

Перв. примен.		Справ. N		Подпись и дата		Инв. N дубл.		Взам. инв. N		Подпись и дата		Инв. N подл.		Лит.		Лист		Листов	
Формат	Зона	Поз.	Обозначение	Наименование	Кол.	Примечание													
				Документация															
A3			R100.230.030.000–00 СБ	Сборочный чертеж															
A2			R100.230.030.000–00 ЭЗ	Схема электрическая															
				принципиальная															
A4			R100.230.030.000–00 ПЭЗ	Перечень элементов															
				Детали															
A3		5	R100.230.030.001–00	Плата печатная	1														



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	Излучатель звука		
B1	KPX-G1205B; Kero Electronics Co.; Магнитный 5VDC D12 H7.5; Radial LS=7.6	1	
K1, K2, K3, K6	FTR-B4GA012Z; Fujitsu; 250VAC 1A DPDT 12VDC; SMD	4	
	Кварцевый резонатор		
BQ1	7A-12.000MAAJ-T; TXC; 12MHz 30ppm 18pF 3ppm; SMD	1	
	Конденсатор SMD		
C1, C2	GRM1885C1H220JA01; muRata; 22pF 50V 5% NP0; SMD0603	2	
C3, C34, C114, C160, C170, C176, C182	GRM21BR61E475M; muRata; 4.7uF 25V 20% X5R; SMD0805	7	
C4, C5, C6, C7, C8, C9, C10, C11, C12, C15, C16, C17, C18, C19, C20, C24, C25, C29, C33, C37, C39, C40, C44, C46, C47, C49, C50, C53, C54, C55, C56, C58, C59, C60, C65, C68, C73, C81, C82, C83, C84, C85, C86, C87, C88, C91, C92, C96, C97, C100, C101, C104, C105, C110, C111, C113, C115, C124, C133, C137, C138, C143, C144, C148, C152, C155, C157, C161, C162, C169, C171, C172, C175, C177, C181	GRM188R71H104K; muRata; 0.1uF 50V 10% X7R; SMD0603	75	
C13, C38, C80, C90	GRM188R71E105KA12; muRata; 1uF 25V 10% X7R; SMD0603	4	
C14, C21	GRM21BR61H225M; muRata; 2.2uF 25V 10% X7R; SMD0805	2	
C22, C23, C26, C27, C67, C69, C72, C98, C103	GRM31MR61E106M; muRata; 10uF 25V 20% X5R; SMD1206	9	
C28, C30, C31	GRM21BR60J107M; muRata; 100uF 6.3V 20% X5R; SMD0805	3	
C32, C149, C153, C158	GRJ188R72A103KE11#; muRata; 10nF 100V 10% X7R; SMD0603	4	
C35, C45, C150, C154, C159	GRM1885C1H102JA01; muRata; 1nF 50V 5% NP0; SMD0603	5	
C36, C41, C48, C51, C52, C57, C61, C62, C63, C64, C66, C70, C71, C74, C75, C76, C77, C78, C79, C89, C93, C94, C95, C99, C102, C106, C107, C108, C109, C112, C116, C117, C118, C119, C120, C121, C122, C123, C125, C126, C127, C128, C129, C130, C131, C132, C134, C135, C136, C139, C140, C141, C142, C145, C146, C163, C164, C165, C166, C167, C168, C173, C174, C178, C179, C180	GRM1885C2A101JA01; muRata; 100pF 100V 5% NP0; SMD0603	66	

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Разработал	Бондарчук С.				ControlVR Перечень элементов			Литер.	Лист	Листов	
Проверил	Бондарчук С.									1	4
Зав. лаб.	Бондарчук С.							R100			
Н. контр.	Шимченко А.										
Утвердил	Орнатский О.										

