piSmasher SBC Revised: 10/19/2015 15081802-01 Revision: 1.3

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Bill Of Materials

October 19,2015 18:55:06

Item	0tv	Reference	Description	Manufacturer	Part Number	Alternate Manufacturer	Alternate Part Number
1		C1, C8, C9, C10, C12	Capacitor, Ceramic, 10uF 25V 10%	Samsung	CL32B106KAULNNE	Taiyo Yuden	TMK325B7106KN-TR
			X7R, SMD 1210			_	
2	48	C2, C11, C13, C15, C16, C17, C18, C19, C20, C21, C22,	Capacitor, Ceramic, 0.1uF 25V 10%	Samsung	CL10B104KA8NNNC	Murata	GRM188R71E104KA01D
		C24, C25, C26, C28, C29, C31, C35, C37, C38, C40,	X7R, SMD 0603				
		C44, C45, C46, C48, C49, C50, C52, C53, C54, C55,					
		C58, C60, C62, C63, C66, C67, C68, C71, C74, C77,					
3	4	C3, C4, C5, C6	Capacitor, Ceramic, 22uF 6.3V 10%	Samsung	CL31A226KOHNNNE	Taiyo Yuden	JMK316ABJ226KL-T
	_		X5R, SMD 1206				
4	2	C7, C14	Capacitor, Ceramic, 3300pF 25V	Murata	C0402C332K3RACTU	Kemet	C0603C332K3RACTU
			10% X7R, SMD 0603				
5	11	C23, C27, C30, C32, C61, C84, C90, C93, C96, C107,	Capacitor, Ceramic, 10uF 6.3V 10%	Samsung	CL21A106KOONNNE	Kemet	C0805C475K9PACTU
		C114	X5R, SMD 0805				
6	2	C33, C34	Capacitor, Ceramic, 33pF 50V 5%	Samsung	CL10C330JB8NNNC	Murata	GRM1885C1H330JA01D
			NPO, SMD 0603				
7	3	C36, C39, C42	Capacitor, Ceramic, 33uF 6.3V 20%	TDK	C3225X5R0J336M250AA	Murata	GRM32DR60J336ME19L
			X5R, SMD 1210				
8	18	C41, C43, C80, C81, C82, C87, C88, C94, C98, C100,	Capacitor, Ceramic, 0.01uF 25V	Samsung	CL10B103KA8NNNC	Murata	GRM188R71E103KA01D
		C101, C102, C103, C104, C105, C110, C111, C112	10% X7R, SMD 0603				
9	3	C47, C51, C56	Capacitor, Ceramic, 1.0uF 25V 10%	Samsung	CL10A105KA8NNNC	Murata	GRM188R61E105KA12D
			X5R, SMD 0603				
10	2	C57, C65	Capacitor, Ceramic, 4.7UF 6.3V	Samsung	CL21A475KQFNNNE	Kemet	C0805C475K9PACTU
			10% X5R, SMD 0805				
11	1	C59	Capacitor, Ceramic, 150uF 6.3V	Samsung	CL32A157MQVNNNE	Taiyo Yuden	JMK325ABJ157MM-T
			20% X5R, SMD 1210				
12	1	C64	Capacitor, Ceramic, 2.2uF 10V 10%	Samsung	CL10A225KP8NNNC	Yageo	CC0603KRX5R6BB225
			X5R, SMD 0603				
13	4	C69, C72, C75, C78	Capacitor, Ceramic, 0.01uF 25V 5%	Samsung	CL10C103JA8NNNC	TDK	C1608C0G1E103J080AA
			NPO, SMD 0603				
14	4	C70, C73, C76, C79	Capacitor, Ceramic, 1000pF 50V 5%	Samsung	CL10C102JB8NNNC	Murata	GRM1885C1H102JA01J
			NPO, SMD 0603				
15	5	C86, C91, C92, C108, C115	Capacitor, Ceramic, 47uF 10V 10%	Samsung	CL32A476KPJNNNE	Murata	GRM32ER61A476KE20K
			X5R, SMD 1210				
16	2	C99, C109	Capacitor, Ceramic, 27pF 50V 5%	Samsung	CL10C270JB8NNNC	Murata	GRM1885C1H270JA01D
			NPO, SMD 0603				
17	1	D1	Diode, Schottky, Dual Common	ON Semiconductor	MBRB2535CTLG		
			Cathode, 35V 25A, D2PAK				
18		D2, D3, D4	LED, Green 0603	Lumex	SML-LX0603SUGW-TR		
19		D5			RB751V40T1G		
20		D6	Diode, Signal, 75V 150mA, SOD123	Vishay	1N4148WFL-G3-08	Diodes Inc	1N4148W-7-F
