

Part 3. MCU – modem active devices functions

Reference designator	Function	Type
D1	negative peak detector	MBD301
D2	positive peak detector	MBD301
D3	signal DC level set	MBD301
D4	signal DC level set	MBD301
D5	TTL input protection	BAV99LT1
D6	TTL input protection	BAV99LT1
D8	TTL input protection	BAV99LT1
D9	reverse power supply protection	1N4001
DS1	Led,3mm,Bicolor, 4 Stack	551-3007
DS2	Led,3mm,Bicolor, 4 Stack	551-3007
DS3	Led,3mm,Bicolor, 4 Stack	551-3007
DS4	Led,3mm,Bicolor, 4 Stack	551-3007
Q1	negative peak detector switch	MMBT3904LT1
Q2	positive peak detector switch	MMBT3904LT1
Q3	radio power supply protection	MMBT3906LT1
Q6	radio power switch	MMBT3904LT1
Q8	input switch	MMBT3904LT1
Q9	output switch	MMBT3904LT1
U1	Quad, Op-Amp	LMC6484AIM
U2	Quad, Op-Amp	TLC2274ID
U3	Hex Inverter CMOS	74HC04AD
U4	HSL,Quad Analog Switch	MC74HC4066D
U5	Quad, Op-Amp	TLC2274ID
U6	Potentiometer 4 Digital	AD8403AR50
U7	Temperature Sensor	LM50CIM3
U8	Dual Op-Amp	TLC2272ID
U9	8 Bit A/D	ADC0838CIWM
U10	Regulator, 5v	MIC295403BT
U12	ASIC, Modem	MMM-16
U13	Dual, D-Flip Flop	74HC74AD
U14	Converter Rs-232	ADM223AR
U15	Reset Circuit	MC33064D-5
U16	Dual, 1 Of 4 Decoder	74VHC139AD
U17	Dual Monostable	74HC4538AD
U18	Microprocessor ,10MHz	Z8401510FEC
U19	RAM,CMOS,32k X 8	TC55257DFL-85L
U20	Microprocessor ,10MHz	Z84C1510FEC
U21	EPRO, Flash 1 Megabit	AT29C010-90J1
U22	Quad NAND Gate	74HC00AD

Part 4. DL-3492 transceiver active devices functions

Reference Designator	Function	Type
CR101A	TCXO Varactor	BB639
CR200	Protection Diode	MMBD6050LT1
CR240	2nd LO Varactor	BB535
CR520	Power Control	MMBD701LT1
CR540	Antenna Switch	MMBV3401
CR541	Antenna Switch	MMBV3401
CR592	Power Control	MMBD701LT1
CR840	VCO Varactor	BB535
Q100	Receive Enable Switch	MUN5213T1
Q101A	TCXO Oscillator	MMBT3904
Q101	Receive Enable Switch	MUN5114T1
Q102A	TCXO Buffer	MMBT3904
Q110	Rf Enable Switch	MUN5213T1
Q130	TX Enable Switch	MUN5213T1
Q131	TX Enable Switch	MUN5213T1
Q132	TX Enable Switch	MUN5114T1
Q133	TX Enable Switch	MUN5213T1
Q134	TX Enable Switch	MUN5114T1
Q135	TX Enable Switch	PZT2222AT1
Q200	Rf Amplifier Bias	MSB1218-RT1
Q201	Low Noise Rf Amplifier	NE85633
Q211	1st LO Mixer	NE25118
Q240	2nd LO Buffer	MMBT918
Q260	2nd LO Amplifier	NE85633
Q261	2nd LO Amplifier Bias	MSB1218-RT1
Q500	PA Driver	MSA2111
Q520	RF Power Amplifier	PZT2222AT1
Q800	TCXO Level Amplifier	MSD1819A-RT1
Q840	Synthesizer Enable	MUN5213T1
Q841	Tx Pin shift Positive	MUN5213T1
Q842	TxPin shift Negative	MUN5213T1
Q843	Lowband pin shift Positive	MUN5213T1
Q844	Lowband pin shift Negative	MUN5213T1
Q845	VCO	MSD1819A-RT1
Q911	Diagnostics Enable	MMBT3904
U110	5.5 Volts Regulated	TK11900M
U111	9.6 Volts Regulated	TK11900M
U130	Power Control	MC33174D
U230	2nd If/Demodulator/Limiter	SA676DK
U510	6W Pwr module, 900 MHz	BGY114E
U520	Power Control	MC33172D
U800	FRACTIONAL-N Synthesizer	SA7025
U840	Shift register 8-STG SOI	MC14094
U900	TLC5620ID quad 8 bit dac	TLC5620ID
U901	Shift register 8-STG SOI	MC14094
U902	3 2CH analog mux/de-mux	MC14053

d9. Tune-up procedure

Ref: FCC Part 2 paragraph 2.983 (d) (9)

1. Connect the transceiver to be aligned to a DC power source. A DC current meter capable of measuring at least 2.5 Amps should be connected in line with the DC source. Connect the output of the transceiver through a watt meter and into a 50 ohm dummy load.
2. Load the synthesizer with the center channel frequency.
3. Key the transmitter and make sure that the supply voltage at the RF board is 13.3 VDC. (Do not transmit for extended periods of time).
4. Adjust PwrSet R525 potentiometer clockwise for 5.0 Watts of output power.
5. Check the power levels on the low and the high frequencies for 5.0 Watts +/- 1 Watt.