

Filename: PMP2534\_REVE\_bom.xls

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### PMP2534\_REVE BOM

COUNT	RefDes	Value	Description	Size	Part Number	Mfr	AREA
4	C4	470uF	Capacitor, Aluminum, 470-uF, 50-V, UPW Series	0.394	UPW1H471MPH	Nichicon	
	C5	470uF	Capacitor, Aluminum, 470-uF, 50-V, UPW Series	0.394	UPW1H471MPH	Nichicon	
2	C6	3.3uF	Capacitor, Ceramic, 50-V, X7R, 20%	1210	C3225X7R1H335MTDK		
2	C7	470pF	Capacitor, Ceramic, 470-pF, 250-V, X7R, 0805	0805	Std	Std	
2	C8	1uF	Capacitor, Ceramic, 50V, X7R, 20%	1206	C3216X7R1H105MTDK		
2	C9	4700pF	Capacitor, Ceramic, 4700pF, 2kV, X7R, 1812	1812		AVX	
31	C10	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105MTDK		
	C11	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105MTDK		
3	C12	680pF	Capacitor, Ceramic, 680pF, 50V, NPO, 0603	0603	Std	Std	
1	C13	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std	Std	
2	C14	3300pF	Capacitor, Ceramic, 3300pF, 50V, X7R, 0603	0603	Std	Std	
4	C15	0.047uF	Capacitor, Ceramic, 0.047uF, 50V, X7R, 0603	0603	Std	Std	
2	C16	0.1uF	Capacitor, Ceramic, 100-V, X7R, 20%	1206	C2012X7R2A104MTDK		
6	C17	4.7uF	Capacitor, Ceramic, 4.7-uF, 6.3-V, X5R, 20%, 0805	0805	Std	Std	
	C18	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105MTDK		
	C19	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105MTDK		
2	C20	150pF	Capacitor, Ceramic, 150pF, 50V, NPO, 0603	0603	Std	Std	
2	C21	0.22uF	Capacitor, Ceramic, 25V, X7R, 10%	0603	C1608X7R1E224K TDK		
2	C22	1800pF	Capacitor, Ceramic, 1800pF, 50V, X7R, 0603	0603	Std	Std	
2	C23	470pF	Capacitor, Ceramic, 50V, X7R, 10%	0603	C1608X7R1H471K TDK		
2	C24	470nF	Capacitor, Ceramic, 3900pF, 50V, X7R, 0603	0603	Std	Std	
2	C25	0.01uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105MTDK		
	C26	4.7uF	Capacitor, Ceramic, 4.7-uF, 6.3-V, X5R, 20%, 0805	0805	Std	Std	
1	C27	1uF	Capacitor, Ceramic, 680pF, 50V, NPO, 0603	0603	Std	Std	
	C28	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105MTDK		
19	C30	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std	Std	
	C31	0.047uF	Capacitor, Ceramic, 0.047uF, 50V, X7R, 0603	0603	Std	Std	
4	C32	10uF	Capacitor, Ceramic, 6.3V, X5R, 20%	0603	C1608X5R0J106M TDK		
	C33	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std	Std	
	C36	470uF	Capacitor, Aluminum, 470-uF, 50-V, UPW Series	0.394	UPW1H471MPH	Nichicon	
	C37	470uF	Capacitor, Aluminum, 470-uF, 50-V, UPW Series	0.394	UPW1H471MPH	Nichicon	
	C38	3.3uF	Capacitor, Ceramic, 50-V, X7R, 20%	1210	C3225X7R1H335MTDK		
	C39	470pF	Capacitor, Ceramic, 470-pF, 250-V, X7R, 0805	0805	Std	Std	
	C40	1uF	Capacitor, Ceramic, 50V, X7R, 20%	1206	C3216X7R1H105MTDK		
	C41	4700pF	Capacitor, Ceramic, 4700pF, 2kV, X7R, 1812	1812		AVX	
	C43	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105MTDK		
	C44	680pF	Capacitor, Ceramic, 680pF, 50V, NPO, 0603	0603	Std	Std	
	C45	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std	Std	
	C46	3300pF	Capacitor, Ceramic, 3300pF, 50V, X7R, 0603	0603	Std	Std	
	C47	0.047uF	Capacitor, Ceramic, 0.047uF, 50V, X7R, 0603	0603	Std	Std	
	C48	0.1uF	Capacitor, Ceramic, 100-V, X7R, 20%	1206	C2012X7R2A104MTDK		
	C49	4.7uF	Capacitor, Ceramic, 4.7-uF, 6.3-V, X5R, 20%, 0805	0805	Std	Std	
	C50	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105MTDK		

	C51	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105M TDK
	C52	150pF	Capacitor, Ceramic, 150pF, 50V, NPO, 0603	0603	Std Std
	C53	0.22uF	Capacitor, Ceramic, 25V, X7R, 10%	0603	C1608X7R1E224K TDK
	C54	1800pF	Capacitor, Ceramic, 1800pF, 50V, X7R, 0603	0603	Std Std
	C55	470pF	Capacitor, Ceramic, 50V, X7R, 10%	0603	C1608X7R1H471K TDK
	C56	470nF	Capacitor, Ceramic, 3900pF, 50V, X7R, 0603	0603	Std Std
	C57	0.01uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105M TDK
	C58	4.7uF	Capacitor, Ceramic, 4.7-uF, 6.3-V, X5R, 20%, 0805	0805	Std Std
	C59	680pF	Capacitor, Ceramic, 680pF, 50V, NPO, 0603	0603	Std Std
	C62	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std Std