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C42, C43	GRM1885C1H330JA01; muRata; 33pF 50V 5% NP0; SMD0603	2				
	Конденсатор танталовый					
C147, C151, C156	TAJD107K020RNJ; AVX; TECAP 100uF 20VDC +-10%; SMD D	3				
	Преобразователь DC-DC					
DA1	TPSM84205; Texas Instrument; 1.5A 5Vout up to 28 Vin StepDown module; EAB	1				
	Преобразователь AC-DC					
DA2	IRM-20-12; Mean Well; 20W 12VDC 1.8A PCB;	1				
	Микросхема					
DA3	TLV1117-33IDCY; Texas Instruments; Voltage regulator 3.3V 800mA; SOT-223	1				
DA4	6N139-X007; VISHAY; Optocoupler darlingron 5.3kV 100 kbit/s; SMD	1				
DD1	STM32F767ZI; STMicroelectronics; MCU 32-bit ARM Cortex-M7 + FPU; LQFP144	1				
DD2, DD5, DD12, DD23, DD31, DD32	SN74LVC1G00DBV; Texas Instruments; 2-in NAND; SOT-23-5	6				
DD3	FT232RL; FTDI; USB to UART BRIDGE; SSOP28	1				
DD4	TPD2E001DRLR; Texas Instruments; ESD-protection array 2-ch; SOT-553	1				
DD6, DD7, DD9, DD13, DD15	SN74LVC1G08DBV; Texas Instruments; 2-in AND; SOT-23-5	5				
DD8	ADM3251EARWZ; Analog Device; Isolated RS-232 with dc-dc; WSO-20	1				
DD10, DD16	74HC00PW; NXP; 4x(2-in NAND); TSSOP-14	2				
DD11	74HC08PW; NXP; 4x(2-in AND); TSSOP-14	1				
DD14	SN74LVC1G32DBV; Texas Instruments; 2-in OR Gate; SOT-23-5	1				
DD17	AT24C08C-STUM; Atmel; Serial EEPROM 8Kbit; SOT-23	1				
DD18, DD19, DD20, DD22	ISO1410DW; Texas Instruments; Isolated RS-485/RS-422 half-duplex 5-kVRMS; SO-16	4				
DD21	ISO1412DW; Texas Instruments; Isolated RS-485/RS-422 full-duplex 5-kVRMS; SO-16	1				
DD24	74HC244PW; NXP; 8-in buffer 3-state; TSSOP-20	1				
DD25	74HCT245PW; NXP; 8-in bus tranceiver 3-state; TSSOP-20	1				
DD26, DD27, DD28, DD29	SN74AHCT1G08DBV; Texas Instruments; 2-in AND; SOT-23-5	4				
DD30	74HC14PW; NXP; 6x(INVERTING SCHMITT TRIGGER); TSSOP-14	1				
DD33	TCA9517DGKR; Texas Instruments; I2C Level-Shifting Bus Repeater; VSSOP8	1				
	Предохранитель самовост. SMD					
F1	MF-MSMF010; Bourns; 0.1A 60VDC 15R; SMD1812	1				
	Предохранитель самовост. выводной					
F2, F3	C250-400; SEA & LAND ELECTRONI; 0.4A 240VAC 1.9R;	2				
	Реле					
K1, K2, K3, K6	FTR-B4GA012Z; Fujitsu; 250VAC 1A DPDT 12VDC; SMD	4				
K4, K5, K7	G2RL-24 DC12; OMRON; 440VAC 8A DPDT 12VDC; PCB	3				
	Резистор SMD					
CRCW08051M00FK	CRCW08051M00FK; VISHAY; 1M +-1%; SMD0805	1				
R1, R84, R98, R102, R106, R111, R118	CRCW0603619RFK; VISHAY; 619R +-1%; SMD0603	7				
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R2, R26, R33					CRCW0805150RFK; VISHAY; 150R +-1%; SMD0805	3	
R3, R4, R6, R7					CRCW120618K7FK; VISHAY; 18K7 +-1%; SMD1206	4	
R5, R11, R12, R14, R15, R25, R27, R29, R30, R31, R49, R52, R57, R58, R60, R81, R88, R91, R96, R99, R100, R103, R104, R105, R110, R112, R113, R115, R116, R117, R146, R153, R169, R175					CRCW060310K0FK; VISHAY; 10K +-1%; SMD0603	34	
R8, R20					CRCW080510K0FK; VISHAY; 10K +-1%; SMD0805	2	
R9, R17, R18, R19, R21, R24, R28, R35, R36, R37, R38, R39, R40, R44, R45, R46, R47, R48, R50, R51, R53, R54, R73, R74, R75, R77, R79, R82, R83, R87, R97, R101, R107, R108, R109, R114, R119, R120, R121, R122, R123, R124, R125, R126, R127, R128, R129, R130, R131, R132, R133, R134, R135, R136, R137, R138, R141, R144, R145, R148, R150, R152, R156, R157, R158, R159, R162, R163, R165, R166, R168, R170, R171, R172, R173, R174, R176, R177					CRCW0603100RFK; VISHAY; 100R +-1%; SMD0603	78	
