| Direction                                | PA (W)          | G.S. (dBm)                   | Link Loss (dB)   | S/C (dBm)                                  | G/T (dB/K)  |  |   |  |   |          |                   |  |                           |   |                    |
|--|-----------------|------------------------------|--|--|---|--|---|--|---|----------|-------------------|--|---------------------------|---|--------------------|
| Uplink                                   | 2.0 @ G.S.      | +45.9 EIRP                   | 150.7 @ 10°  | -104.5 Isotropic                           | -23.5 @ S/C   |  |   |  |   |          |                   |  |                           |   |                    |
| Downlink                                 | 1.0 @ S/C       | -119.8 Isotropic             | 150.7 @ 10°  | +30.6 EIRP                                 | -12.2 @ G.S.  |  |   |  |   |          |                   |  |                           |   |                    |
|  |                 |                              |  |  |   | h. <b>LTC5534</b><br>dynamic range         |   |  |   |          |                   |  |                           |   |                    |
|  |                 |                              |  |  |   | , Ic = 7mA<br>/n = 0.1μA                   |   |  | T   | Power    | Detection         | DE D. /  | 2001                      |   |                    |
|  |                 |                              |  | 10dB <b>∮</b>                              | _ [   | RF   | R <sub>EV</sub> (to M4)                 | PA T <sub>X</sub><br>(dBm)   | Direction   | VSWR     | RL (dB)           | RF Det.<br>In (dBm)  | DC Out<br>(V)             |   |                    |
|  |                 |                              | Γ  | }  |   | ector                                      | REV (LO IVI4)                           | 0  | FWD   | -        | -                 | -54  | 0.30                      |   |                    |
|  |                 |                              |  | ı  |   | J  |   | 0  | REV   | 1.10     | 26                | -60  | 0.20                      |   |                    |
|  |                 |                              |  | 30dB <b>\$</b>                             |   | g RF<br>ector ——DC                         | <sub>FWD</sub> (to M4)                  | +35  | FWD   | -        | -                 | -19  | 1.75                      |   |                    |
|  |                 |                              |  | l j  |   | T  |   | +35  | REV   | 5.83     | 3                 | -2   | 2.45                      |   |                    |
| Canted T<br>Gain: +1.4<br>Backt<br>SMPM. | dBi (back)      | RF1                          | -24d<br>MiniCirc.<br>Los   | se Forward B -24dB  BDCN-20-13+ ss: 0.18dB | Enable————————————————————————————————————                    | Gain: +:<br>NF: 4.8i<br>Ic = 850<br>(based | lmA @ +33dBm<br>on 940MHz)<br>vn = ? mA | (high - fr   | om M4)  |          | Output<br>Network | ]  |                           |   |                    |
|  | ANT(\$          | Qorvo QPC1022<br>Loss: 0.2dB | CTRL-  |  | /Enable (low  |  | Enable (hig                             | R <sub>&gt;</sub>  | <sub>k</sub> = high<br><sub>k</sub> = low (d<br>M4) | Γ        |                   | -T <sub>X</sub> (ANTP1<br>-PWRAMP.<br><sub>X</sub> (ANTP/N):<br>CLKP/I | AX5043 - Matchi - Sensiti | X5043<br>nsceiver<br>Notes:<br>ng networks, p. 3<br>vity for 100kbps<br>-108 dBm          |                    |
|  |                 |                              | MiniCirc. <b>BPF-C450+</b><br>400MHz - 510MHz<br>Loss: 0.81dB @ 435MHz |  | Infineon BGB707L<br>Gain: 24dB<br>NF: 0.5dB<br>Ic = 6mA<br>OR | SD   | Fc:<br>BV                               | Murata <b>SF24</b><br>435.0 MHz<br><i>W</i> : 10 MHz<br>oss: 1.9dB | 46E   |          |                   | <u> </u>   | <b>Eval:</b> Stability: + | TCXO S or Clipped SW. 16,000 MHz ECS-TXO-3225 HCMOS out /-2.5 ppm (-30 to :: -135dBc/Hz @ | <b>5</b><br>o +85) |
| Notes:                                   | wices requiring | power operate at 2           | 2.0\/ except for the   |  | Qorvo <b>TQP3M90</b><br>Gain: 24dB<br>NF: 0.38dB<br>Ic = 45mA |  |   |  |   |          |                   |  | nd Transo                 |   | S/C                |
|  |                 |                              | L.5 v, except for the  | :  | Shtdn = 2mA   |  |   |  |   | <u> </u> |                   |  |                           |   |                    |
|  | hich requires 5 | GitHub (oresat-c3-           | rf/link madal-\  |  |   |  |   |  |   |          | (                 | Operating  | Freq: 435 -               | 438 MHz   |                    |