	C63	0.047uF	Capacitor, Ceramic, 0.047uF, 50V, X7R, 0603	0603	Std Std
	C64	10uF	Capacitor, Ceramic, 6.3V, X5R, 20%	0603	C1608X5R0J106M TDK
	C65	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105M TDK
1	C66	.1uF	Capacitor, Ceramic, .1uF, 25-V, X7R, 10%	0603	GRM39X7R104K2f muRata
1	C67	0.047uF	Capacitor, Ceramic, 50V, X7R, 20%	0603	Std Std
1	C68	22pF	Capacitor, Ceramic, 50V, C0G, 5%	0603	Std Std
	C69	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105M TDK
	C70	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105M TDK
1	C71	0.1uF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std Std
1	C72	100pF		0603	std muRata
2	C73	47uF	Capacitor, Ceramic, 47uF, 6.3V, X5R, 10%	1210	C3225X5R0J476K TDK
	C74	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105M TDK
	C75	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105M TDK
	C76	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std Std
	C77	10uF	Capacitor, Ceramic, 6.3V, X5R, 20%	0603	C1608X5R0J106M TDK
	C78	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std Std
	C79	47uF	Capacitor, Ceramic, 47uF, 6.3V, X5R, 10%	1210	C3225X5R0J476K TDK
	C80	4.7uF	Capacitor, Ceramic, 4.7-uF, 6.3-V, X5R, 20%, 0805	0805	Std Std
	C81	4.7uF	Capacitor, Ceramic, 4.7-uF, 6.3-V, X5R, 20%, 0805	0805	Std Std
	C82	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std Std
	C83	10uF	Capacitor, Ceramic, 6.3V, X5R, 20%	0603	C1608X5R0J106M TDK
	C84	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std Std
	C85	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std Std
	C86	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std Std
2	C88	3300uF	Capacitor, Aluminum, SM, ±20%, 16V,	0.670 X 0.697 inch	EEVFK1C332 Panasonic
	C89	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std Std
	C90	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105M TDK
	C91	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105M TDK
	C92	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105M TDK
	C93	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std Std
	C94	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105M TDK
	C95	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105M TDK
	C96	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105M TDK
	C97	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105M TDK
	C98	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105M TDK
	C99	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105M TDK
	C100	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105M TDK
	C101	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105M TDK
	C102	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105M TDK

	C103	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105MTDK
	C104	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105MTDK
	C105	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105MTDK
	C106	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105MTDK
	C107	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std Std
	C108	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std Std
	C109	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std Std
	C110	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std Std
	C111	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std Std
	C112	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std Std
	C113	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 0603	0603	Std Std
	C114	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105MTDK
	C115	1uF	Capacitor, Ceramic, 16V, X7R, 20%	0603	C1608X7R1C105MTDK
	C116	3300uF	Capacitor, Aluminum, SM, ±20%, 16V,	0.670 X 0.697 inch	EEVFK1C332 Panasonic
6	C117	10uF	Capacitor, Ceramic, 25-V, X5R, 20%	1210	C3225JB1E106K TDK
	C118	10uF	Capacitor, Ceramic, 25-V, X5R, 20%	1210	C3225JB1E106K TDK
	C119	10uF	Capacitor, Ceramic, 25-V, X5R, 20%	1210	C3225JB1E106K TDK
	C120	10uF	Capacitor, Ceramic, 25-V, X5R, 20%	1210	C3225JB1E106K TDK
