

BOM X-4046 VCO Core PCB

(you may want additional MTA conenctors for the off-board components)

Qty	Value	Parts
2	22R or ferrite	F1, F2
1	100R	R1
2	1k	R4, R6
1	2k +3500ppm/C	R9 (PTC)
1	4.7k	R14
1	10k	R15
1	12k	R20
1	33k	R22
3	75k	R24, R25, R26
9	100k	R2, R27, R28, R29, R30, R31, R32, R33, R34
5	100k (Trimmer)	R36, R37, R38, R39, R40
4	100k (Potentiometer)	R42, R43, R44, R45
1	120k	R48
2	220k	R0, R51
1	1.5M	R54
1	3.3M	R56
1	100pF	C1
1	470pF	C2
5	10n	C3, C4, C5, C6, C7
3	100n	C10, C12, C13
1	220n	C11
2	10uF/35V	C14, C15
3	1N4148	D1, D2, D3
1	2N3904	Q3
1	Q1 / Q2	LM394 (or other matched pairs)
1	CD4046	IC1 (see notes)
1	TL072	IC2
1	TL074	IC3
1	Lin FM AC/DC	S1 (SPST on-off)
1	to Waveshaper PCB	J_WS
1	1V/oct	J1
1	Exp FM	J2
1	Lin FM	J3
1	Hard Sync	J4
1	Triangle out	J5
1	Saw out	J7

BOM X-4046 VCO Waveshaper PCB

(you may want additional MTA connectors for the off-board components)

Qty	Value	Parts
2	22R/ferrite	L1, L2
1	390R	R3
2	1k	R5, R7
1	1.8k	R8
3	2.2k	R10, R11, R12
1	3k	R13
4	10k	R16, R17, R18, R19
1	18k	R21
1	100k	R35
2	100k (Trimmer)	R23, R41
2	100k (Potentiometer)	R46, R47
1	120k	R49
1	330k	R52
1	500k (Potentiometer)	R53
1	2.2M	R55
2	10n	C500, C600
2	100n	C300, C400
2	10uF/35V	C100, C200
2	2N3904	Q4, Q5
1	TL074	IC4
1	From Core PCB	JCON
1	Rampoid out	J6
1	PWM in	J8
1	Sine out	J9
1	Pulse out	J10