

Onstate Technologies			Bill of Materials:	Bargraph Meter		
www.OnstateTech.com			file: BOM BM-7 F-V LED display	Date: Sept/17		
Part #:	Qty.	Value:	Description:	Note	Digikey #:	MFG #
R1	1	0R	wire jumper, 0.2" (optional)	high Vin divider		
R2	1	0.47k	0.47k Ohm resistor, 1/6W 5%, 0.2"	low adj trim	470EBK-ND	CFR-12JB-52-470R
R3	1	1.5k	1.5k Ohm resistor, 1/6W 5%, 0.2"	LED brightness limit	1.5KEBK-ND	CFR-12JB-52-1K5
R4	1	NA	resistor, 1/6W 5%	HI ref divider		
R5	1	4.7k	4.7k Ohm resistor, 1/6W 5%	LM2917 out load	4.7KEBK-ND	CFR-12JB-52-4K7
R6	1	47k	47k Ohm resistor, 1/6W 5%	LM2917 Vout RC time	47KEBK-ND	CFR-12JB-52-47K
R7	1	1.0k	1.0k (1.0-4.7k) Ohm resistor, 1/6W 5%, 0.2"	AC signal in limit	1.0KEBK-ND	CFR-12JB-52-1K
			use R or C, 0.1uF (104) cer.cap, 16-50V 0.1"	DC-AC (optional)		
R8	1	0.47k	0.47k Ohm resistor, 1/6W 5%, 0.2"	7.6V zener load	470EBK-ND	CFR-12JB-52-470R
VR1	1	100k	10k trimmer R, top adjust, center pin back	align flat	3362P-104LF-ND	3362P-1-104LF
VR2, VR3	2	10k	10k trimmer R, top adjust, center pin back	align flat	3362P-103LF-ND	3362P-1-103LF
			10k trimmer R, top adjust, center pin back	alt part	987-1020-ND	25PR10KLF
D1	1	1N4148	diode, 200mA, diode insert on H3 with wire on D1	H3 bypass, J1 on D1	1N4148FS-ND	
D2	1	BAT42	schottky diode, 200mA, DO35	DC pass	497-2495-1-ND	BAT42
			optional for delay display, D2/C2 sets timing	display delay		
D3	1	BAT42	schottky diode, 200mA, DO35	clamp high AC sig in	497-2495-1-ND	BAT42
		47k	D3/R9 alt. optional, 10k Ohm resistor, 1/6W 5%	AC sig in load	10KEBK-ND	
C1,C2,C4	3	105	1.0uF (105) cer. cap, 16-50V 0.1"	filter, C4 optional	445-8410-ND	FK18X5R1E105K
				alt. Part.	BC1162CT-ND	K105Z20Y5VF5TL2
C5	1	225	2.2uF (225) cer. cap, 16-50V 0.1"	LM2917 ripple/response	445-8407-ND	FK18X5R1C225K
C6	1	104	0.1uF (104) cer.cap, 16-50V 0.1"	LM2917 Vout RC time	478-3192-ND	SR205E104MAR
IC1	1	LM3914N	10 seg. bargraph display driver, linear, 16-DIP	align flat	LM3914N-1/NOPB	LM3914N-1/NOPB
IC2	1	LM2917N	F-V coverter, 8-DIP	align flat	LM2917N-8/NOPB	LM2917N-8/NOPB
DSP1	1	10-LED	10-LED bargraph display, 0.3"	flat, +LED, any type	160-1067-ND	LTA-1000G
H1	1	2-PIN	2 pin locking header, RA, 0.1" POWER	align flat	A1926-ND	640457-3
H2	1	2-PIN	2 pin locking header, RA, 0.1", SIGNAL	align flat	A1926-ND	
CRIMP	4	CRIMP	0.1" crimp pins	hand crimp	A100453CT-ND	1375819-1
				alt. old part.	A19520-ND	
CON1, CON2	2	2-CON	2 pin locking housing, 0.1"	hand crimp	A99613-ND	1375820-2
		2-CON	2 pin locking housing, 0.1"	alt. old part.	A19490-ND	
PCB	1	PCB-PEBM-7	Bargraph meter PCB		PCB-PEBM-7	
LM2917N Vout=fin x Vcc x R6 x C6 Vcc=7.6V BOM above for AC input signal (0.1-5Vp-p)						
If input signal is pulse DC, D3=100k, R7=100k+104 cap parallel, DC in with 10k R to IN. IN with 100k to ground load.						
1. Set VR1/VR3 to center, VR2 to full CW (gnd).						
2. Apply 12V power. LED1-LED3 maybe ON. Adjust VR2 until all LEDs are off.						
3. Connect required input signal for display.						
4. VR1 for LED10 ON, VR2 for LED1 ON						
5. Adjust VR1 to display LED scale (LED10 ON)						