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Designator	Value	Tolerance	Footprint	Description	Manufacturer
C1	47 µF	±20%	TAJ-A	Capacitor SMD	Tantalum, height max. 1.6 mm
C2	47 μF	±20%	TAJ-A	Capacitor SMD	Tantalum, height max. 1.6 mm
C3	47 μF	±20%	TAJ-A	Capacitor SMD	Tantalum, height max. 1.6 mm
C4	4.7 µF	±20%, X5R	603	Capacitor SMD	
C5	470 nF	±10%, X5R	402	Capacitor SMD	
C6	100 nF	±10%, X7R	402	Capacitor SMD	
C7	100 nF	±10%, X7R	402	Capacitor SMD	
C8	15 pF	±5%, COG/NP0	402	Capacitor SMD	
C9	15 pF	±5%, COG/NP0	402	Capacitor SMD	
C10	10 nF	±10%, X7R	402	Capacitor SMD	
C11	2.2 pF	±0.25 pF, COG/NP0	402	Capacitor SMD	
C12	10 nF	±10%, X7R	402	Capacitor SMD	
C13	220 pF	±10%, COG/NP0	402	Capacitor SMD	
C14	100 nF	±10%, X7R	402	Capacitor SMD	
C15	100 nF	±10%, X7R	402	Capacitor SMD	
C16	100 nF	±10%, X7R	402	Capacitor SMD	
C17	3.9 pF	±0.1 pF, COG/NP0	402	Capacitor SMD	Johanson 500R07S3R9BV4
C18	3.9 pF	±0.1 pF, COG/NP0	402	Capacitor SMD	Johanson 500R07S3R9BV4
C19	220 pF	+-10%, COG/NP0	402	Capacitor SMD	
C20	100 nF	±10%, X7R	402	Capacitor SMD	
C21	100 nF	±10%, X7R	402	Capacitor SMD	
C22	2.2 nF	±10%, X7R	402	Capacitor SMD	
C26	470 nF	±10%, X5R	402	Capacitor SMD	
C27	470 nF	±10%, X5R	402	Capacitor SMD	
C28	100 nF	±10%, X7R	402	Capacitor SMD	
D1	1N4148	21070, 7414	805	Diode SMD	
D2	1N4148		805	Diode SMD	
L1	12 nH	±5%	402	Inductor Monolithic SMD	Johanson L-07C12NJV4
L2	27 nH	±5%	402	Inductor Monolithic SMD	Johanson L-07C27NJV4
 L3	27 nH	±5%	402	Inductor Monolithic SMD	Johanson L-07C27NJV4
L4	4.7 nH	±0.3nH	402	Inductor Monolithic SMD	Johanson L-07C4N7SV4
L5	35 mH, RDC≤250Ω, IDC≥1mA	±10%		Inductor Coil	
L6	100 nH	±10%	402	Inductor Monolithic SMD	
L7	4mH, RDC≤100Ω, IDC≥10mA	±10%		Inductor Coil	
L8	18 nH	±5%	402	Inductor Monolithic SMD	Johanson L-07C18NJV4
P1	Female Header 1.27mm			Connector SMD	for example, MPE-Garry BL SMD 91-0
PCB1	CUSTOM, solder stop black			PCB, 4 layers, 0.6 mm thick	
Q1	BC846BW or BC847BW		SOT323	Bipolar Transistor NPN SMD	
Q2	BC846BW or BC847BW		SOT323	Bipolar Transistor NPN SMD	
Q3	BC846BW or BC847BW		SOT323	Bipolar Transistor NPN SMD	
R2	47k	±5%	402	Resistor SMD	
R3	56k	±1%	402	Resistor SMD	
R4	47k	±5%	402	Resistor SMD	
R5	47k	±5%	402	Resistor SMD	
R7	10k	±5%	402	Resistor SMD	
R8	10k	±5%	402	Resistor SMD	
R9	10k	±5%	402	Resistor SMD	



	Table + 2. C2+00-Onionos +00 Watch, Down List (continued)						
Designator	Value	Tolerance	Footprint	Description	Manufacturer		
U1	CC430F6137IRGC		QFN64	MCU with ISM Transceiver	ТІ		
U3	CMA3000-D01		WLP	Acceleration Sensor SPI	VTI		
U4	HKA5403Q-30		DIE	EL Driver			
U5	SCP1000-D11			Pressure Sensor I2C	VTI		
Y1	32.768kHz, CL=12.5pF, ESR≤80kΩ	±20ppm	3.2 x 1.5 mm2	Crystal SMD	Microcrystal CC7V-T1A		
Y2	26MHz, CL=10pF, ESR≤40Ω	±10ppm	3.2 x 2.5 mm2	Crystal SMD	Epson TSX3225-X1E000021014300		