	C121	10uF	Capacitor, Ceramic, 25-V, X5R, 20%	1210	C3225JB1E106K TDK
	C122	10uF	Capacitor, Ceramic, 25-V, X5R, 20%	1210	C3225JB1E106K TDK
4	D1	40CTQ150	Diode, Dual Schottky, 150-V, 40-A	TO-220V	40CTQ150 IR
2	D2	ES1D-13	Diode, Super Fast Rectifier, 200V, 1A	0.220 x 0.115 inch	ES1D-13-F Diodes
	D3	40CTQ150	Diode, Dual Schottky, 150-V, 40-A	TO-220V	40CTQ150 IR
9	D4	BAS16	Diode, Switching, 75V, 200mA	SOT23	BAS16LT1 On Semiconductor
	D5	BAS16	Diode, Switching, 75V, 200mA	SOT23	BAS16LT1 On Semiconductor
2	D6	GREEN	Diode. LED, Blue, vvV, 25mA	0.063 x 0.126 inch	SSF-LXH100L-ID
4	D7	RED	Diode. LED, Blue, vvV, 25mA	0.063 x 0.126 inch	SSF-LXH100L-ID
8	D8	BAS16	Diode, Switching, SOT23	SOT23	BAS16 On Semi
	D9	BAS16	Diode, Switching, 75V, 200mA	SOT23	BAS16LT1 On Semiconductor
	D10	BAS16	Diode, Switching, SOT23	SOT23	BAS16 On Semi
	D11	BAS16	Diode, Switching, SOT23	SOT23	BAS16 On Semi
	D12	BAS16	Diode, Switching, SOT23	SOT23	BAS16 On Semi
	D13	40CTQ150	Diode, Dual Schottky, 150-V, 40-A	TO-220V	40CTQ150 IR
	D14	ES1D-13	Diode, Super Fast Rectifier, 200V, 1A	0.220 x 0.115 inch	ES1D-13-F Diodes
	D15	40CTQ150	Diode, Dual Schottky, 150-V, 40-A	TO-220V	40CTQ150 IR
	D16	BAS16	Diode, Switching, 75V, 200mA	SOT23	BAS16LT1 On Semiconductor
	D17	BAS16	Diode, Switching, 75V, 200mA	SOT23	BAS16LT1 On Semiconductor
	D18	GREEN	Diode. LED, Blue, vvV, 25mA	0.063 x 0.126 inch	SSF-LXH100L-ID
	D19	RED	Diode. LED, Blue, vvV, 25mA	0.063 x 0.126 inch	SSF-LXH100L-ID
	D20	BAS16	Diode, Switching, SOT23	SOT23	BAS16 On Semi
	D21	BAS16	Diode, Switching, 75V, 200mA	SOT23	BAS16LT1 On Semiconductor
	D22	BAS16	Diode, Switching, SOT23	SOT23	BAS16 On Semi
	D23	BAS16	Diode, Switching, SOT23	SOT23	BAS16 On Semi
	D24	BAS16	Diode, Switching, SOT23	SOT23	BAS16 On Semi
	D25	BAS16	Diode, Switching, 75V, 200mA	SOT23	BAS16LT1 On Semiconductor
12	D26	BAT54LT1	Diode, Schottky, 200-mA, 30-V	SOT23	BAT54LT1 On Semi
	D27	BAT54LT1	Diode, Schottky, 200-mA, 30-V	SOT23	BAT54LT1 On Semi
	D28	BAT54LT1	Diode, Schottky, 200-mA, 30-V	SOT23	BAT54LT1 On Semi
	D29	BAT54LT1	Diode, Schottky, 200-mA, 30-V	SOT23	BAT54LT1 On Semi

	D30	BAT54LT1	Diode, Schottky, 200-mA, 30-V	SOT23	BAT54LT1	On Semi
	D31	BAT54LT1	Diode, Schottky, 200-mA, 30-V	SOT23	BAT54LT1	On Semi
	D32	BAT54LT1	Diode, Schottky, 200-mA, 30-V	SOT23	BAT54LT1	On Semi
	D33	BAT54LT1	Diode, Schottky, 200-mA, 30-V	SOT23	BAT54LT1	On Semi
	D34	BAT54LT1	Diode, Schottky, 200-mA, 30-V	SOT23	BAT54LT1	On Semi
	D35	BAT54LT1	Diode, Schottky, 200-mA, 30-V	SOT23	BAT54LT1	On Semi
	D36	BAT54LT1	Diode, Schottky, 200-mA, 30-V	SOT23	BAT54LT1	On Semi
	D37	RED	Diode. LED, Blue, vvV, 25mA	0.063 x 0.126 inch	SSF-LXH100L-ID	
	D38	BAT54LT1	Diode, Schottky, 200-mA, 30-V	SOT23	BAT54LT1	On Semi
	D39	BAS16	Diode, Switching, 75V, 200mA	SOT23	BAS16LT1	On Semiconductor
	D40	RED	Diode. LED, Blue, vvV, 25mA	0.063 x 0.126 inch	SSF-LXH100L-ID	
	D41	BAS16	Diode, Switching, 75V, 200mA	SOT23	BAS16LT1	On Semiconductor
1	FH1	4A	Fuse Clip, 5X20MM	0.200 x 0.787 inch	5HF[P]xxx	Bel Fuse
4	HS1		Heatsink, TO-220/218 veritcal	0.640 x 0.640	634-15AB	Wakefield
	HS2		Heatsink, TO-220/218 veritcal	0.640 x 0.640	634-15AB	Wakefield
	HS3		Heatsink, TO-220/218 veritcal	0.640 x 0.640	634-15AB	Wakefield
	HS4		Heatsink, TO-220/218 veritcal	0.640 x 0.640	634-15AB	Wakefield
1	J1	MTLW-125-06-G-D	Header, Male 2x25-pin, 100mil spacing	0.100 inch x 25 x 2	MTLW-125-06-G-D	Samtec
2	J2	D120/2DS	Terminal Block, 2-pin, 15-A, 5.1mm	0.40 x 0.35 inch	D120/2DS	OST
1	J3	ED555/2DS	Terminal Block, 2-pin, 6-A, 3.5mm	0.27 x 0.25 inch	ED555/2DS	OST
1	J4	39-29-1048	Connector, 4-pin M, Right Angle, Dual with Flanges	0.772 x 0.750	39-29-1048	Molex
	J5	D120/2DS	Terminal Block, 2-pin, 15-A, 5.1mm	0.40 x 0.35 inch	D120/2DS	OST
2	J8		Terminal Block, 2-pin, 6-A, 3.5mm	0.27 x 0.25"	ED1514	OST
	J10		Terminal Block, 2-pin, 6-A, 3.5mm	0.27 x 0.25"	ED1514	OST
1	J11	ATX CONNECTOR	Connector, Mini-fit Jr, Header, 0.165	Molex	39-29-xxxx	24-pin"
