

PROGRAMMABLE COMPLEX OSCILLATOR MODEL 259				
259M BOM				
MB				
SEMICONDUCTORS				
VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#
1N457	D1, D2, D3, D4, D5, D7, D8, D9, D11, D14, D15, D18	12		512-1N457
CAPACITORS				
VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#
47uF	C1	1	TANTALUM AXIAL	74-173D476X9010XE3
RESISTORS				
VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#
4K99 1%	R35, R37, R137, R139	4	1% 1/4W	603-MFR-25FBF52-4K99
82k 1% for 1.2v P/O	R5A, R109A	2		603-MFR-25FTE52-82K
470R	R2, R14, R48, R57, R58, R80, R86, R87, R117, R166A, R200, R287	12	5% 1/4W	603-CFR-25JB-52-470R
2K2	R78	1	5% 1/4W	603-CFR-25JR-522K2
3K3	R77	1	5% 1/4W	660-CF1/4CT52R332J
10K	R160	1	5% 1/4W	603-CFR-25JB-52-10K
15K	R32, R36, R133, R138	4	5% 1/4W	603-CFR-25JB-52-15K
47K	R75	1	5% 1/4W	603-CFR-25JB-52-47K
100K	R1, R105, R166, R188, R252, R264	6	5% 1/4W	603-CFR-25JR-52100K
130K	R4, R108	2	5% 1/4W	603-CFR-25JR-52-130K
150K	R167, R190, R253, R267	4	5% 1/4W	603-CFR-25JR-52150K
220K	R45	1	5% 1/4W	603-CFR-25JB-52-220K
680K	R113B, R198	2	5% 1/4W	603-CFR-25JB-52-680K
2M2	R17, R112	2	5% 1/4W	603-CFR-25JB-52-2M2
10M	R31, R136	2	5% 1/4W	603-CFR-25JB-52-10M
20K	R11,R33,R34,R134,R135,R136,R170	7	SINGLE TURN	652-3362P-1-203LF
20K FOR 1.2V/O	R6,R110 TRIMMER	2	SINGLE TURN	652-3362P-1-203LF
100K	R168,R254 TRIMMER	2	PRV6	72-PRV6-100K
100K	R2,R3,R7,R38,R106,R107,R111,R127,R159,R189,R191,R265,R266	13	CTS JK2167	EBAY
MISC				
VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#
	LED1, LED2, LED3, LED4, LED5, LED6, LED7, LED8, LED9, LED10,			

		15		630-HLMP-K101
	LED11, LED12, LED13, LED14, LED15			
		1	BANANA JACK BLUE	530-108-0910-1
		8	BANANA JACK BLACK	530-108-0903-1
		10	TINIJAX	502-41
DPDT ON-OFF-(ON)	7207	1	TOGGLE SWITCH	611-7207SYCQE
DPDT ON-ON-ON	7211	1	TOGGLE SWITCH	611-7211-002
SPDT ON-OFF-ON	7103	1	TOGGLE SWITCH	611-7103-002
SPDT (ON)-OFF-(ON)	7105	1	TOGGLE SWITCH	611-7105-002
SPDT ON-ON	7101	4	TOGGLE SWITCH	611-7101-002
	PLD1, PLD2	2	PIN FEMALE HEADER	517-929836-01-26-RK
		7	BLUE SWITCH CAP	THONK
		1	WHITE SWITCH CAP	THONK
PCB2				
SEMICONDUCTORS				
VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#
1N457	D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13	13		512-1N457
1N5228	Z1	1		78-1N5228B
TL072	IC1, IC2, IC3, IC18, IC20, IC21, IC26, IC27, IC28, IC29, IC30, IC31, IC32, IC33, IC34, IC35	16		595-TL072IP
LF13331	IC4, IC5, IC17, IC23, IC24	5		EBAY 181111957836
CD4001	IC9, IC14	2		595-CD4001BE
CD4030	IC8, IC13	2		595-CD4030BE
CD4040	IC11, IC15	2		595-CD4040BE
CD4555	IC7	1		595-CD4555BE
74LS05	IC10, IC16	2		595-SN74LS05N
LM301	IC12, IC19	2		926-LM301AN/NOPB
LM311	IC6, IC22, IC25	3		595-LM311P
CA3130	IC36, IC37, IC38, IC39, IC40	5		968-CA3130EZ
MAT02	Q1, Q5	2	any dual NPN is fine	EBAY
MAT03	Q2, Q6	2	any dual PNP is fine	EBAY
2N3958	Q10/11	1	LS3958 will work too	EBAY
2n3565	Q3, Q4, Q7, Q8, Q12, Q13	6		610-PN3565
J201	Q9	1		106-J201
CAPACITORS				

VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#
1uF	C25, C26, C29, C36	4	TANTALUM AXIAL	74-173D105X9035VWE3
2.2uF	C16A	1	TANTALUM AXIAL	74-173D35V2.2
4.7uF	C37, C38	2	TANTALUM AXIAL	74-173D475X9035VWE3
10uF	C35	1	TANTALUM AXIAL	74-173D106X9035XWE3
47uF	C3, C16	2	TANTALUM AXIAL	74-173D476X9010XE3
10pF	C28A	1	CERAMIC 6.35MM LS	581-SA102A100J
22pF	C18	1	CERAMIC 6.35MM LS	581-SA102A220J
47pF	C31, C32, C33, C34	4	CERAMIC 6.35MM LS	581-SA102A470J
100pF	C1, C4, C14, C15, C17, C21, C22A, C24, C27A, C30	10	CERAMIC 6.35MM LS	581-SA102A101J
220pF	C2, C8A, C9, C11, C20A, C27	6	CERAMIC 6.35MM LS	581-SA101A221JAR
470pF	C22, C23A, C28	3	CERAMIC 6.35MM LS	581-SA101A471JAR
2000pF	C23	1	CERAMIC 6.35MM LS	581-SA101C222K
10000pF	C7, C19, C24A, F1, F2, F3, F4	7	CERAMIC 6.35MM LS	581-SA105E103M
47000pF	C5, C6, C13, C24B	4	CERAMIC 6.35MM LS	581-SA105C473KAR
4.7nF	C8, C20	2	FILM 10MM LS	871-B32621A6472J
180nF	C10, C12	2	FILM 10MM LS	667-ECW-F2184JAQ
RESISTORS				
VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#
1K 1%	R118	1	1% 1/4W	603-MFR-25FTF52-1K
2K49 1%	R125	1	1% 1/4W	603-MFR-25FBF52-2K49
4K99 1%	R56, R66, R153, R155	4	1% 1/4W	603-MFR-25FBF52-4K99
10K 1%	R53, R55, R126, R156, R186, R238, R246, R249, R251	9	1% 1/4W	603-MFR-25FTF52-10K
15K 1%	R247	1	1% 1/4W	603-MFR-25FBF52-15K
20K 1%	R51, R175, R187, R272	4	1% 1/4W	603-MFR-25FBF52-20K
24K9 1%	R242, R243	2	1% 1/4W	603-MFR-25FTE52-24K9
28K7 1%	R154	1	1% 1/4W	603-MFR-25FTE52-28K7
30K 1%	R120, R226	2	1% 1/4W	603-MFR-25FRF52-30K
30K1 1%	R176, R273	2	1% 1/4W	603-MFR-25FBF52-30K1
33K 1%	R224	1	1% 1/4W	603-MFR-25FRF52-33K
43K2 1%	R236	1	1% 1/4W	603-MFR-25FBF52-43K2
49K9 1%	R62, R174, R234, R274	4	1% 1/4W	603-MFR-25FBF52-49K9
56K 1%	R232	1	1% 1/4W	603-MFR-25FRF52-56K
68K 1%	R222, R228	2	1% 1/4W	603-MFR-25FBF52-68K

75K 1%	R271	1	1% 1/4W	603-MFR-25FTE52-75K
91K 1%	R230	1	1% 1/4W	603-MFR-25FBF52-91K
100K 1%	R12, R20, R30, R115, R223, R227, R231, R235, R239, R240	10	1% 1/4W	603-MFR-25FBF52-100K
150K 1%	R19A, R113	2	1% 1/4W	603-MFR-25FBF52-150K
121K 1%	R21A, R123A	2	1% 1/4W	603-MFR-25FTE52-121K
100R	R15, R81, R119, R201, R284, R288	6	5% 1/4W	603-CFR-25JR-52100R
220R	R64, R261	2	5% 1/4W	603-CFR-25JR-52220R
470R	R285	1	5% 1/4W	603-CFR-25JB-52-470R
680R	R147, R148, R157, R272A, R292	5	5% 1/4W	603-CFR-25JB-52-680R
820R	R65	1	5% 1/4W	603-CFR-25JB-52-820R
1K	R23, R144, R214A, R248A, R259, R263	6	5% 1/4W	660-CF1/4CT52R102J
1K8	R208	1	5% 1/4W	603-CFR-25JR-521K8
2K2	R177, R255	2	5% 1/4W	603-CFR-25JR-522K2
3K3	R143, R150, R216	3	5% 1/4W	660-CF1/4CT52R332J
4K7	R54, R172, R173, R248, R250, R258, R260, R262	8	5% 1/4W	603-CFR-25JB-52-4K7
6K8	R27, R130, R142, R152, R179, R210A, R276A, R290	8	5% 1/4W	603-CFR-25JB-52-6K8
	R8, R18, R42, R46, R47, R56A, R60, R61, R67, R71, R73, R76, R79,			
	R88, R90, R91, R92, R96, R97, R102, R114, R161, R162, R164A,			
10K		45	5% 1/4W	603-CFR-25JB-52-10K
	R169A, R178, R182, R192, R195, R206, R213, R220A, R221, R225,			
	R229, R233, R237, R241, R244, R268, R275, R276, R278, R281, R294			
12K	R165, R219, R280	3	5% 1/4W	603-CFR-25JB-52-12K
15K	R50, R158, R214, R279	4	5% 1/4W	603-CFR-25JB-52-15K
18K	R185	1	5% 1/4W	603-CFR-25JB-52-18K
22K	R29, R131, R149, R209, R217, R218, R286, R290A	8	5% 1/4W	603-CFR-25JB-52-22K
24K	R49, R164	2	5% 1/4W	603-CFR-25JB-52-24K
	R16, R24, R48A, R68, R69, R85, R94, R95, R116, R145, R146, R163,			
33K		19	5% 1/4W	603-CFR-25JB-52-33K
	R181, R202, R205, R215, R283, R289, R293			
39K	R82, R196	2	5% 1/4W	603-CFR-25JB-52-39K
47K	R13, R25, R129, R180, R184	5	5% 1/4W	603-CFR-25JB-52-47K
56K	R19, R113A	2	5% 1/4W	660-CF1/4CT52R563J
62K	R63	1	5% 1/4W	603-CFR-25JB-52-62K
68K	R9, R10, R21, R52, R103, R104, R123, R171, R212	9	5% 1/4W	603-CFR-25JB-52-68K
82K	R83, R291	2	5% 1/4W	603-CFR-25JR-52-82K

