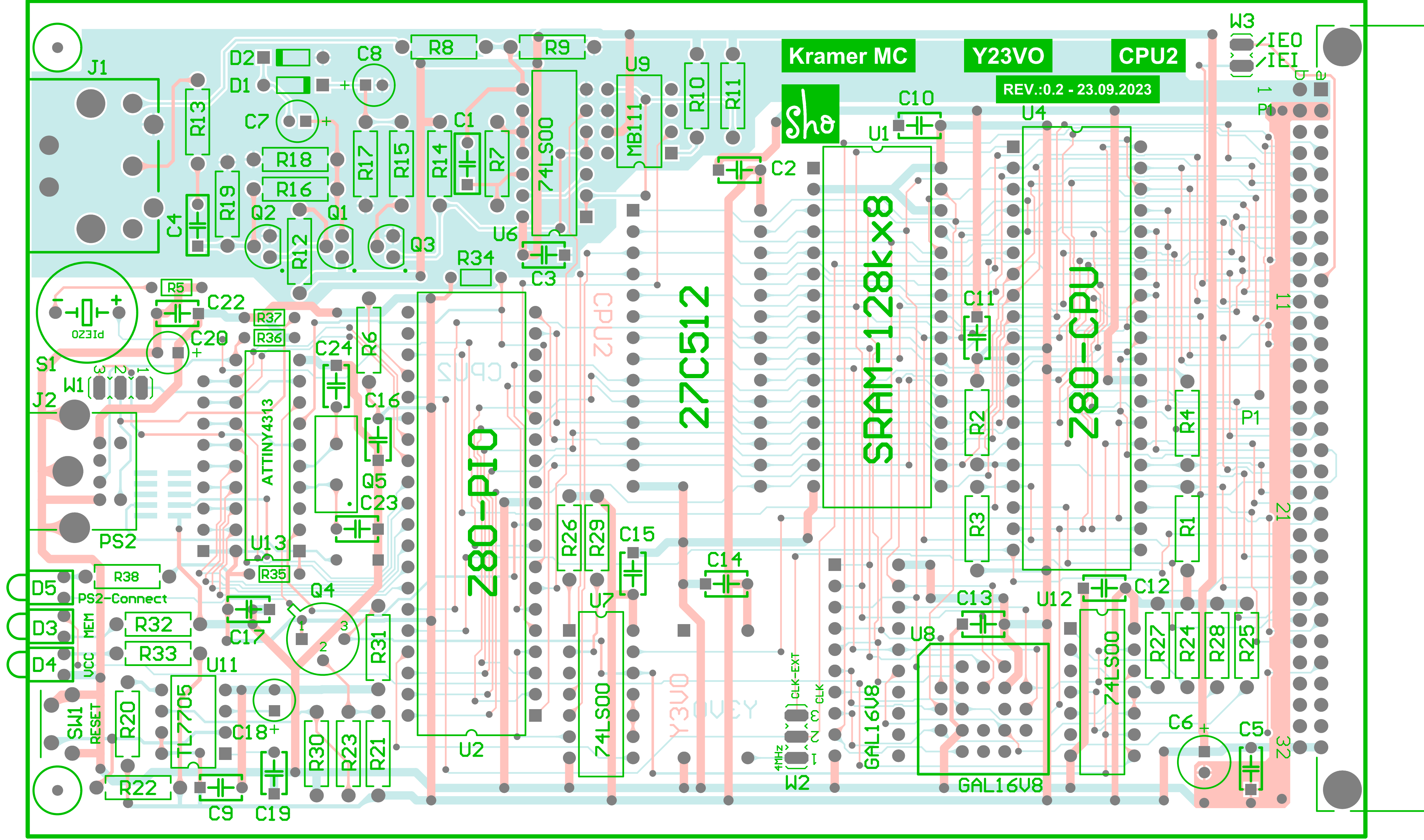


PS2 = High = keyboard not connected
 PS2 = Low = keyboard connected
 CH_VALID = Low = Character Valid
 CH_VALID = High = Character not Valid





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Bill of Materials

Datum:	6. Februar 2024
Zeit:	19:03:13
Variante:	Variant of Kramer_MCU2_KIT
Bezeichnung:	Kramer-MC
Revision:	0.1
Description:	overview CPU2

Quantity	Designator	Footprint	Bemerkung	Value	MFT	Order-Code	Second-source	shotech
1	C1	CAP_Radial_5MM_7k2_3k0	Folienkondensator, 470nF / 63V / 10% RMS	470nF	KEMET	R82DC3470AA60K		2045
13	C14, C15, C16, C17, C19, C22	CAP_Radial_5MM	100nF/50V±10%/X7R/RM 5.08	100nF/50V	Vishay / BC Components	K104K15X7RF53H5	C322C104K5R5TA - shotech	1347
1	C4	CAP_Radial_5MM_7k2_2k5	Folienkondensator, 100nF, 63V, RM5, 10%	100nF	KEMET	R82DC3100AA50K		1682
1	C5	CAP_Radial_5MM_4_2k5	Vielschichtkondensator MLCC – 50volts 0.033uF 10% X7R Radial	33nF	TDK	FG28X7R1H333KNT06	FK28X7R1H333K - shotech	1553
1	C6	CAPPR5-6.3x11	Subminiatur-Eiiko, radial, 100 µF, 16 V, RM 2,5, 85°C, 1000h	100µF/16V	REC	Artikel-Nr.: SM 100/16RAD	Multcomp	1740
2	C7, C8	CAPPR2-5x11	1µF/50V/20%/2000h/RM 2	1µF/50V	Würth Elektronik	8.60021E+11		1550
2	C18, C20	CAPPR2-5x11 - RM2,5	10µF/50V/20%/RM2.5/105 °C /2000h	10µF/50V	Chang	RL1H100MC110B25CEH		1339
2	C23, C24	CAP_Radial_5MM	Ker-Ko 22pF 50V RM5.00 5% NPO/COG	22pF	TDK	FG28C0G1H220JNT06	FG28C0G1H220JNT00	2387
1	CS1		Circuit socket DIP28-LC		ASS	A 28-LC-TT		1521
1	CS2		Circuit socket DIP32-P2		ASS	AR32-HZL-TT		1329
2	CS3, CS4		Circuit socket DIP40		ASS	A 40-LC-TT		1582
1	CS5		Circuit socket PLCC-20		MC	MC-20PLCC		2224