2	L1	47 uH	Inductor, 47uH, 10.3-A, 12-milliohm	0.950 dia.	2200LL-470-RC	J.W.Miller
2	L2	1.2uH	Inductor, SMT, 14.7A, 2.38milliohm	12 X 10.5 MM	MLC1260-122MLC	Coilcraft
2	L3	PA1005-100	XFMR, Current Sense	0.284 x 0.330 inch	PA1005.100	Pulse
	L4	47 uH	Inductor, 47uH, 10.3-A, 12-milliohm	0.950 dia.	2200LL-470-RC	J.W.Miller
	L5	1.2uH	Inductor, SMT, 14.7A, 2.38milliohm	12 X 10.5 MM	MLC1260-122MLC	Coilcraft
	L6	PA1005-100	XFMR, Current Sense	0.284 x 0.330 inch	PA1005.100	Pulse
5	Q2	MMBT2907	Bipolar, PNP, 60V, 600mA	SOT23	MMBT2907LT1	On Semi
	Q3	MMBT2907	Bipolar, PNP, 60V, 600mA	SOT23	MMBT2907LT1	On Semi
8	Q4	MMBT3904LT1	Bipolar, NPN, 40-V, 200-mA	SOT23	MMBT3904LT1	On Semi
	Q5	MMBT3904LT1	Bipolar, NPN, 40-V, 200-mA	SOT23	MMBT3904LT1	On Semi
4	Q7	MMBT3906LT1	Bipolar, PNP, 40-V, 200-mA	SOT23	MMBT3906LT1	On Semi
4	Q8	BSS138	MOSFET, Nch, 50V, 0.22A, 3.5 Ohm	SOT23	BSS138	Fairchild
	Q9	BSS138	MOSFET, Nch, 50V, 0.22A, 3.5 Ohm	SOT23	BSS138	Fairchild
	Q10	MMBT3904LT1	Bipolar, NPN, 40-V, 200-mA	SOT23	MMBT3904LT1	On Semi
1	Q11	Si4401DY	MOSFET, P-ch, -40V, 10A, 15.5milliohm	SO8	Si4401DY	Siliconix
	Q12	MMBT2907	Bipolar, PNP, 60V, 600mA	SOT23	MMBT2907LT1	On Semi
	Q13	MMBT2907	Bipolar, PNP, 60V, 600mA	SOT23	MMBT2907LT1	On Semi
	Q14	MMBT3906LT1	Bipolar, PNP, 40-V, 200-mA	SOT23	MMBT3906LT1	On Semi
	Q18	BSS138	MOSFET, Nch, 50V, 0.22A, 3.5 Ohm	SOT23	BSS138	Fairchild
	Q19	BSS138	MOSFET, Nch, 50V, 0.22A, 3.5 Ohm	SOT23	BSS138	Fairchild
	Q20	MMBT3904LT1	Bipolar, NPN, 40-V, 200-mA	SOT23	MMBT3904LT1	On Semi
1	Q21	MMBT2222A	Bipolar, NPN, 40V, 600mA	SOT23	MMBT2222ALT1	ON Semiconductor
	Q22	MMBT2907	Bipolar, PNP, 60V, 600mA	SOT23	MMBT2907LT1	On Semi
2	Q23	IRF7460	XSTR, MOSFET, N-Chan, 20V, Rds(ON)<10m	{Size}	IR/IRF7460	STD

	Q24	MMBT3904LT1	Bipolar, NPN, 40-V, 200-mA	SOT23	MMBT3904LT1	On Semi
	Q25	IRF7460	XSTR, MOSFET, N-Chan, 20V, Rds(ON)<10m	{Size}	IR/IRF7460	STD
	Q26	MMBT3904LT1	Bipolar, NPN, 40-V, 200-mA	SOT23	MMBT3904LT1	On Semi
8	Q27	HAT2167H	Mosfet, N-Ch, Vds xxV, Rds yy milliOhms, Id zZA	LFPAK	HAT2168H	Hitachi
	Q28	HAT2167H	Mosfet, N-Ch, Vds xxV, Rds yy milliOhms, Id zZA	LFPAK	HAT2168H	Hitachi
	Q29	MMBT3904LT1	Bipolar, NPN, 40-V, 200-mA	SOT23	MMBT3904LT1	On Semi
	Q30	MMBT3906LT1	Bipolar, PNP, 40-V, 200-mA	SOT23	MMBT3906LT1	On Semi
	Q31	HAT2167H	Mosfet, N-Ch, Vds xxV, Rds yy milliOhms, Id zZA	LFPAK	HAT2168H	Hitachi
	Q32	HAT2167H	Mosfet, N-Ch, Vds xxV, Rds yy milliOhms, Id zZA	LFPAK	HAT2168H	Hitachi
1	Q33	Si9407BDY	MOSFET, Pch, -60Vds, 3.5A, 120 milliohm	SO8	Si9407AEY	Vishay
	Q34	MMBT3906LT1	Bipolar, PNP, 40-V, 200-mA	SOT23	MMBT3906LT1	On Semi
	Q35	MMBT3904LT1	Bipolar, NPN, 40-V, 200-mA	SOT23	MMBT3904LT1	On Semi
	Q36	HAT2167H	Mosfet, N-Ch, Vds xxV, Rds yy milliOhms, Id zZA	LFPAK	HAT2168H	Hitachi
	Q37	HAT2167H	Mosfet, N-Ch, Vds xxV, Rds yy milliOhms, Id zZA	LFPAK	HAT2168H	Hitachi
	Q38	HAT2167H	Mosfet, N-Ch, Vds xxV, Rds yy milliOhms, Id zZA	LFPAK	HAT2168H	Hitachi
	Q39	HAT2167H	Mosfet, N-Ch, Vds xxV, Rds yy milliOhms, Id zZA	LFPAK	HAT2168H	Hitachi
2	R1	0.82	Resistor, Chip, 1/2W, yy%	1812	Std	Std
4	R2	100	Resistor, Chip, 100-Ohms, 1-W, 5%	2512	Std	Std
	R3	100	Resistor, Chip, 100-Ohms, 1-W, 5%	2512	Std	Std
6	R4	0.05	Resistor, Chip, 0.05-Ohms, 1W, 1%	2512	ERJ-L1WKFxxxU	Panasonic
	R5	0.05	Resistor, Chip, 0.05-Ohms, 1W, 1%	2512	ERJ-L1WKFxxxU	Panasonic
	R6	0.05	Resistor, Chip, 0.05-Ohms, 1W, 1%	2512	ERJ-L1WKFxxxU	Panasonic
4	R7	10k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
8	R8	100k	Resistor, Chip, 2.49k, 1%, 0603	0603	Std	Std
	R9	100k	Resistor, Chip, 2.49k, 1%, 0603	0603	Std	Std
12	R10	1k	Resistor, Chip, 1k, 1%, 0603	0603	Std	Std
	R11	1k	Resistor, Chip, 1k, 1%, 0603	0603	Std	Std
	R12	100k	Resistor, Chip, 2.49k, 1%, 0603	0603	Std	Std
4	R13	2.2k	Resistor, Chip, 2.49k, 1%, 0603	0603	Std	Std
	R14	100k	Resistor, Chip, 2.49k, 1%, 0603	0603	Std	Std
	R15	2.2k	Resistor, Chip, 2.49k, 1%, 0603	0603	Std	Std