21	1	FB1	Ferrite Bead, 220 ohms 25% @	Laird	HZ0603A222R-10	Murata	BLM18AG221SN1D
			100MHz, 0.6A max, SMD 0603				
22	5	FB2, FB3, FB4, FB5, FB6	Ferrite Bead, 120 ohms 25% @	Vishay Dale	ILHB0603ER121V	KOA Speer	CZP1JFTTD121P
			100MHz, 2A max, SMD 0603				
23	7	PC1, PB1, PA1, JC1, PB2, PA2, P3	Conn, Header, 40-pin, 20-posx2-	Samtec	TFM-120-01-F-D-A		
			row, 0.05" Vert Shrouded, TH				
24	1	J1	Conn, Jack, 2-pos, 5.5mm OD x	CUI Inc	PJ-063BH		
			2.5mm ID DC Power, 8A T/H RA				
25	1	J4	Conn, Header, 14-pos, 2MM VERT	Molex Inc.	87831-1420		
			Gold SHRD			-	-
26	2	J5, J6	Conn, Recept, HDMI 19-pos, TH, RA	CNC Tech	2000-1-1-20-00-BK		
			Horizontal			-	1
27	1	J7	Connector, Receptacle, USB Type A	Amphenol	UE27AC5410H		
			2.0, 4 Position Through Hole,				
			Right Angle, Horizontal			-	-
28	2	J9, J10	Header, 25 pos x 2 rows, 50 Pins,	Samtec	TSW-125-07-F-D		
			0.1 Centers				-
29	1	J11	Conn, Header, 5-pos, 0.1" Vert,	Samtec	TSW-105-07-L-S	Sullins Connector	PRPC005SAAN-RC
			Gold Flash	- 12	<u> </u>	Solutions	
30	2	L1, L2	Inductor 2.2uH 20% 21milliohm	Coilcraft	XFL4020-222MEB		
			3.7A SMD 4mmx4mmx2mm				1

31	9	L3, L4, L5, L6, L7, L8, L9, L10, L11	Inductor, 10uH 20% 700mohm 470mA, Shielded, SMD 2mmx2mmx1.2mm	Abracon	ASPI-2012-100M-T	TDK	VLS2012ET-100M
32	1	P2	Conn, Header, 30-pin, 15-posx2- row, 0.05" Vert Shrouded, TH	Samtec	TFM-115-01-F-D-A		
33	1	D8	Conn, Magjack, 1-port 1000 Base-T	Abracon	ARJE-0027		
34	1		MOSFET, P-CH, 20V 5.5A, SOT-223	Fairchild	FDT434P		
				Semiconductor			
35	8	RP2, RP3, RP4, RP5, RP6, RP7, RP8, RP9	Resistor Pack, 75 ohm 1% x4 Individual, 1/16W per resistor,	Vishay	CRA06S08375R0FTA		
26	1	DD10	Convex, SMD 1206		WG164 TD 0710W		G2 W1 6 102 T4T D
36	1	RP10	Resistor Pack, 10K ohm 5% x4 Individual, 1/16W per resistor,	Yageo	YC164-JR-0710KL	Bourns Inc.	CAY16-103J4LF
37	1	R1	Convex. SMD 1206 Resistor, 1.13K ohm 1% 1/10W, SMD	Samsung	RC1608F1131CS	Yageo	RC0603FR-071K13L
38	7	R2, R3, R17, R27, R30, R34, R35	0603 Resistor, 330 ohm 1% 1/10W, SMD	Samsung	RC1608F331CS	Panasonic	ERJ-3EKF3300V
39	4	R4, R5, R6, R31	0603 Resistor, 100K ohm 1% 1/10W, SMD	Samsung	RC1608F104CS	Panasonic	ERJ-3EKF1003V
40	2	R7, R11	0603 Resistor, 24.9K ohm 0.1% 1/8W,	Yageo	RT0805BRD0729K4L	Panasonic	ERA-6AEB2942V
41	3	R8, R10, R12	SMD 0805 Resistor, 10.0K ohm 0.1% 25ppm	Yageo	AT0603BRD0710KL	Panasonic	ERA-3AEB103V
			1/10W, SMD 0603				
42	1		Resistor, 100K ohm 0.1% 1/8W, SMD 0805	-	RT0805BRD07100KL	Panasonic	ERA-6AEB104V
43	1	R13	Resistor, 49.9 ohm 1% 1/10W, SMD 0603	Samsung	RC1608F49R9CS	Yageo	RC0603FR-0749R9L
44	1	R14	Resistor, 27.0K ohm 1% 1/10W, SMD 0603	Samsung	RC1608F273CS	Panasonic	ERJ-3EKF2702V
45	4	R15,R16,R43,R44	Resistor, 2.00K ohm 1% 1/10W, SMD 0603	Samsung	RC1608F202CS	Panasonic	ERJ-3EKF2201V
46	2	R18, R21	Resistor, 100 ohm 1% 1/10W, SMD 0603	Samsung	RC1608F101CS	Panasonic	ERJ-3EKF1000V
