

1.4 Active Device List

The following is a complete listing of all the active devices used in the EMCEE Model TU1000F UHF Television Translator. The devices are grouped together as seen on each specific schematic or interconnection diagram. Given with each device is its schematic designator, part number and function.

DEVICE	PART #/DESIGNATOR	FUNCTION
<u>VHF/UHF RECEIVER DRAWER</u>		
<u>INTERCONNECT DIAGRAMS 30383104/094</u>		
<u>Reference Oscillator</u>		
<u>Schematic Diagram 10368037</u>		
Integrated Circuit	3B130/U1	RF Amplifier
TCXO	RTX0771AD/G1	Oscillator
 <u>VHF Synthesizer</u>		
<u>Schematic Diagram 30362003 (Band I)</u>		
Integrated Circuit	3B160/U4	Reference Divider
Integrated Circuit	3B190/U2	Dual Prescaler
Integrated Circuit	3B161/U1	Synthesizer
Integrated Circuit	3B149/U3	Loop Filter
Integrated Circuit	3B181/U6	Feedback Amplifier
Integrated Circuit	3B151/U5	RF Amplifier
VCO	V220S015/G1	Oscillator
 <u>VHF Synthesizer</u>		
<u>Schematic Diagram 30362427 (Band III)</u>		
Integrated Circuit	3B160/U4	Reference Divider
Integrated Circuit	MC12028AD/U2	Dual Prescaler
Integrated Circuit	3B161/U1	Synthesizer
Integrated Circuit	3B149/U3	Loop Filter
Integrated Circuit	3B181/U6	Feedback Amplifier
Integrated Circuit	SNA586/U5	RF Amplifier
VCO	V110SC01/G1	Oscillator

DEVICE	PART #/DESIGNATOR	FUNCTION
<u>UHF Synthesizer</u> <u>Schematic Diagram 30367094</u>		
Integrated Circuit	3B160/U4	Frequency Divider
Integrated Circuit	3B161/U1	Frequency Synthesizer
Integrated Circuit	3B190/U2	Dual Modulus Freq. Divider
Transistor	3B151/U5	RF Amplifier
Transistor	3B193/U6	RF Amplifier
<u>X2 Multiplier (with Vectron Oscillator - Band I)</u> <u>Schematic Diagram B280-35</u>		
Integrated Circuit	3B09/LL1	Voltage Regulator
Transistor	2B03/Q1	RF Amplifier
Transistor	2B06/Q2	RF Amplifier
<u>X4 Multiplier (with Vectron Oscillator - Band III)</u> <u>Schematic Diagram C331-24</u>		
Integrated Circuit	3B09/U1	Voltage Regulator
Transistor	2B03/Q1	RF Amplifier
Transistor	2B06/Q2, Q3	RF Amplifier
<u>X16 Multiplier (with Vectron Oscillator - Band IV and V)</u> <u>Schematic Diagram 30367226</u>		
Diode	SK-2/A1, A2, A3	Multiplier
Integrated Circuit	3B153/U1	RF Amplifier
Integrated Circuit	3B141/U2	RF Amplifier
Integrated Circuit	3B151/U3, U6	RF Amplifier
Integrated Circuit	3B238/U4	RF Amplifier
Integrated Circuit	2B130/U5	RF Amplifier
<u>Downconverter/Preamplifier</u> <u>Schematic Diagram A331-29</u>		
Diode	MCLSBL-1X/MX1	Mixer
Transistor	2B39/Q1	RF Amplifier

DEVICE	PART #/DESIGNATOR	FUNCTION
<u>IF SAW Filter/Amplifier</u> <u>Schematic Diagram B331-21</u>		
Transistor	2B110/Q1, Q3	RF Amplifier
Transistor	2B06/Q2	RF Amplifier
<u>IF AGC Amplifier</u> <u>Schematic Diagram C331-37</u>		
Diode	1B70/CR1, CR2, CR4, CR9	RF Attenuator
Diode	1B05/VR1	Voltage Regulator
Transistor	2B28/Q1	RF Amplifier
Transistor	2B06/Q2, Q3	RF Amplifier
<u>TU20F 20 WATT EXCITER/UPCONVERTER</u> <u>INTERCONNECT DIAGRAM 40383113</u>		
<u>IF/Upconverter</u> <u>Schematic Diagram 30383013</u>		
Diode	HSMS2812/CR1	RF Switch
Diode	HSMP3800/CR2, CR3, CR4	RF Attenuator
Diode	CMPZ52373/VR1	Voltage Regulator
Transistor	MAV-11SM/U1, U3, U7	RF Amplifier
Transistor	MAR-3SM/U6	RF Amplifier
<u>Linearizer</u> <u>Schematic Diagram 30367078</u>		
Diode	1B162/CR1-CR8	RF Switch
Transistor	2B08/Q2, Q4, Q5	RF Amplifier
Transistor	2B09/Q1, Q3	RF Amplifier
<u>2W UHF Amplifier</u> <u>Schematic Diagram 30367002</u>		
Transistor	3B141/U1	RF Amplifier
Transistor	3B151/U2	RF Amplifier
Transistor	3B152/U3	RF Amplifier
Transistor	2B158/Q1	RF Amplifier
Transistor	2B25/Q2	Current Regulator

DEVICE	PART #/DESIGNATOR	FUNCTION
<u>20W UHF Amplifier</u> <u>Schematic Diagram 40383053</u>		
Transistor	2B25/Q3, Q4	Current Regulator
Transistor	2B190/Q1, Q2	RF Amplifier
<u>Metering Detector</u> <u>Schematic Diagram 30368024</u>		
Diode	1B159/CR2, CR3, CR4	RF Detector
<u>UHF Synthesizer</u> <u>Schematic Diagram 30367094</u>		
Integrated Circuit	3B160/U4	Frequency Divider
Integrated Circuit	3B161/U1	Frequency Synthesizer
Integrated Circuit	3B190/U2	Dual Modulus Freq. Divider
Transistor	3B151/U5	RF Amplifier
Transistor	3B193/U6	RF Amplifier
<u>Reference Oscillator</u> <u>Schematic Diagram 10368037</u>		
Integrated Circuit	3B130/U1	RF Amplifier
TCXO	RTX0771AD	Oscillator
<u>DUAL 300 WATT POWER AMPLIFIER DRAWER</u> <u>INTERCONNECT DIAGRAM 40386002</u>		
<u>300W UHF Amplifier</u> <u>Schematic Diagram 40386003</u>		
Motorola Amplifier Pallet	XFA8090B/A1	RF Power Amplifier
Motorola Amplifier Pallet	XFA8180B/A2, A3	RF Power Amplifier