

Wide Dyanmic Range FSM VA7TA

Materials List 201901 UpDate - rev. 2

Note: Parts applicable to SMD/Through-hole component hybrid construction mounted on 1/10th inch grid prototype PCB.									
The parts listed here are mostly generic and many can be substituted with equivalents.									
This list is intended to provide a general guideline for the type of parts and components that could be used.									
Ref	Qty	Value	Cmp name	Note	Type	Size	Mfr	Mfr Part #	Digikey Stock #
BT1,	1	4 x AA	Battery Holder	1	Solder Lug	LowProfile	MPD	BC4AAL	BC4AAL-ND
C2,C5,C6,C9	4	0.1u/50V	Ceramic Capacitor	2	leaded radial	0.1" space	Kemet	C320C104K5R5TA7301	399-9870-1-ND
C1, C3, C4, C8, C10, C11,	6	0.1u/50V	Ceramic Capacitor	2	SMD X7R	0805	Kemet	C0805C104M5RACTU	399-1169-1-ND
C12, C13,	2	1u/25V	Ceramic Capacitor	2	SMD X7R	0805	Samsung	CL21B105KAFNFNE	1276-2926-1-ND
D1, D4,	2	1N5817	Schottky Diode	2	leaded axial	DO41	Diodes Inc.	1N5817-B	1N5817-BDI-ND
D2,	1	1N5819	Schottky Diode	2	leaded axial	DO41	Diodes Inc.	1N5819-T	1N5819DICT-ND
L1, L2,	2	FeedThruBead	Axial Lead Ferrite Bead	2	leaded axial	0.138"x0.206"	Laird	28L0138-80R-10	240-2513-1-ND
M1,	1	50uA, 100uA, 200ua	D'Arsonval Panel Meter	3,4	see text				
R1,	1	5.6M / 5%	Resistor	2	leaded axial	1/4W	Stackpole	CF14JT5M60	CF14JT5M60CT-ND
R2,	1	1M / 1%	Resistor	2	leaded axial	1/4W	Stackpole	RNF14FTD1M00	RNF14FTD1M00CT-ND
R3,	1	51K / 1%	Resistor	2	leaded axial	1/4W	Stackpole	RNMF14FTC51K0	S51KCACT-ND
R5, R4,	2	1.5K / 1%	Resistor	2	SMD	0805	Stackpole	RNCP0805FTD1K50	RNCP0805FTD1K50CT-ND
R6,	1	5.6K / 1%	Resistor	2	leaded axial	1/4W	Stackpole	RNMF14FTC5K60	S5.6KCACT-ND
R7, R8, R9	3	Select 1% Values	Resistor – see text	3	leaded axial	1/4W	Stackpole	RNF/RNMF series	
R10	1	10K / 1%	Resistor	2	SMD	0805	Stackpole	RMCF0805FT10K0	RMCF0805FT10K0CT-ND
R11,	1	91K / 1%	Resistor	2	SMD	0805	Stackpole	RMCF0805FT91K0	RMCF0805FT91K0CT-ND
R12	1	1M / 1%	Resistor	2	SMD	0805	Stackpole	RMCF0805FT1M00	RMCF0805FT1M00CT-ND
RV3,	1	100K	Linear Pot 1/4" shaft	2	3/8" hole		Bourns Inc.	PDA241-SRT02-104B0	PDA241-SRT02-104B0-ND
RV2,	1	100K	TrimPot	2	leaded radial	0.28" square	Nidec Copal	CT6EP104	CT6EP104-ND
SMA1,	1	RF-IN	SMA Female Coaxial bulkhead	2	Nut and Washer	SMA	Linx Tech	CONSMA008	CONSMA008-ND
SW1,	1	MEASURE LEVEL	SPDT Momentary Push Switch	2	Panel Mount	6.5mm hole	NKK	MB2011LD1W01	MB2011LD1W01-ND
SW2,	1	1dB/10dB SCALE	SPDT Toggle Switch	2	Panel Mount	6.5mm hole	NKK	M2012SS4W01	360-3242-ND
SW3,	1	BAT. Test	SPDT Momentary Push Switch	2	Panel Mount	6.5mm hole	NKK	MB2011LD1W01	MB2011LD1W01-ND
CAP Pushbutton	2	Black	Push Button Switch Cap		Black	10mm	NKK	AT442A	AT442A-ND
T1,	1	Z = 1:16	Broadband Transformer	7,8	See Text		Coil Craft	WBT16-1SL	
U1,	1	AD8307ANZ	AD8307DIP		8 pin DIP		ADI	AD8307ANZ	AD8307ANZ-ND
U2,	1	AD822	Dual Rail-to-Rail Op Amp	6	8 pin DIP		ADI	AD822ANZ	AD822ANZ-ND
U3	1	MCP1702	3.3V LDO Regulator	2	TO92		Microchip	MCP1702-3302E/TO	MCP1702-3302E/TO-ND
Miscellaneous Materials:									
Enclosure			see text		See text				
Prototype Grid PCB			1/10th grid proto PCB stock			2" x 2.5"			
Bare PCB stock									
Terminal Block	3	3 positions	Wire Connections 1-9	2	Side Entry		Phoenix Contact	1935174	277-1578-ND
Note 1: Battery holder selection may need to vary depending on enclosure used.									
Note 2: Part is generic and depends on the type of construction. There may be lower cost alternatives.									
Note 3: Use shunt as necessary to provide a 200uA meter full scale sensitivity.									
Note 4: Available surplus or online Asia shopping. See text.									
Note 5: Stackpole 1% resistors cost effective at less than 20 cents each.									
Note 6: Any general purpose low power rail-to-rail dual operational amplifier should work. Be on guard for possible different pinouts.									
Note 7: CoilCraft WB16-1L, WB16-6TL or WBT16-1L for through hole mount; WB16-1SL, WB16-6TSL, WBT16-1SL for SMD mount could be considered for this application.									
Note 8: Attainable from Coilcraft.com directly or possibly Mouser.com.									