

4.1 Board Layout

This section shows the dimensions, PCB layers (Figure 1 through Figure 5), and assembly drawing for the bq20z65 module.

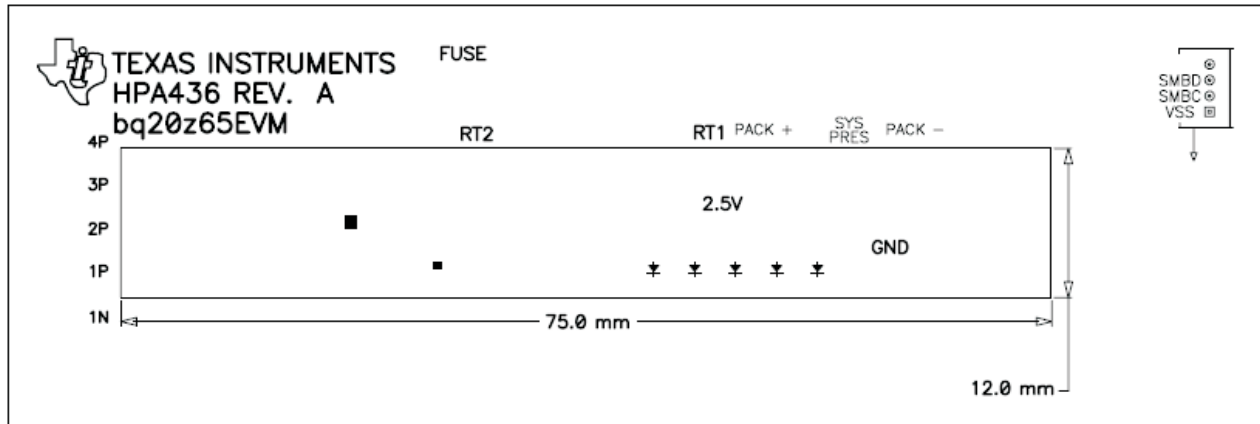


Figure 1. bq20z65EVM-001 Layout – Silk Screen

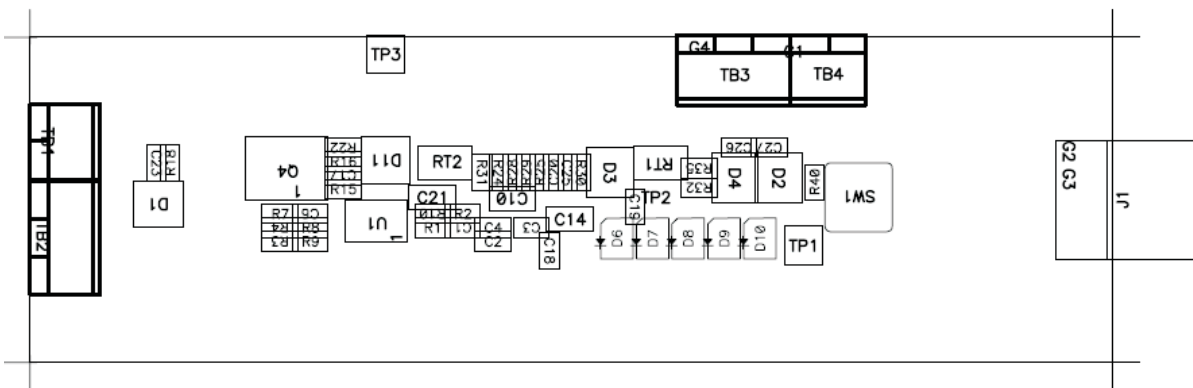


Figure 2. Top Assembly

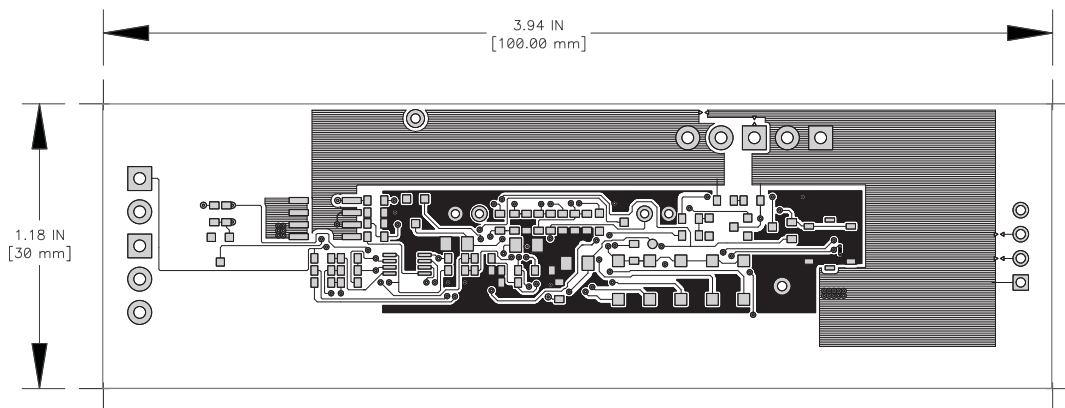


Figure 3. Top Layer

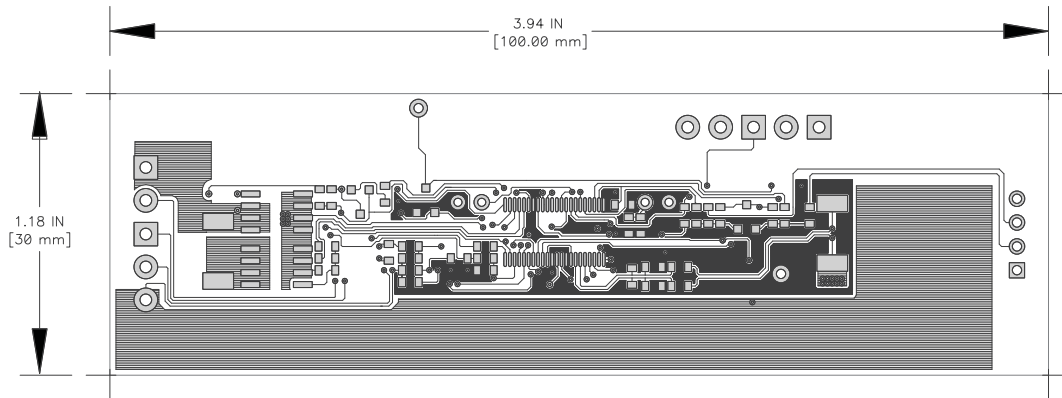


Figure 4. Bottom Layer

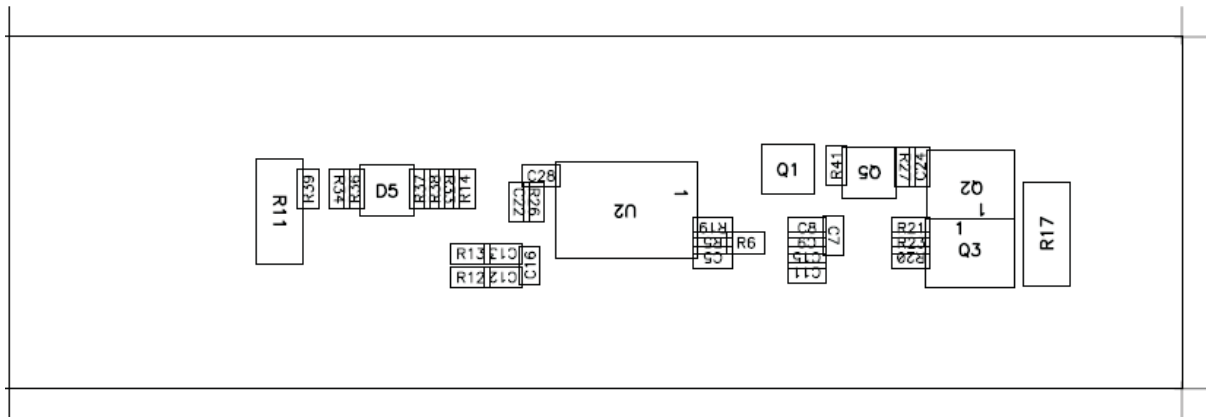


Figure 5. Bottom Assembly

4.2 Bill of Materials and Schematic

Table 3. Bill of Materials

| Count | RefDes | Description | Size | Mfr | Part Number |
|-------|---|---|-----------------------------|-------------------|-------------|
| 21 | C1–C9, C12, C13, C15–C18, C23, C24, C26–C28 | Capacitor, Ceramic, 0.1 μ F, 50 V, X7R, 20% | 0603 | Any | STD |
| 1 | C11 | Capacitor, Ceramic, 0.22 μ F, 50 V, X7R, 20% | 0603 | Any | STD |
