

FREQUENCY SHIFTER / BALANCED MODULATOR MODEL 285**BILL OF MATERIALS REV 1.1****PCB1****SEMICONDUCTORS**

VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#	COMMENT
TL074	IC1, IC2, IC3	3	TL074	595-TL074CN	
TL071	IC4	1	TL071	595-TL071CP	
BAT54S	D1	1	BAT54S	833-BAT54S-TP	
1N457	D2, D3	2	1N457	512-1N457	
2N3904	Q1	1	2N3904	610-2N3904	

CAPACITORS

VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#	COMMENT
2.7nF	C2	1	STYRENE AXIAL 15MM LS	667-ECQ-U2A272ML	FILM, BEND TO FIT
4.7uF	C3	1	CERAMIC SMD 1206	810-C3216X7R1H475M1E	
0.1uF	F1, F2, F3, F4, F5, F6, F7	7	CERAMIC 5MM LS	581-SA105E104M	

RESISTORS

VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#	COMMENT
100K	R1, R2, R3, R4, R5, R6, R8, R9, R12, R13, R14, R16, R17, R18, R22, R25, R26, R33, R39, R40	20	1% 1/4W	271-100K-RC	
10K	R7, R30, R31, R32, R38, R41, R42, R44, R46	9	1% 1/4W	271-10K-RC	
200K	R10	1	1% 1/4W	271-200K-RC	
30K	R11, R15, R23	3	1% 1/4W	271-30K-RC	
150K	R19, R20	2	1% 1/4W	271-150K-RC	
220R	R21	1	1% 1/4W	271-220-RC	
33K	R24	1	1% 1/4W	271-33K-RC	
20K	R27	1	1% 1/4W	271-20K-RC	
49K9	R28, R35, R36, R37	4	1% 1/4W	271-49.9K-RC	
39K	R29	1	1% 1/4W	271-39K-RC	
1K	R34	1	1% 1/4W	271-1K-RC	
2K	R43, R47	2	1% 1/4W	271-2K-RC	
12K	R45	1	1% 1/4W	271-12K-RC	
10-100K LINEAR	POT1, POT2, POT3, POT4	4	10-100K LINEAR 16MM RIGHT ANGLE	SMALLBEAR	
10-100K AUDIO	POT5	1	10-100K AUDIO 16MM RIGHT ANGLE	SMALLBEAR	

MISC					
VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#	COMMENT
SPDT ON-ON	SW1	1	TOGGLE SWITCH	633-M201201	
	J1	1	TINIJAX NORMALIZED	502-42A	
	J2, J3, J4, J5, J6, J7, J8, J9, J10, J11, J12, J13	12	TINIJAX	502-41	
	PLD1	1	PLD 20 PIN (FEMALE)	517-929975-01-10-RK	
	B1, B2	2	BANANA JACK BLACK	530-108-0903-1	
		5	SMALL DAVIES KNOB	5164-1610AA	
		1	BLUE SWITCH CAP	108-00357-EV	

PCB2

SEMICONDUCTORS

VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#	COMMENT
LM1117-3.3V	IC1	1	3.3V	926-LM1117IDT3.3NOPB	
TL074	IC2, IC7, IC11	3	TL074	595-TL074CN	
SPIN FV-1	IC3, IC6	2	DSP	Small Bear	
CLOCK CRYSTAL	IC4, IC8	2	32.768 KHz	695-CM200C-327KF-U	
24LC32A	IC5	2	GOLD OR MARKED WITH "F"	INCLUDED WITH PCB	
24LC32A	IC9	2	SILVER OR MARKED WITH "R"	INCLUDED WITH PCB	
SSM2164	IC10	1	QUAD VCA	SMALLBEAR	
TL071	IC12	1	TL071	595-TL071CP	

CAPACITORS

VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#	COMMENT
10uF	C1, C2, C3, C4, C17, C31	6	TANTALUM SMD CASE D	80-T491D106K025	
	C5, C8, C9, C18, C22, C23, C32, C37, C40, C41,				
100pF	C42	11	CERAMIC 5MM LS	581-SA102A101J	
1uF	C6, C10, C11, C20, C24, C25, C34	7	FILM 5MM LS	80-R82DC4100AA60J	
1nF	C7, C12, C13, C21, C26, C27, C35	7	FILM 5MM LS	871-B32529C102J	
22pF	C19, C33	2	CERAMIC 5MM LS	581-SA102A220J	
560pF	C36, C39, C43, C44	4	CERAMIC 5MM LS	581-SA101A561GAA	
470pF	C38	1	CERAMIC 5MM LS	581-SA101A471JAR	
	F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11,				
0.1uF	F12, F13, F14, F15, F16, F17, F18	18	CERAMIC 5MM LS	581-SA105E104M	

RESISTORS

VALUE	DESIGNATOR	QTY DESCRIPTION	MOUSER PART#	COMMENT
20K	R1, R6, R7, R15, R16, R20, R21, R29, R30	9 1% 1/4W	271-20K-RC	
470R	R2, R8, R9, R17, R22, R23, R31	7 1% 1/4W	271-470-RC	
10K	R3, R5, R10, R14, R19, R24, R28, R38	8 1% 1/4W	271-10K-RC	
30K	R4, R11, R12, R18, R25, R26, R32, R35, R36, R37, R40, R42, R43	13 1% 1/4W	271-30K-RC	
10R	R13, R27	2 1% 1/4W	271-10-RC	
499R	R33, R34, R44, R45	4 1% 1/4W	271-499-RC	
15K	R39, R41	2 1% 1/4W	271-15K-RC	
100K	R46, R47	2 1% 1/4W	271-100K-RC	
7K5	R48	1 1% 1/4W	271-7.5K-RC	

MISC

VALUE	DESIGNATOR	QTY DESCRIPTION	MOUSER PART#	COMMENT
	PBD1	1 PLD 20 PIN (MALE)	517-836-01-10	
		1 POWER CONNECTOR	587-306-50-010	
		5 15MM F-F STANDOFF	534-24395	
		5 12MM M-F STANDOFF	534-24314	
		1 16 PIN DIP SOCKET	517-4816-3000-CP	
		5 14 PIN DIP SOCKET	517-4814-3000-CP	
		1 8 PIN DIP SOCKET	517-4808-3000-CP	
		5 3MM FLAT HEAD SCREWS		
		5 3MM ROND HEAD SCREWS		