47	1	R19	Resistor, 4.70K ohm 1% 1/10W, SMD 0603	Samsung	RC1608F472CS	Panasonic	ERJ-3EKF4701V
48	1	R20	Resistor, 887 ohm 1% 1/10W, SMD 0603	Samsung	RC1608F8870CS	Panasonic	ERJ-3EKF8870V
49	3	R22, R37, R39		Samsung	RC1608F103CS	Panasonic	ERJ-3EKF1002V
50	7	R23, R32, R33, R36, R38, R40, R41		Samsung	RC1608F102CS	Panasonic	ERJ-3EKF1001V
51	2	R24, R25	Resistor, 47.0K ohm 1% 1/10W, SMD 0603	Samsung	RC1608F473CS	Panasonic	ERJ-3EKF4702V
52	1	R26	Resistor, 390K ohm 1% 1/10W, SMD 0603	Samsung	RC1608F394CS	Yageo	RC0603FR-07390KL
53	1	R28	Resistor, Oohms 1/10W, SMD 0603	Comgung	RC1608J000CS	Danagania	ED T 2CEVADAAV
54		R29	Resistor, 8.06K ohm 1% 1/10W, SMD	Samsung Samsung	RC1608F8061CS	Panasonic Panasonic	ERJ-3GEY0R00V ERJ-3EKF8061V
55	1	R42	1	Samsung	RC1608F1212CS	Panasonic	ERJ-3EKF1212V
56	1	R45	0603 Resistor, Do Not Install, 1/10W,				
			SMD 0603			-	
57	_	TVS1	TVS DIODE 3.3VWM SOD523	NXP Semiconductors	PESD3V3U1UB,115	-	
58		TVS2	Diode Array, Quint 3.3V ESD Prot., SOT363	NXP Semiconductor	PESD3V3L5UY,115		
59	1	U1	IC, Buck Regulator, Synchronous, 5.0V 1A, 16QFN 3x3mm	Texas Instruments	TPS62153RGTT	Texas Instruments	TPS62153RGTR
60	1	U2	IC, Buck Regulator, Synchronous, 1.8V 1A, 160FN 3x3mm	Texas Instruments	TPS62151RGTT	Texas Instruments	TPS62151RGTR
61	1	U3	IC, Quad Voltage Supervisor with Manual Reset Input, VSSOP-8	Texas Instruments	TPS386596L33DGKR		
62	1	U4	IC, EEPROM, 256x8bit, I2C 400KHz,	ON Semiconductor	CAT24AA02TDI-GT3		
63	2	U5, U7	TSOT23-5 TVS Diode Array, 13 Channel HDMI,	Texas Instruments	TPD13S523PWR		<u> </u>
"			5.5VWM 15VC 1pF Cio 0.05pF diff	TONGS THE CTUMENTS	11 D 1 2 D 2 C 2 F W N		
<u> </u>			Cio, 5V Load Switch, 16TSSOP			1	
64	1		LOFP		ADV7513BSWZ		
65	1	U8	IC, Receiver, HDMI 165MHZ LP, 64LQFP	Analog Devices	ADV7611BSWZ-P		
66	1	U9	IC, USB PHY, Host/Dev/OTG, ULPI I/F, 24-QFN	Microchip Technology	USB3315C-CP-TR		
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67	1	U10	IC, USB TVS and Current Limit	Texas Instruments	TPD3S014DBVR		
			Switch, SOT-23-6				
68	1	U11	IC, Gigabit Ethernet Transceiver	Micrel	KSZ9031RNXCA		
			with RGMII support, QFN-48				
69	1	U12	IC, Dual Non-Inverting	Diodes Incorporated	74LVC2G07W6-7	Texas Instruments	SN74LVC2G07DBVR
			Buffer/Driver, Open Drain Output,				
			SOT23-6				
70	1	X1	Crystal, 28.63636MHz, 20ppm,	Abracon	ABM8G-28.63636MHZ-18-		
			18pF, 50 Ohm, -40C - 85C, 3.2mm x		D2Y-T		
			2.5mm DFN4 SMD				
71	1	X2	Crystal, 25.0000MHz, 20ppm, 18pF,	AVX Corp/Kyocera Corp	CX3225GB25000P0HPQCC	Abracon	ABM8G-25.000MHZ-18-
			50 Ohm, -40C - 85C, 3.2mm x 2.5mm				D2Y-T
			DFN4 SMD				
72	1	Y1	IC, Crystal Oscillator, 12.0MHz	Abracon	ASE-12.000MHZ-LR-T		
			+/-25ppm, 3.2mm x 2.5mm SMD				
73	1	Y2	Oscillator, MEMS, 24.000MHz +/-	Abracon LLC	ASEMB-24.000MHZ-LC-T		
			50ppm, 1.8V-3.3V, SMD 3.2mmx2.5mm				