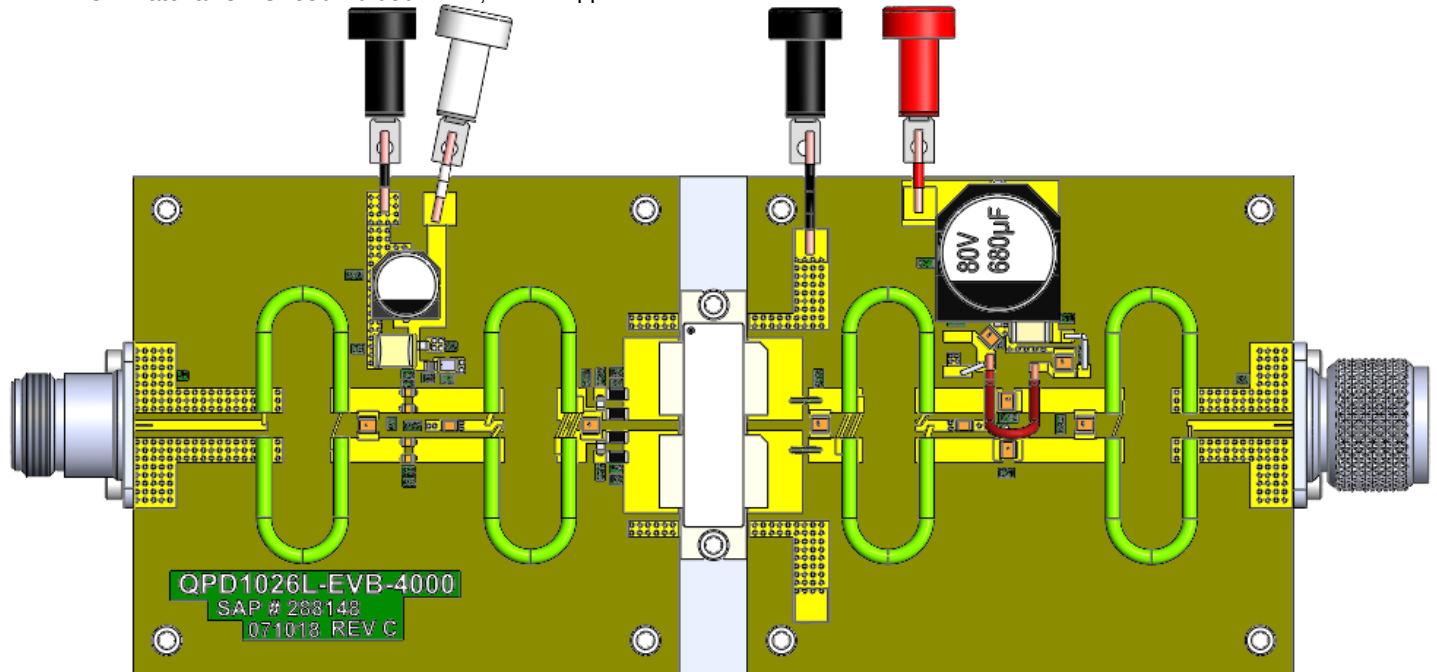


432 – 442 MHz Application Circuit EVB – Layout ¹

Notes:

