RF CIRCUIT DESCRIPTION

1.Power Regulator
On the Digital board use TOREX XC6201B332P (U3) this is 3.3V Regulator for digital circuit (U1,U2,U4,U5,U6,U7).
On the RF board use TOREX XC6204B302P (U2) this is 3.0V Regulator for RF circuit (PLL,BUFFER,PreDrive,Drive)

2.PLL
In the PLL section use FUJITSU MB15E07SL PLL IC. Built-in Phase Comparator, reference counter , swallow counter and programmable counter, , Charge pump. (Q1,D3,D4,L1,C20) is "VCO" section ,(X1,C2,C3,C10,D1,D2,C33) is "REF OSC and modulation" section, (C8,R2,C6,R3,C7) is "LOOP Filter " section.

3.BUFFER
"Q2,R18,L4,C28,R20,R19,C29" is BUFFER stage reduce load effect for VCO.

4.Pre Driver
"Q3,C34,R24,C35,R25,C65" amplify signal ,deliver more large signal to "Driver" stage.

5.Driver
"C36,R28,C37,R27,Q4,L6,L7,C38,C40"amplify signal ,deliver more power to "POWER" stage.

6.POWER
"C41,L8,R29,L9,Q5,L10,R49,C43,C46,L12,C47" boost up power, deliver power to antenna.

7.RF LOW PASS FILTER
"C50,C51,C52.C53,L13,L14,L15" is 7 th order 'π' filter filtration output RF signal reduce harmonic level.

8. MODULATOR
Digital signal from CPU (U2.Pin15) to a 4rd Bessel filter (R27,R28,R29,R30,C9,C10,C11,C12,U6,U7) filtration MOD signal reduce adjacence channel power. adjacence channel power. Next to REF OSC (C2,C3,C4,C10,C33,D1,D2 ,C11,R5) D1&D2 ,and VCO (L1,L2,D3,D4,C20,C22,C24,C25,C26,C27,R12,R13,R14,R15,R16,R17) D3&D4, D1,D2,D3,D4 is variable capacitance diode,make REF OSC & VCO frequency change.