**IPT Pick-up Design Equations**

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| **Eq. #** | **Equation** |
| (1) | Io (for ) is the largest current possible: |
| (2) | Io (for ): |
| (3) | Vout: |
| (4) | Pout: |
| (5) | Duty Cycle (D):  Where Pmax is given by: |
| (6) | Qmax: |
| (7) | Qavg: |
| (8) | C2 Compensation Capacitor:  Impedance matching to increase overall power:  Rearranging and solving, we are able to find C2: |
| (9) |  |
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