

LBM-7250-4 Lab Brick® Butler Matrix

2400 – 7250 MHz Frequency | Butler Matrix 4x4

Features/Benefits

- Broad Frequency Range Covers all WiFi/WiFi6E Bands
- Excellent Phase Accuracy
- Front and Top Mounting Options
- Sized to fit multiple units into a single rack unit for ATE and laboratory applications

Applications

- Phased Antenna Array Beam Forming
- WiFi, WiFi6E, 5G, LTE, Bluetooth
- MIMO Simulation and Test
- Radar



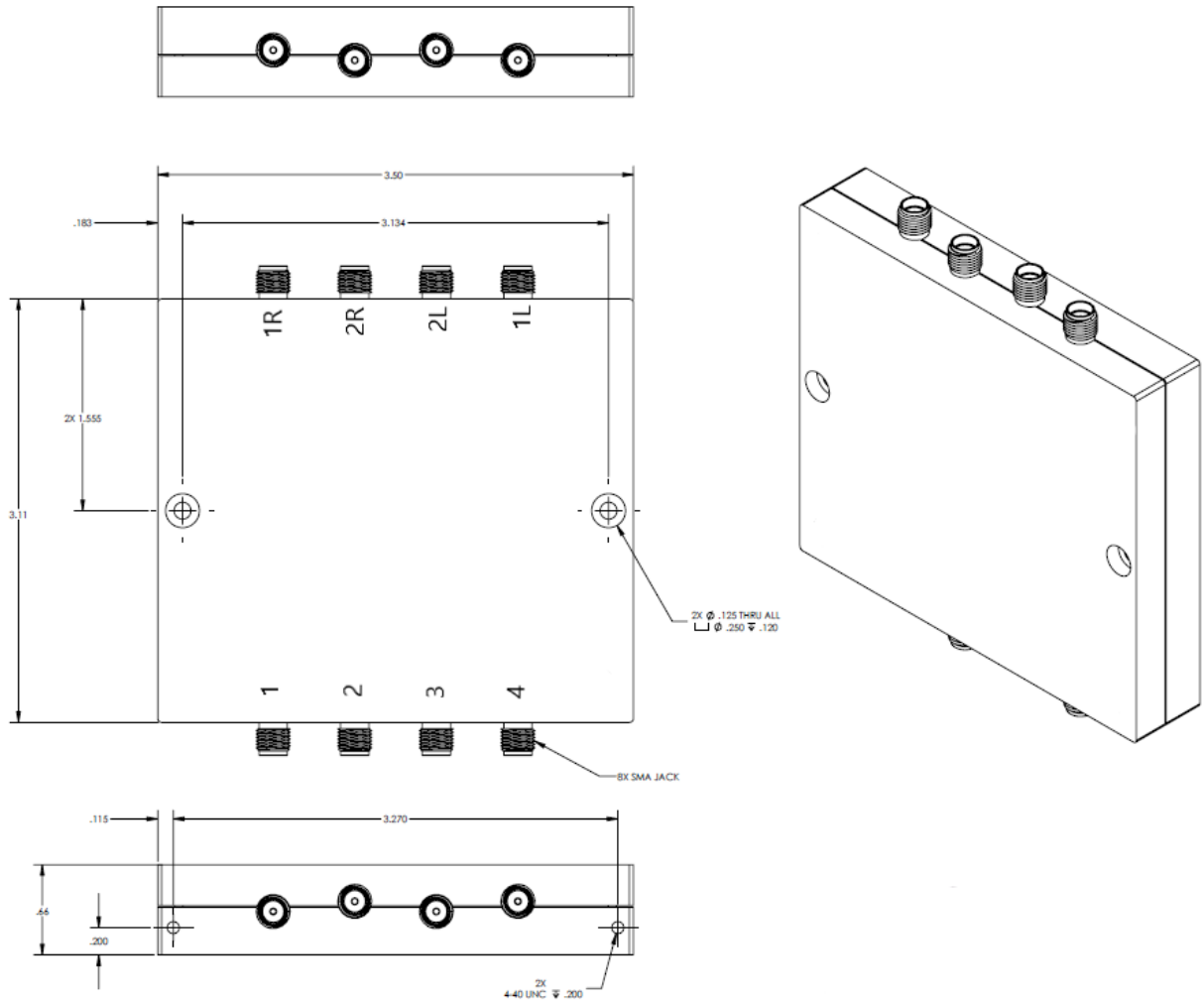
The Lab Brick Butler Matrix is a cost-effective beam forming tool used with phased array antennas. Engineers use the Vaunix Butler Matrix to improve phase progression technology and address angular coverage issues by shaping radiation patterns and steering antenna array beams towards a desired direction in WiFi, WiFi6E, WiFi7, 5G, Bluetooth and other communication systems.

The LBM-7250-4 is a passive beam forming solution in a small, user-friendly package. The device can be mounted to a face plate with front access in a rack mount configuration. The LBM-7250-4 can also be mounted to a chassis from the top or bottom using the provided mounting holes.

LBM-7250-4 Specifications

| <i>Parameter</i> | <i>Test Conditions</i> | <i>Min</i> | <i>Typ</i> | <i>Max</i> |
|-----------------------------|------------------------------------|----------------------------------------------------------|------------|------------|
| Frequency Range (MHz) | | 2400 | | 7250 |
| Impedance (Ω) | | | 50 | |
| Insertion Loss (dB) | | | 8 | 10.5 |
| Phase Accuracy (degrees) | 2.4 - 2.5 GHz | | 5 | |
| | 5.15 - 5.85 GHz | | 7 | |
| | 5.925 - 7.125 GHz | | 9 | |
| | Full Band | | 10 | 15 |
| VSWR | | | 1.5:1 | |
| Isolation (dB) | | | 15 | |
| Maximum Input Level (Watts) | Peak | | 50 | |
| <i>Parameter</i> | <i>Test Conditions/Notes</i> | | | |
| Environmental | Operating Temperature | -30 °C to +70 °C | | |
| | Relative Humidity (non-condensing) | <95% | | |
| Physical Connections | RF Connectors | SMA – female | | |
| Mechanical | Size | 3.5 x 3.11 x 0.66 inches 88.9 x 79 x 16.8 millimeters | | |
| | Weight | 0.3 lbs 136g | | |

LBM-7250-4 Mechanical Outline



LBM-7250-4 Phase Mapping

| | 1 | 2 | 3 | 4 |
|-----------|----------|----------|----------|----------|
| 1R | -45 | -90 | -135 | -180 |
| 2R | -90 | -225 | 0 | -135 |
| 2L | -135 | 0 | -225 | -90 |
| 1L | -180 | -135 | -90 | -45 |

LBM-7250-4 Data