| 1 | C19 | Capacitor, Ceramic, 4.7 μ F, 10 V, X7R, 20% | 0603 | Any | STD |
| 1 | C20 | Capacitor, Ceramic, 47nF, 50 V, X7R, 20% | 0603 | Any | STD |
| 2 | C22, C25 | Capacitor, Ceramic, 0.47 μ F, 16 V, X7R, 20% | 0603 | Any | STD |
| 3 | C10, C14, C21 | Capacitor, Ceramic, 1.0 μ F, 25 V, X7R, 20% | 0805 | Any | STD |
| 4 | D1–D3, D11 | Diode, Switching, 150-mA, 75-V, 350mW | SOT23 | Vishay-Liteon | BAS16 |
| 2 | D4, D5 | Diode, Dual, Zener, 5.6V, 300mW | SOT23 | Vishay-Telefunken | AZ23C5V6 |
| 5 | D6–D10 | Diode, LED, Green, Gullwing, GW Type, 20ma, 7.5 mcd typ. | 0.120 \times 0.087 inches | Panasonic | LN1361C |
| 1 | J1 | Header, Friction Lock Ass'y, 4-pin Right Angle, | 0.400 \times 0.500 | Molex | 22-05-3041 |
| 1 | Q1 | MOSFET, N-ch, 20-V, 1.3A, 0.16- Ω | SOT23 | Fairchild | NDS331N |
| 2 | Q2, Q4 | MOSFET, N-ch Logic Level, Power Trench, 30V, 11A, 12.5 m Ω | SO8 | Fairchild | FDS6690A |

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