4	R16	15.8k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
	R17	15.8k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
10	R18	0	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R19	0	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R20	10k	Resistor, Chip, 6.65k, 1%, 0603	0603	Std	Std
6	R21	49.9	Resistor, Chip, 49.9 Ohms, 1%, 0603	0603	Std	Std
12	R22	0	Resistor, Chip, 0 Ohms, 0603	0603	Std	Std
	R23	0	Resistor, Chip, 0 Ohms, 0603	0603	Std	Std
2	R24	68k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R25	6.65k	Resistor, Chip, 6.65k, 1%, 0603	0603	Std	Std
2	R26	18.2k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
4	R27	49.9k	Resistor, Chip, 49.9k, 1%, 0603	0603	Std	Std
2	R28	2.49k	Resistor, Chip, 2.49k, 1%, 0603	0603	Std	Std
	R29	0	Resistor, Chip, 1/16W, 1%	0603	Std	Std
8	R30	1K	Resistor, Chip, 49.9 Ohms, 1%, 0603	0603	Std	Std
	R31	1K	Resistor, Chip, 49.9 Ohms, 1%, 0603	0603	Std	Std
2	R32	20.0k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
6	R33	100k	Resistor, Chip, 100k, 1%, 0603	0603	Std	Std

2	R34	150k	Resistor, Chip, 562k, 1%, 0603	0603	Std	Std
2	R35	53.6k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
4	R36	680	Resistor, Chip, 100k, 1%, 0603	0603	Std	Std
2	R37	82.5k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R38	49.9	Resistor, Chip, 49.9 Ohms, 1%, 0603	0603	Std	Std
6	R39	1k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R40	4.12k	Resistor, Chip, 4.12k, 1%, 0603	0603	Std	Std
	R41	0	Resistor, Chip, 0 Ohms, 0603	0603	Std	Std
2	R42	40.2k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R43	51.1k	Resistor, Chip, 51.1k, 1%, 0603	0603	Std	Std
	R44	100k	Resistor, Chip, 100k, 1%, 0603	0603	Std	Std
	R45	1K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R46	1K	Resistor, Chip, 49.9 Ohms, 1%, 0603	0603	Std	Std
	R47	1K	Resistor, Chip, 49.9 Ohms, 1%, 0603	0603	Std	Std
	R48	100k	Resistor, Chip, 100k, 1%, 0603	0603	Std	Std
2	R49	270k	Resistor, Chip, 562k, 1%, 0603	0603	Std	Std
2	R50	9.09k	Resistor, Chip, 9.09k, 1%, 0603	0603	Std	Std
	R51	680	Resistor, Chip, 100k, 1%, 0603	0603	Std	Std
	R52	0	Resistor, Chip, 1/16W, 1%	0603	Std	Std
8	R53	47K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R54	47K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R55	49.9k	Resistor, Chip, 49.9k, 1%, 0603	0603	Std	Std
2	R56	100	Resistor, Chip, 49.9 Ohms, 1%, 0603	0603	Std	Std
	R57	0	Resistor, Chip, 1/16W, 1%	0603	Std	Std
8	R58	22k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
	R59	1k	Resistor, Chip, 1k, 1%, 0603	0603	Std	Std
	R60	49.9	Resistor, Chip, 49.9 Ohms, 1%, 0603	0603	Std	Std
4	R61	4.7k	Resistor, Chip, 6.65k, 1%, 0603	0603	Std	Std
	R62	0	Resistor, Chip, 0 Ohms, 0603	0603	Std	Std
	R63	22k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
	R64	1k	Resistor, Chip, 1k, 1%, 0603	0603	Std	Std
	R65	0.82	Resistor, Chip, 1/2W, yy%	1812	Std	Std
	R66	100	Resistor, Chip, 100-Ohms, 1-W, 5%	2512	Std	Std
	R67	100	Resistor, Chip, 100-Ohms, 1-W, 5%	2512	Std	Std
	R68	0.05	Resistor, Chip, 0.05-Ohms, 1W, 1%	2512	ERJ-L1WKFxxxU	Panasonic
	R69	0.05	Resistor, Chip, 0.05-Ohms, 1W, 1%	2512	ERJ-L1WKFxxxU	Panasonic
	R70	0.05	Resistor, Chip, 0.05-Ohms, 1W, 1%	2512	ERJ-L1WKFxxxU	Panasonic
	R71	10k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R72	100k	Resistor, Chip, 2.49k, 1%, 0603	0603	Std	Std
	R73	100k	Resistor, Chip, 2.49k, 1%, 0603	0603	Std	Std
	R74	1k	Resistor, Chip, 1k, 1%, 0603	0603	Std	Std
	R75	1k	Resistor, Chip, 1k, 1%, 0603	0603	Std	Std
	R76	100k	Resistor, Chip, 2.49k, 1%, 0603	0603	Std	Std
	R77	2.2k	Resistor, Chip, 2.49k, 1%, 0603	0603	Std	Std
	R78	100k	Resistor, Chip, 2.49k, 1%, 0603	0603	Std	Std
	R79	2.2k	Resistor, Chip, 2.49k, 1%, 0603	0603	Std	Std
	R80	15.8k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
	R81	15.8k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
	R84	10k	Resistor, Chip, 6.65k, 1%, 0603	0603	Std	Std

	R85	49.9	Resistor, Chip, 49.9 Ohms, 1%, 0603	0603	Std	Std