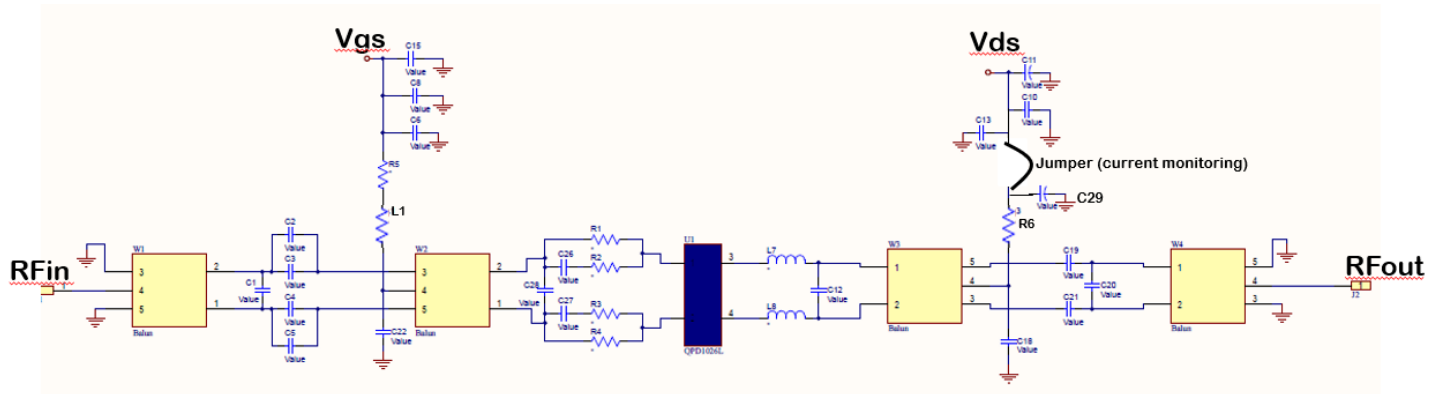
1. PCB material is RO4350B 0.030" thick, 2 oz. copper each side.



432 – 442 MHz Application Circuit Bill of Material

Reference Design	Value	Qty	Description	Manf. Part Number
Balun 1	50 Ohm	1	Semi-rigid coax, 1.7" shield length	UT-085-50
Balun 2	25 Ohm	1	Semi-rigid coax, 1.7" shield length	UT-090-25
Balun 3	25 Ohm	1	Semi-rigid coax, 1.7" shield length	UT-090-25
Balun 4	50 Ohm	1	Semi-rigid coax, 1.7" shield length	UT-085-50
C1, C20	8.2 pF	2	CAP, 800B, 500V, C0G	800B8R2CT500XT
C2, C3, C4, C5	4.7 pF	4	CAP, 600F, 250V, 0805	600F4R7BT250XT
C6	100 pF	1	CAP, 600F, 250V, C0G	600F101JT250XT
C8	10 µF	1	CAP, 10µF, 10%, 50V, X7S, 2220	C5750X7R1H106K230KB
C10	10 µF	1	CAP, 10uF, 20%, 100V, X7R, 2220	22201C106MAT2A
C11	680 µF	1	CAP, 20%, 80V, Aluminum Electrolytic	MAL215099708E3
C12	22 pF	1	22pF, 800B, 500V, C0G	ATC800B220JW500XT
C13, C29	560 pF	2	560pF, 800B, 500V, C0G	ATC800B561JW100XT
C15	220 µF	1	CAP, 20%, 50V, Aluminum Electrolytic	EMVY500ADA221MJA0G
C19, C21	220 pF	2	220pF, 800B, 500V, C0G	ATC800B221JW200XT
C22, C18	560 pF	2	560pF 800B, vertical placement	ATC800B561JW100XT
C26, C27	56 pF	2	CAP, 56pF, 5%, 250V, C0G, 0805	600F560JT250XT
C28	15 pF	1	CAP, 15pF, 5%, 500V, C0G, ATC-B	800B150JT500XT
R1, R4	5.1 Ohm	2	RES, 5.1 OHM, 1%, 1/4W, SMT, 1206	CRCW12065R10FKEA
R2, R3	0.5 Ohm	2	0.5 ohm, 1%, 1/2W 1206	CSR1206FTR500
R5, R6	0 Ohm	2	0 OHM SMT, 1206	CSR1206FTR00
L1	0 Ohm	1	0 OHM SMT, 1206	CSR1206FTR00
L7, L8	–	2	18 AWG wire, 6 mm long bent at 3 mm	–

432 – 442 MHz Application Circuit - Schematic



Bias-up Procedure

1. Set V_G to -5 V.
2. Set I_D current limit to 4 A.
3. Apply 65 V V_D .
4. Slowly adjust V_G until I_D is set to 1.5 A.
5. Apply RF.

Bias-down Procedure

1. Turn off RF signal.
2. Turn off V_D
3. Wait 2 seconds to allow drain capacitor to discharge.
4. Turn off V_G