Table 4-2. eZ430-Chronos-433 Watch, BOM List (continued)

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Schematics, Layout, BOM, and LCD

Designator	Value	Tolerance	Footprint	Description	Manufacturer
C1	47 µF	±20%	TAJ-A	Capacitor SMD	Tantalum, height max. 1.6mm
C2	47 µF	±20%	TAJ-A	Capacitor SMD	Tantalum, height max. 1.6mm
C3	47 µF	±20%	TAJ-A	Capacitor SMD	Tantalum, height max. 1.6mm
C4	4.7 µF	±20%, X5R	603	Capacitor SMD	
C5	470 nF	±10%, X5R	402	Capacitor SMD	
C6	100 nF	±10%, X7R	402	Capacitor SMD	
C7	100 nF	±10%, X7R	402	Capacitor SMD	
C8	15 pF	±5%, COG/NP0	402	Capacitor SMD	
C9	15 pF	±5%, COG/NP0	402	Capacitor SMD	
C10	10 nF	±10%, X7R	402	Capacitor SMD	
C11	2.2 pF	±0.25pF, COG/NP0	402	Capacitor SMD	
C12	10 nF	±10%, X7R	402	Capacitor SMD	
C13	220 pF	±10%, COG/NP0	402	Capacitor SMD	
C14	100 nF	±10%, X7R	402	Capacitor SMD	
C15	100 nF	±10%, X7R	402	Capacitor SMD	
C16	100 nF	±10%, X7R	402	Capacitor SMD	
C17	1.8 pF	±0.1pF, COG/NP0	402	Capacitor SMD	Johanson 500R07S1R8BV4
C18	0R	±5%	402	Resistor SMD	
C19	N.A.				
C20	100 nF	±10%, X7R	402	Capacitor SMD	
C21	100 nF	±10%, X7R	402	Capacitor SMD	
C22	2.2 nF	±10%, X7R	402	Capacitor SMD	
C26	470 nF	±10%, X5R	402	Capacitor SMD	
C27	470 nF	±10%, X5R	402	Capacitor SMD	
C28	100 nF	±10%, X7R	402	Capacitor SMD	
D1	1N4148		805	Diode SMD	
D2	1N4148		805	Diode SMD	
L1	12 nH	±5%	402	Inductor Monolithic SMD	Johanson L-07C12NJV4
L2	5.6 nH	±0.3nH	402	Inductor Monolithic SMD	Johanson L-07C5N6SV4
L3	N.A.				
L4	0R	±5%	402	Resistor SMD	
L5	35 mH, RDC≤250Ω, IDC≥1mA	±10%		Inductor Coil	
L6	100nH	±10%	402	Inductor Monolithic SMD	
L7	4mH, RDC≤100Ω, IDC≥10mA	±10%		Inductor Coil	
P1	Female Header 1.27mm			Connector SMD	for example, MPE-Garry BL SMD 91-0
PCB1	CUSTOM, solder stop black			PCB, 4 layers, 0.6 mm thick	
Q1	BC846BW or BC847BW		SOT323	Bipolar Transistor NPN SMD	
Q2	BC846BW or BC847BW		SOT323	Bipolar Transistor NPN SMD	
Q3	BC846BW or BC847BW		SOT323	Bipolar Transistor NPN SMD	
R2	47k	±5%	402	Resistor SMD	
R3	56k	±1%	402	Resistor SMD	
R4	47k	±5%	402	Resistor SMD	
R5	47k	±5%	402	Resistor SMD	
R7	10k	±5%	402	Resistor SMD	
R8	10k	±5%	402	Resistor SMD	



Table 4-3. eZ430-Chronos-868 and -915 Watch, BOM List (continued)

Designator	Value	Tolerance	Footprint	Description	Manufacturer
U1	CC430F6137IRGC		QFN64	MCU with ISM Transceiver	ТІ
U2	0896BM15A0001			896MHz Balun	Johanson
U3	CMA3000-D01		WLP	Acceleration Sensor SPI	VTI
U4	HKA5403Q-30		DIE	EL Driver	
U5	SCP1000-D11			Pressure Sensor I2C	VTI
Y1	32.768kHz, CL=12.5pF, ESR≤80kΩ	±20ppm	3.2 x 1.5 mm2	Crystal SMD	Microcrystal CC7V-T1A
Y2	26MHz, CL=10pF, ESR≤40Ω	±10ppm	3.2 x 2.5 mm2	Crystal SMD	Epson TSX3225-X1E000021014300

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Access Point Schematics, Layout and BOM