	R86	0	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R87	0	Resistor, Chip, 0 Ohms, 0603	0603	Std	Std
	R88	68k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R89	6.65k	Resistor, Chip, 6.65k, 1%, 0603	0603	Std	Std
	R90	18.2k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R91	49.9k	Resistor, Chip, 49.9k, 1%, 0603	0603	Std	Std
	R92	2.49k	Resistor, Chip, 2.49k, 1%, 0603	0603	Std	Std
	R93	0	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R94	1K	Resistor, Chip, 49.9 Ohms, 1%, 0603	0603	Std	Std
	R95	1K	Resistor, Chip, 49.9 Ohms, 1%, 0603	0603	Std	Std
	R96	20.0k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R97	100k	Resistor, Chip, 100k, 1%, 0603	0603	Std	Std
	R98	150k	Resistor, Chip, 562k, 1%, 0603	0603	Std	Std
	R99	53.6k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R100	680	Resistor, Chip, 100k, 1%, 0603	0603	Std	Std
	R101	82.5k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R102	49.9	Resistor, Chip, 49.9 Ohms, 1%, 0603	0603	Std	Std
	R103	1k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R104	4.12k	Resistor, Chip, 4.12k, 1%, 0603	0603	Std	Std
	R105	0	Resistor, Chip, 0 Ohms, 0603	0603	Std	Std
	R106	40.2k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R107	51.1k	Resistor, Chip, 51.1k, 1%, 0603	0603	Std	Std
	R108	100k	Resistor, Chip, 100k, 1%, 0603	0603	Std	Std
	R109	1K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R110	1K	Resistor, Chip, 49.9 Ohms, 1%, 0603	0603	Std	Std
	R111	1K	Resistor, Chip, 49.9 Ohms, 1%, 0603	0603	Std	Std
	R112	100k	Resistor, Chip, 100k, 1%, 0603	0603	Std	Std
	R113	270k	Resistor, Chip, 562k, 1%, 0603	0603	Std	Std
	R114	9.09k	Resistor, Chip, 9.09k, 1%, 0603	0603	Std	Std
	R115	680	Resistor, Chip, 100k, 1%, 0603	0603	Std	Std
	R117	47K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R118	47K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R119	49.9k	Resistor, Chip, 49.9k, 1%, 0603	0603	Std	Std
	R120	100	Resistor, Chip, 49.9 Ohms, 1%, 0603	0603	Std	Std
	R122	22k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
	R123	1k	Resistor, Chip, 1k, 1%, 0603	0603	Std	Std
	R124	49.9	Resistor, Chip, 49.9 Ohms, 1%, 0603	0603	Std	Std
	R125	4.7k	Resistor, Chip, 6.65k, 1%, 0603	0603	Std	Std
	R126	0	Resistor, Chip, 0 Ohms, 0603	0603	Std	Std
	R127	22k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
	R128	1k	Resistor, Chip, 1k, 1%, 0603	0603	Std	Std
1	R129	18K	Resistor, Chip, 1/16-W, .1%	0603	Std	Std
2	R130	49.9k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R131	10k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R132	10k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R133	100k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R134	49.9k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R135	10k	Resistor, Chip, 2.49k, 1%, 0603	0603	Std	Std

	R136	22k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
	R137	47K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R138	1K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R139	47K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R140	22k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
4	R141	82k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
	R142	1k	Resistor, Chip, 1k, 1%, 0603	0603	Std	Std
2	R143	100k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
2	R144	0.01	Resistor, Chip, 0.01 Ohms, 1/4-W, 1%	1210	Std	Std
2	R145	47k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
	R146	4.7k	Resistor, Chip, 6.65k, 1%, 0603	0603	Std	Std
	R147	0	Resistor, Chip, 0 Ohms, 0603	0603	Std	Std
2	R148	1k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
	R149	82k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
	R150	1k	Resistor, Chip, 1k, 1%, 0603	0603	Std	Std
2	R151	470	Resistor, Chip, 1/8W, yy%	1206	Std	Std
	R152	470	Resistor, Chip, 1/8W, yy%	1206	Std	Std
4	R153	4.7k	Resistor, Chip, 1k, 1%, 0603	0603	Std	Std
	R154	4.7k	Resistor, Chip, 1k, 1%, 0603	0603	Std	Std
	R155	4.7k	Resistor, Chip, 1k, 1%, 0603	0603	Std	Std