	R26, R39, R43, R44, R59, R70, R72, R72A, R74, R89, R93, R98, R99,			
100K	R101, R128, R132, R140, R141, R183, R193, R194, R197, R199, R207, R256, R269, R270, R282	28	5% 1/4W	603-CFR-25JR-52100K
130K	R170, R204	2	5% 1/4W	603-CFR-25JR-52-130K
150K	R198, R203	2	5% 1/4W	603-CFR-25JR-52150K
220K	R121	1	5% 1/4W	603-CFR-25JB-52-220K
240K	R220	1	5% 1/4W	603-CFR-25JB-52-240K
300K	R204A, R257	2	5% 1/4W	660-CF1/4CT52R304J
330K	R28, R124	2	5% 1/4W	603-CFR-25JB-52-330K
470K	R40, R100, R211	3	5% 1/4W	603-CFR-25JB-52-470K
1M	R71A, R73A, R96A, R97A, R245A, R245B	6	5% 1/4W	603-CFR-25JR-521M
1M2	R245	1	5% 1/4W	603-CFR-25JB-52-1M2
1M5	R27A, R130A	2	5% 1/4W	603-CFR-25JB-52-1M5
3M3	R49A	1	5% 1/4W	603-CFR-25JB-52-3M3
4M7	R41	1	5% 1/4W	603-CFR-25JR-524M7
10M	R281A	1	5% 1/4W	603-CFR-25JB-52-10M
1R	R1	1	5% 1W	588-OM10G5E-R58
1K	R22, R122	2	TEMPCO	https://www.thonk.co.uk/shop/tempco-resistor-krl-bantry-3500ppm-x2/
20K	TR1	1	SINGLE TURN	652-3362P-1-203LF
5K	TR2, TR3	2	SINGLE TURN	652-3362P-1-502LF
MISC				
VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#
1/8" TO 1/4" SHAFT ADAPTER		2	FOR PRV6 POTS	506-KR104
HEADER	PLD1, PLD2	2	2x13 MALE HEADER	517-929836-01-26-RK
VTL5C3/2	V-A, V-B, V-D, V-G, V-H	5	DUAL VACTROL	https://www.thonk.co.uk/shop/vactrols-vtl/
VTL5C3	V-C, V-E, V-F	3	SINGLE VACTROL	https://www.thonk.co.uk/shop/vactrols-vtl/
		2	26PIN RIBBON CABLE	EBAY ITEM # 231938545446
		1	POWER CONNECTOR	587-306-50-010
		4	15MM F-F STANDOFF	855-R30-1001502
		4	30MM F-F STANDOFF	855-R30-1003002
NOTES:				
ON THE MAIN PCB COMPONENT DESIGNATION SHEET				
BLUE RESISTORS ARE THE TEMPCOS.				
ORANGE IS A 10K CHANGE.				291-10K-RC

RED IS FOR M.O TRIM. SELECT FOR GOOD LOOKING M.O TRIM.3K3 WORKS NICE WE HAVE FOUND.CHANGE TO 3K3.				291-3.3K-RC
VIOLET BOX IS "R*"THIS IS AN ADDITIONAL RESISTOR TO INCREASE THE START POINT OF THE TIMBRE. SOLDER A 100K TRIMMER IN TEMPORARILY. ADJUST, REMOVE,MEASURE,INSERT CLOSEST VALUE.				
IC22 AND IC25 HAVE AN ADDITIONAL JUMPER.				
SELECT Q10/11 FOR IDSS .7 TO 1.4 MA.				
GREEN RESISTOR ADJUSTS MAX TIMBRE. IF NECESSARY, SOLDER A 100K TRIMMER IN TEMPORARILY. ADJUST, REMOVE,MEASURE,INSERT CLOSEST VALUE.				652-3362P-1-104LF