Table 4-4. eZ430-Chronos-433 Access Point, BOM List

Designator	Value	Tolerance	Footprint	Description	Manufacturer
C1	1 µF	+-10%, X5R	603	Capacitor SMD	
C2	4.7 µF	+-10%, X5R	603	Capacitor SMD	
C3	2.2 µF	+-10%, X5R	603	Capacitor SMD	
C4	47 pF	+-10%, COG/NP0	402	Capacitor SMD	
C5	47 pF	+-10%, COG/NP0	402	Capacitor SMD	
C6	100 nF	+-10%, X7R	402	Capacitor SMD	
C7	100 nF	+-10%, X7R	402	Capacitor SMD	
C8	1 µF	+-10%, X5R	603	Capacitor SMD	
C9	100 nF	+-10%, X7R	402	Capacitor SMD	
C10	10 nF	+-10%, X7R	402	Capacitor SMD	
C11	2.2 pF	+-0.25pF, COG/NP0	402	Capacitor SMD	
C12	10 nF	+-10%, X7R	402	Capacitor SMD	
C13	220 pF	+-10%, COG/NP0	402	Capacitor SMD	
C14	22 pF	+-5%, COG/NP0	402	Capacitor SMD	
C15	22 pF	+-5%, COG/NP0	402	Capacitor SMD	
C16	3.9 pF	+-0.1pF, COG/NP0	402	Capacitor SMD	Johanson 500R07S3R9BV4
C17	3.9 pF	+-0.1pF, COG/NP0	402	Capacitor SMD	Johanson 500R07S3R9BV4
C18	220 pF	+-10%, COG/NP0	402	Capacitor SMD	
C18	220 pF	+-10%, COG/NP0	402	Capacitor SMD	
C19	220 pF	+-10%, COG/NP0	402	Capacitor SMD	
C20	220 pF	+-10%, COG/NP0	402	Capacitor SMD	
C21	220 pF	+-10%, COG/NP0	402	Capacitor SMD	
D1	green		603	LED SMD	
E1	0868AT43A0020			Chip Antenna	Johanson
L1	Ferrite Bead 1k, 1R, min. 100mA		402	EMI Filter SMD	for example, TDK MMZ1005S102C
L2	27 nH	+-5%	402	Inductor Monolithic SMD	Johanson L-07C27NJV4
L3	27 nH	+-5%	402	Inductor Monolithic SMD	Johanson L-07C27NJV4
L4	18 nH	+-5%	402	Inductor Monolithic SMD	Johanson L-07C18NJV4
L5	47nH	+-5%	402	Inductor Monolithic SMD	Johanson L-07C47NJV4
P1	USB Type A			USB Plug	for example, Lumberg 241007
PCB1	CUSTOM, solder stop black			PCB, 2 layers, 0.8 mm thick	
R1	2R	+-5%	402	Resistor SMD	
R2	33R	+-5%	402	Resistor SMD	
R3	33R	+-5%	402	Resistor SMD	
R4	1.5k	+-5%	402	Resistor SMD	
R5	56k	+-1%	402	Resistor SMD	
R6	270R	+-5%	402	Resistor SMD	
U1	TPS76933DBV		SOT-23	Linear Regulator	ТІ
U2	CC1111F32RSP		QFN36	ISM Transceiver	ТІ
Y1	48MHz, CL=16pF, ESR≤40Ω	+-10ppm	23.2 x 2.5 mm2	Crystal SMD	Epson TSX3225-X1E000021040300

Access Point Schematics, Layout and BOM

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Table 4-5. eZ430-Chronos-868 Access Point, BOM List