	R156	4.7k	Resistor, Chip, 1k, 1%, 0603	0603	Std	Std
	R157	10k	Resistor, Chip, 2.49k, 1%, 0603	0603	Std	Std
	R158	22k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
	R159	47K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R160	1K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R161	47K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R162	22k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
	R163	82k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
	R164	1k	Resistor, Chip, 1k, 1%, 0603	0603	Std	Std
	R165	100k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
	R166	0.01	Resistor, Chip, 0.01 Ohms, 1/4-W, 1%	1210	Std	Std
	R167	47k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
	R168	4.7k	Resistor, Chip, 6.65k, 1%, 0603	0603	Std	Std
	R169	0	Resistor, Chip, 0 Ohms, 0603	0603	Std	Std
	R170	1k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
	R171	82k	Resistor, Chip, 15.8k, 1%, 0603	0603	Std	Std
	R172	1k	Resistor, Chip, 1k, 1%, 0603	0603	Std	Std
2	R173	2.67k	Resistor, Chip, 2.67k, 1%, 0603	0603	Std	Std
13	R174	10K	Resistor, Chip, 10 Ohms, 1%, 0603	0603	Std	Std
	R175	10K	Resistor, Chip, 10 Ohms, 1%, 0603	0603	Std	Std
8	R176	22	Resistor, Chip, 22 Ohms, 1%, 0603	0603	Std	Std
	R177	22	Resistor, Chip, 22 Ohms, 1%, 0603	0603	Std	Std
	R178	10K	Resistor, Chip, 10 Ohms, 1%, 0603	0603	Std	Std
	R179	0	Resistor, Chip, 0 Ohms, 0603	0603	Std	Std
	R180	22	Resistor, Chip, 22 Ohms, 1%, 0603	0603	Std	Std
	R181	22	Resistor, Chip, 22 Ohms, 1%, 0603	0603	Std	Std
	R182	10K	Resistor, Chip, 10 Ohms, 1%, 0603	0603	Std	Std
	R183	2.67k	Resistor, Chip, 2.67k, 1%, 0603	0603	Std	Std
	R184	22	Resistor, Chip, 22 Ohms, 1%, 0603	0603	Std	Std



	R185	22	Resistor, Chip, 22 Ohms, 1%, 0603	0603	Std	Std
	R186	22	Resistor, Chip, 22 Ohms, 1%, 0603	0603	Std	Std
	R187	22	Resistor, Chip, 22 Ohms, 1%, 0603	0603	Std	Std
2	R188	69.8K	Resistor, Chip, 69.8K Ohms, 1%, 0603	0603	Std	Std
	R189	10K	Resistor, Chip, 10 Ohms, 1%, 0603	0603	Std	Std
	R190	10K	Resistor, Chip, 10 Ohms, 1%, 0603	0603	Std	Std
	R191	69.8K	Resistor, Chip, 69.8K Ohms, 1%, 0603	0603	Std	Std
	R192	0	Resistor, Chip, 0 Ohms, 0603	0603	Std	Std
	R193	0	Resistor, Chip, 0 Ohms, 0603	0603	Std	Std
	R194	10K	Resistor, Chip, 10 Ohms, 1%, 0603	0603	Std	Std
	R195	10K	Resistor, Chip, 10 Ohms, 1%, 0603	0603	Std	Std
2	R196	2.21K	Resistor, Chip, 2.67k, 1%, 0603	0603	Std	Std
	R197	2.21K	Resistor, Chip, 2.67k, 1%, 0603	0603	Std	Std
	R198	10K	Resistor, Chip, 10 Ohms, 1%, 0603	0603	Std	Std
	R199	10K	Resistor, Chip, 10 Ohms, 1%, 0603	0603	Std	Std
1	R200	2.49K	Resistor, Chip, 2.67k, 1%, 0603	0603	Std	Std
	R201	10K	Resistor, Chip, 10 Ohms, 1%, 0603	0603	Std	Std
	R202	10K	Resistor, Chip, 10 Ohms, 1%, 0603	0603	Std	Std
	R203	0	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R204	49.9K	Resistor, Chip, 10 Ohms, 1%, 0603	0603	Std	Std
	R205	10K	Resistor, Chip, 10 Ohms, 1%, 0603	0603	Std	Std
	R206	0	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R207	0	Resistor, Chip, 1/16W, 1%	0603	Std	Std
3	S1	{Value}	Switch, SPDT, 10-A, 125-V, PC-mount	0.730 x 0.670 inch	D501J12S2AQA	C & K
	S2	{Value}	Switch, SPDT, 10-A, 125-V, PC-mount	0.730 x 0.670 inch	D501J12S2AQA	C & K
2	S3	{Value}	Switch, 1P1T, PB Momentary, 50-mA	0.24 x 0.14 inch	EVQ-PJA04Q	Panasonic
	S4	{Value}	Switch, 1P1T, PB Momentary, 50-mA	0.24 x 0.14 inch	EVQ-PJA04Q	Panasonic
	S5	{Value}	Switch, SPDT, 10-A, 125-V, PC-mount	0.730 x 0.670 inch	D501J12S2AQA	C & K
2	T1	PA0912	Transformer, High Frequency Planar, 3 Prim, 2 Sec.	1000 x 1160 inch	PA0912	Pulse
	T2	PA0912	Transformer, High Frequency Planar, 3 Prim, 2 Sec.	1000 x 1160 inch	PA0912	Pulse
1	T3	VPH1-1400	Transformer, 201uH, ±30%	0.512 x 0.508 inch	VPH1-1400	Cooper
18	TP1	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
6	TP2	5001	Test Point, Black, Thru Hole Color Keyed	0.100 x 0.100 inch	5001	Keystone