1	CS6		Circuit socket DIP20 präzision		ASS	AR 20 HZL-TT		2067
2	D1, D2	DO-35	Dioden (Allzweck, Leistung, Schaltung) Vr75V Iq/150mA T/R	1N4148	On Semiconductors	1N4148TR		1594
2	D3, D5	LED-A214B-RED	LED diffus rot 200mcd 25° 3mm	LED-A214B	Everlight	A214B/SUR/S530-A3		2005
1	D4	LED-A214B-GREEN	LED diffus grün 200mcd 25° 3mm	LED-A214B	Everlight	A214B/SYG/S530-E2		2004
1	J1	SDF-50J	DIN, 5Pjack, n. throughhole, w/shielding	DS-5-01B	shotech	DS-5-01B		2257
1	J2	AD-DIO-FS-06	6-pol. Mini-DIN-Buchse, violett, geschirmt	AD-DIO-FS-06		EB-DIOS M06V	MD-60SM - Mouser	2074
1	LP1		Circuit board Kramer MC CPU2		frei			2372
1	P1	0902164x921	Messeriaste A+B gewinkelt 64polig	A-BM64ABR	Assmann WSW	A-BM64ABR		2021
2	Q1, Q3	SC_TO-92	Hole TO-92-3	BC548CBU	Fairchild	BC548CBU	BC548BU (On Semi)	1169
1	Q2	SC_TO-92	Bipolartransistoren - BJT NPN 45V 800mA HFE/630	BC337-40	On-Semiconductor	BC33740BU		1650
1	Q4	TO-39	Bipolartransistor, PNP, 60V, 0,6A, 1W, TO-39	2N2905A	CDL	2N2905A		2009
1	Q5	HC49/4H_SMX	Quarz 4.000 MHz, 30 ppm, 50ppm 16 pF, 130 Ohm	4MHz	HKC	9SL4000000E16F3FZ000		2124
11	R26, R27, R28, R29	RES10-7.8X2.8	WIDERSTAND, 207, axial, 1%	4k7				1587
1	R5	RES6.5-3.4X1.9	Metallsch. 0204 1/4W 1%	1k	frei	frei		1255
1	R7	RES10-7.8X2.8	WIDERSTAND, 207, 1%	180R				2026
1	R8	RES10-7.8X2.8 - 22k	WIDERSTAND, 207, axial, 1%	22k				1672
1	R9	RES10-7.8X2.8	WIDERSTAND, 207, 1%, axial	6.8k	frei			2027
1	R10	RES10-7.8X2.8	WIDERSTAND, 207, 1%	160R				2029
4	R11, R12, R14, R30	RES10-7.8X2.8 - 1k	Metallsch. 0207 1/4W 1%	1k	frei	RMGK001		1235
1	R13, R18	RES10-7.8X2.8	WIDERSTAND, 207, axial, 10k, 1%	470R	frei			1748
4	R15, R20, R22, R31	RES10-7.8X2.8 - 10k	WIDERSTAND, 207, axial, 1%	10k	frei	RMGK010		1233