Designator	Value	Tolerance	Footprint	Description	Manufacturer
C1	1 µF	+-10%, X5R	603	Capacitor SMD	
C2	4.7 μF	+-10%, X5R	603	Capacitor SMD	
C3	2.2 µF	+-10%, X5R	603	Capacitor SMD	
C4	47 pF	+-10%, COG/NP0	402	Capacitor SMD	
C5	47 pF	+-10%, COG/NP0	402	Capacitor SMD	
C6	100 nF	+-10%, X7R	402	Capacitor SMD	
C7	100 nF	+-10%, X7R	402	Capacitor SMD	
C8	1 µF	+-10%, X5R	603	Capacitor SMD	
C9	100 nF	+-10%, X7R	402	Capacitor SMD	
C10	10 nF	+-10%, X7R	402	Capacitor SMD	
C11	2.2 pF	+-0.25pF, COG/NP0	402	Capacitor SMD	
C12	10 nF	+-10%, X7R	402	Capacitor SMD	
C13	220 pF	+-10%, COG/NP0	402	Capacitor SMD	
C14	22 pF	+-5%, COG/NP0	402	Capacitor SMD	
C15	22 pF	+-5%, COG/NP0	402	Capacitor SMD	
C16	1.8 pF	+-0.1pF, COG/NP0	402	Capacitor SMD	Johanson 500R07S1R8BV4
C17	100 pF	+-10%, COG/NP0	402	Capacitor SMD	
C18	N.A.				
D1	green		603	LED SMD	
E1	0915AT43A0026			Chip Antenna	Johanson
L1	Ferrite Bead 1k, 1R, min. 100mA		402	EMI Filter SMD	for example, TDK MMZ1005S102C
L2	5.6 nH	+-0.3nH	402	Inductor Monolithic SMD	Johanson L-07C5N6SV4
L3	5.6 nH	+-0.3nH	402	Inductor Monolithic SMD	Johanson L-07C5N6SV4
L4	12 nH	+-5%	402	Inductor Monolithic SMD	Johanson L-07C12NJV4
P1	USB Type A			USB Plug	for example, Lumberg 241007
PCB1	CUSTOM, solder stop black			PCB, 2 layers, 0.8 mm thick	
R1	2R	+-5%	402	Resistor SMD	
R2	33R	+-5%	402	Resistor SMD	
R3	33R	+-5%	402	Resistor SMD	
R4	1.5k	+-5%	402	Resistor SMD	
R5	56k	+-1%	402	Resistor SMD	
R6	270R	+-5%	402	Resistor SMD	
R7	0R	+-5%	402	Resistor SMD	
U1	TPS76933DBV		SOT-23	Linear Regulator	TI
U2	CC1111F32RSP		QFN36	ISM Transceiver	TI
U3	0896BM15A0001			896MHz Balun	Johanson
Y1	48MHz, CL=16pF, ESR≤40Ω	+-10ppm	23.2 x 2.5 mm2	Crystal SMD	Epson TSX3225-X1E00002104030

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Access Point Schematics, Layout and BOM

Table 4-6. eZ430-Chronos-915 Access Point, BOM List

Designator	Value	Tolerance	Footprint	Description	Manufacturer
C1	1 µF	+-10%, X5R	603	Capacitor SMD	
C2	4.7 µF	+-10%, X5R	603	Capacitor SMD	
C3	2.2 µF	+-10%, X5R	603	Capacitor SMD	
C4	47 pF	+-10%, COG/NP0	402	Capacitor SMD	
C5	47 pF	+-10%, COG/NP0	402	Capacitor SMD	
C6	100 nF	+-10%, X7R	402	Capacitor SMD	
C7	100 nF	+-10%, X7R	402	Capacitor SMD	
C8	1 µF	+-10%, X5R	603	Capacitor SMD	
C9	100 nF	+-10%, X7R	402	Capacitor SMD	
C10	10 nF	+-10%, X7R	402	Capacitor SMD	
C11	2.2 pF	+-0.25pF, COG/NP0	402	Capacitor SMD	
C12	10 nF	+-10%, X7R	402	Capacitor SMD	
C13	220 pF	+-10%, COG/NP0	402	Capacitor SMD	
C14	22 pF	+-5%, COG/NP0	402	Capacitor SMD	
C15	22 pF	+-5%, COG/NP0	402	Capacitor SMD	
C16	1.8 pF	+-0.1pF, COG/NP0	402	Capacitor SMD	Johanson 500R07S1R8BV4
C17	100 pF	+-10%, COG/NP0	402	Capacitor SMD	
C18	N.A.				
D1	green		603	LED SMD	
E1	0915AT43A0026			Chip Antenna	Johanson
L1	Ferrite Bead 1k, 1R, min. 100mA		402	EMI Filter SMD	for example, TDK MMZ1005S102C
L2	5.6 nH	+-0.3nH	402	Inductor Monolithic SMD	Johanson L-07C5N6SV4
L3	5.6 nH	+-0.3nH	402	Inductor Monolithic SMD	Johanson L-07C5N6SV4
L4	12 nH	+-5%	402	Inductor Monolithic SMD	Johanson L-07C12NJV4
P1	USB Type A			USB Plug	for example, Lumberg 241007
PCB1	CUSTOM, solder stop black			PCB, 2 layers, 0.8 mm thick	
R1	2R	+-5%	402	Resistor SMD	
R2	33R	+-5%	402	Resistor SMD	
R3	33R	+-5%	402	Resistor SMD	
R4	1.5k	+-5%	402	Resistor SMD	
R5	56k	+-1%	402	Resistor SMD	
R6	270R	+-5%	402	Resistor SMD	
R7	N.A.				
U1	TPS76933DBV		SOT-23	Linear Regulator	TI
U2	CC1111F32RSP		QFN36	ISM Transceiver	TI
U3	0896BM15A0001			896MHz Balun	Johanson
Y1	48MHz, CL=16pF, ESR≤40Ω	+-10ppm	23.2 x 2.5 mm2	Crystal SMD	Epson TSX3225-X1E000021040300

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