	TP3	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP4	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP7	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP11	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP12	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP14	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP15	5001	Test Point, Black, Thru Hole Color Keyed	0.100 x 0.100 inch	5001	Keystone
	TP16	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP17	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP20	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP24	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP25	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP27	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP28	5001	Test Point, Black, Thru Hole Color Keyed	0.100 x 0.100 inch	5001	Keystone
	TP29	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP30	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone

	TP31	5001	Test Point, Black, Thru Hole Color Keyed	0.100 x 0.100 inch	5001	Keystone
	TP32	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP33	5001	Test Point, Black, Thru Hole Color Keyed	0.100 x 0.100 inch	5001	Keystone
	TP34	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP35	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP36	5001	Test Point, Black, Thru Hole Color Keyed	0.100 x 0.100 inch	5001	Keystone
2	U1	LM324	IC, Quad Operational Amplifier	SO14	LM324D	Texas Instruments
2	U2	UCC2897PW	IC, Current-Mode Active Clamp PWM Controller	PW20	UCC2897PW	Texas Instruments
6	U3	H11A817B	IC, Optocoupler, 5300-V, 50-600% CTR	0.380 x 0.180	H11A817B	QT Optoelectronics
	U4	H11A817B	IC, Optocoupler, 5300-V, 50-600% CTR	0.380 x 0.180	H11A817B	QT Optoelectronics
	U5	H11A817B	IC, Optocoupler, 5300-V, 50-600% CTR	0.380 x 0.180	H11A817B	QT Optoelectronics
4	U6	LM358D	IC, Dual Operational Amplifiers	SO8	LM358D	TI
6	U7	TL1431ADBZ	IC, Precision Adjustable Shunt Regulator	SOT23-3	TL1431ADBZ	TI
	U8	LM324	IC, Quad Operational Amplifier	SO14	LM324D	Texas Instruments
	U9	UCC2897PW	IC, Current-Mode Active Clamp PWM Controller	PW20	UCC2897PW	Texas Instruments
	U10	H11A817B	IC, Optocoupler, 5300-V, 50-600% CTR	0.380 x 0.180	H11A817B	QT Optoelectronics
	U11	H11A817B	IC, Optocoupler, 5300-V, 50-600% CTR	0.380 x 0.180	H11A817B	QT Optoelectronics
	U12	H11A817B	IC, Optocoupler, 5300-V, 50-600% CTR	0.380 x 0.180	H11A817B	QT Optoelectronics
	U13	LM358D	IC, Dual Operational Amplifiers	SO8	LM358D	TI
	U14	TL1431ADBZ	IC, Precision Adjustable Shunt Regulator	SOT23-3	TL1431ADBZ	TI
1	U15	UCC2808-2	IC, Low Power Current Mode Push Pull PWM	SO8	UCC2808AQDR-2Q1	
1	U16	TL331DBV	IC, COMPARATOR, DIFFERENTIAL, SINGLE	SOT_23_5 (DBV)	TL331DBV	TI
	U17	LM358D	IC, Dual Operational Amplifiers	SO8	LM358D	TI
	U18	TL1431ADBZ	IC, Precision Adjustable Shunt Regulator	SOT23-3	TL1431ADBZ	TI
	U19	TL1431ADBZ	IC, Precision Adjustable Shunt Regulator	SOT23-3	TL1431ADBZ	TI
	U20	TL1431ADBZ	IC, Precision Adjustable Shunt Regulator	SOT23-3	TL1431ADBZ	TI
	U21	LM358D	IC, Dual Operational Amplifiers	SO8	LM358D	TI
	U22	TL1431ADBZ	IC, Precision Adjustable Shunt Regulator	SOT23-3	TL1431ADBZ	TI
4	U23	ISO124	Precision Lowest Cost Isolation Amplifier			
	U24	ISO124	Precision Lowest Cost Isolation Amplifier			
	U25	ISO124	Precision Lowest Cost Isolation Amplifier			
	U26	ISO124	Precision Lowest Cost Isolation Amplifier			
1	U27	LM324D	IC, CMOS, Quad Operational Amplifier	SO14	LM324D	Texas Instruments

- Notes:
1. These assemblies are ESD sensitive, ESD precautions shall be observed.
  2. These assemblies must be clean and free from flux and all contaminants.  
Use of no clean flux is not acceptable.
  3. These assemblies must comply with workmanship standards IPC-A-610 Class 2.
  4. Ref designators marked with an asterisk (\*\*\*) cannot be substituted.  
All other components can be substituted with equivalent MFG's components.

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