R10, R32, R43, R56, R65					CRCW06031K00FK; VISHAY; 1K +-1%; SMD0603	5	
R13					CRCW080510R0FK; VISHAY; 10R +-1%; SMD0805	1	
R16, R76					CRCW08054K70FK; VISHAY; 4K7 +-1%; SMD0805	2	
R22, R23, R34, R41					CRCW0805390RFK; VISHAY; 390R +-1%; SMD0805	4	
R42, R55, R62, R69, R71, R72, R164, R167					CRCW12061K00FK; VISHAY; 1K +-1%; SMD1206	8	
R59, R61, R66, R67					CRCW08051K00FK; VISHAY; 1K +-1%; SMD0805	4	
R63, R64, R80					CRCW1206510RFK; VISHAY; 510R +-1%; SMD1206	3	
R70					CRCW0805200KFK; VISHAY; 200K +-1%; SMD0805	1	
R78					CRCW08052K00FK; VISHAY; 2K +-1%; SMD0805	1	
R85, R86, R89, R90, R92, R93, R94, R95					CRCW06030000Z0; VISHAY; 0R; SMD0603	8	
R139, R140, R142					CRCW06035K60FK; VISHAY; 5K6 +-1%; SMD0603	3	
R143, R147, R149, R151					CRCW06032K20FK; VISHAY; 2K2 +-1%; SMD0603	4	
R154, R155, R160, R161					CRCW06032K00FK; VISHAY; 2K +-1%; SMD0603	4	
					<u>Фильтр</u>		
L1, L4					BLM31PG601SN1; muRata; 600R 1.5A (100MHz); SMD1206	2	
L3					744231091; Wurth Elektronik; WE-CNSW common line mod filter 90R 370mA; SMD0805	1	
L6, L7, L9, L10, L11, L12, L13, L14					BLM21AG102SN1; muRata; 1000R 0.6A (100MHz); SMD0805	8	
					<u>Дроссель SMD</u>		
L2					DLW5BSM351SQ2; muRata; 350R (100MHz) 2A 0.04R common mode; SMD	1	
L5, L8					DLW5BSM302SQ2; muRata; 3000R (100MHz) 0.5A 0.3R common mode; SMD	2	
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	<u>Резисторная сборка SMD</u>		
RN1, RN2	CRA06S083100RF; VISHAY; 4x100R +-1%; SMD	2	
	<u>Кнопка</u>		
SW1	B3F-1025; OMRON; 6x6mm h=5mm black;	1	
	<u>Светодиод SMD</u>		
VD1, VD3, VD4, VD7, VD8, VD9, VD13, VD16, VD19, VD21, VD23, VD33	LL-S172GC-2A; Lucky Light; Зеленый 570nm 2x1.25мм; SMD0805	12	
VD6, VD25, VD32	LL-S172SC-2S; Lucky Light; Красный 640nm 2x1.25мм; SMD0805	3	
	<u>Диод SMD</u>		
VD2, VD10, VD15, VD17, VD18, VD20, VD22, VD24	PMLL4148L; NXP; Vr=75V If=0.2A; SOD80C	8	
	<u>Диод шоттки SMD</u>		
VD5	MBR0540T; ON Semiconductor; Vr=40V If=0.5A; SOD-123	1	
	<u>Диод TVS SMD</u>		
VD11, VD12, VD14	SMAJ12CA; Littelfuse; 400W Vr=12V; DO-214CA(SMA)	3	
VD26, VD27, VD28, VD29, VD30, VD31	PSM712; ProTek Devices; 600W Vr=12V Vr=7V; SOT-23	6	
	<u>Транзистор SMD</u>		
VT1	PDTA114ET; NXP; PNP Vce=-50V Ic=0.1A 10k; SOT-23	1	
VT2, VT3, VT5, VT6, VT8, VT9, VT10, VT11, VT12, VT13, VT14, VT15	PDTC114ET; NXP; NPN Vce=50V Ic=0.1A 10k; SOT-23	12	
VT4, VT7	BC817; NXP; NPN Vce=-45V Ic=0.5A; SOT-23	2	
	<u>Вилка</u>		
X1	63849-1; TE Connectivity; Ножевая Латунь Луженая 6.3x0.8 PCB hole;	1	
X2	B03P-NV; JST; NV 3 конт LS=5.0 10A 250V PCB;	1	
X3, X22, X23, X24	35362-0550; Molex; Sherlock 5 конт LS=2 2A 125V PCB;	4	
X4	09185106904; Harting; IDC 10P LS=2.54 2A 250VAC PCB long levers;	1	
X5, X17, X18	35362-0650; Molex; Sherlock 6 конт LS=2 2A 125V PCB;	3	
X6	53253-0470; Molex; Micro-Latch 4 конт LS=2 2A 125V PCB;	1	
X7, X9	35362-0350; Molex; Sherlock 3 конт LS=2 2A 125V PCB;	2	
X8, X10, X19, X20, X21	35362-0450; Molex; Sherlock 4 конт LS=2 2A 125V PCB;	5	
X11	B04P-NV; JST; NV 4 конт LS=5.0 10A 250V PCB;	1	
X12	B02P-NV; JST; NV 2 конт LS=5.0 10A 250V PCB;	1	
X13, X14	09185166324; Harting; IDC 16P LS=2.54 2A 250VAC PCB (BH-16);	2	
X15	35362-0850; Molex; Sherlock 8 конт LS=2 2A 125V PCB;	1	
X16	53313-1265; Molex; Mi II 12 конт (6конт x 2) LS=2 2A 125V PCB;	1	

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