1	R16	RES10-7.8X2.8 - 47k	WIDERSTAND, 207, axial, 1%	47k	frei	RMGK047		1237
1	R17	RES10-7.8X2.8 - 2k2	WIDERSTAND, 207, axial, 1%	2k	frei	MF12 2k		1245
1	R19	RES10-7.8X2.8	WIDERSTAND, 207, 1%	12k				2115
1	R21	RES10-7.8X2.8	WIDERSTAND, 207, 1%	750R				2017
1	R23	RES10-7.8X2.8	WIDERSTAND, 207, axial, 1%	2k7	frei			2116
2	R32, R33	RES10-7.8X2.8 - 330R	WIDERSTAND, 207, axial, 1%	330R				1588
3	R34, R36, R37	RES6.5-3.4X1.9	WIDERSTAND, 204, axial, 1%	10k	frei	frei		1253
1	R35	RES6.5-3.4X1.9	WIDERSTAND, 204, axial, 1%	47k	frei	frei		1250
1	R38	RES10-7.8X2.8 - 330R	WIDERSTAND, 207, axial, 1%	330R				1577
1	S1	PIEZO_12mm	Piezo-Signalq 13mm 30V 4kHz 80dB PC	PT-1245P-PQ	Hitpoint	PT-1245P-PQ		2370
1	SW1	SW-DTSA-6	Mini-Taster print stehend 1N	DTSA62K	Diptronics	DTSA62K		2013
1	U1	PDIP32	SRAM 1Mb, 2.7V-5.5V, 55ns 128K x 8 Asynch SRAM	AS6C1008-55PCN	Alliance Memory	AS6C1008-55PCN	AS6C1008-55PIN	1487
1	U2	PDIP40	CMOS Parallel I/O Controller	ZB4C2004PEC	Zilog	ZB4C0004PEC	80A-PIO	823
1	U4	PDIP40		ZB4C0004PEC	Zilog	ZB4C0004PEC	VB880D	822
3	U6, U7, U12	N014	Quadruple 2-Input Positive-NAND Gate	SN74LS00N	Texas Instruments	SN74LS00N	DL000D	1546
1	U8	PLCC-20	Programmable Logic Device 8 Macro Cells 62.5MHz 5V 20-Pin PLCC	GAL16V8D-15LJ	Lattice	GAL16V8D-15LJ		1035
1	U9	P008	Optokoppler Ga-LED+Si-Fotodiode+ TTL-Verstärker DIP-8	MB111	RFT			2050
1	U11	P008	SUPPLY VOLTAGE SUPERVISORS	TL7705A	Texas Instruments	TL7705A		1283
1	U13	N020	MC 8bit 1.8V 4kB Flash 20MHz DIP20	ATTINY4313	Microchip / Atmel	ATTINY4313-PU		2166
1	W1	JP2	Jumper 3pin	Jumper 3pin	frei	frei		1564
1	W2	JP2	Jumper 3pin	Jumper 3pin	frei	frei		1564
1	W3	JP1	Jumper RM2.54, rot	JUMP-RT		JUMP-RT		