J2R7	ROHM
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	CRCW1206619RFKE_ RK73H2BT_6190F MCR18__F6190 232272466191	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
R193, R194	2	0699-1433	RESISTOR 562 +-1pct .125W TKF TC=0+-100	CRCW1206562RFKE_ RK73H2BT_5620F MCR18__F5620 232272465621	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

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Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
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
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
R232, R233	2	0699-1381	RESISTOR 3.48K +-1pct .125W TKF TC=0+-100	CRCW12063K48FKE_ RK73H2BT_3481F MCR18__F3481 232272463482	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
R240	1	0699-1369	RESISTOR 1.1K +-1pct .125W TKF TC=0+-100	CRCW12061K10FKE_ RK73H2BT_1101F MCR18__F1101 232272461102L	VISHAY KOA ROHM YAGEO

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Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R244-R249	6	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, 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
R3	1	0699-1322	RESISTOR 68.1K +-1pct .125W TKF TC=0+-100	CRCW120668K1FKE_ RK73H2BT_6812F MCR18__F6812 232272466813	VISHAY KOA ROHM YAGEO
R30-R33, R36-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
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

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Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R335	1	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
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 RR1632P121OB BLU-1206-121OHM 0.1%25PPM	KOA SUSUMU RCD COMPONENTS
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
R350, R351, R352, 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

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Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
R356, R357	2	0699-3954	RESISTOR 1.96K +-1pct .063W TKF TC=0+-200	CRCW06031K96FKE_ RK73H1JT_1961F 232270461962L MCR03__FX1961	VISHAY KOA YAGEO ROHM
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
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-R368	12	0699-1391	RESISTOR 10K +-1pct .125W TKF TC=0+-100	CRCW120610K0FKE_ RK73H2BT_1002F MCR18__F1002 232272461003L	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, R239, R242, R243, R312	7	0699-1372	RESISTOR 1.47K +-1pct .125W TKF TC=0+-100	CRCW12061K47FKE_ RK73H2BT_1471F MCR18__F1471 232272461472	VISHAY KOA ROHM YAGEO
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
R64	1	0699-1385	RES-FXD 5.11K +-1PCT .125W TC 0+-100	CRCW12065K11FKE_ RK73H2BT_5111F MCR18__F5111 232272465112L	VISHAY KOA ROHM YAGEO

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Reference Designator	Qty	Agilent P/N	Description	MPN	Manufacturer
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
R75, R137, R138, R197, R255, R269, R271, R272	8	0699-1432	RESISTOR 511 +-1pct .125W TKF TC=0+-100	CRCW1206511RFKE_ RK73H2BT_5110F MCR18__F5110 232272465111L	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
U1	1	1820-6075	IC CNTR CMOS/HCT DECD ASYNCHRO	74HCT390D 74HCT390D	PHILIPS NXP
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-DEMURX 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 GPIB 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
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
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

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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	MC144110DWR2	
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-SC	AD706JRZ	ANALOG DEVICES
U45	1	1820-6867	IC GATE ECL/10KH OR QUAD 2-INP	MC10H103FN_G	ON SEMICONDUCTOR
U46, U47	2	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-SOI	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
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
U65	1	1820-5629	IC FF ECL/10KH D-M/S POS-EDGE-TRIG	MC10H131FNG	ON SEMICONDUCTOR
U69	1	1820-5940	IC GATE CMOS/ACT AND QUAD 2-INP	MC74ACT08DG 74ACT08SCX.	ON SEMICONDUCTOR FAIRCHILD SEMICONDUCTOR
U7	1	1820-7697	IC MODULAR MICROCONTROLLER;16MHZ	MC68331CEH16	FREESCALE SEMICONDUCTOR
U70, U71	2	1827-1714	IC V COMPTR ULTRAFast SiGe 16-LFCSP	ADCMP581BCPZ-	ANALOG DEVICES
U8	1	53131-80060	PROGRAMMED IC 4M-BIT FLASH 120-NS CMO	see U8a	
U8a	1	1818-6109	IC 4M-BIT FLASH 120-NS CMOS	AM29F400BB-120SD	SPANSION
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

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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

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