

## QDA-100-50000-61.75-0.25

0.1~50GHz, 61.75dB, 0.25dB

### Features:

- \* Broadband
- \* High Dynamic Range

### Applications:

- \* Wireless
- \* Transmitter
- \* Laboratory Test
- \* Radar



### Electrical

|                       |                                                 |
|-----------------------|-------------------------------------------------|
| Frequency:            | 0.1~50GHz                                       |
| Insertion Loss:       | 10dB typ.                                       |
| Step:                 | 0.25dB                                          |
| Attenuation Range:    | 0~61.75dB                                       |
| Attenuation Accuracy: | ±1.5dB typ. @0~29.75dB<br>±4dB typ. @30~61.75dB |
| VSWR:                 | 2.8 typ.                                        |
| Voltage/Current:      | -5V @10mA typ.                                  |
| Switching Time:       | 20ns typ.                                       |
| Logic Input:          | On: 1( +2.3~+5V)<br>Off: 0( 0~+0.8V)            |

### Absolute Maximum Ratings\*1

|              |             |
|--------------|-------------|
| Input Power: | +24dBm max. |
|--------------|-------------|

[1] Permanent damage may occur if any of these limits are exceeded.

### Mechanical

|                                              |                                   |
|----------------------------------------------|-----------------------------------|
| Size*2:                                      | 36*26*12mm<br>1.417*1.024*0.472in |
| RF Connectors:                               | 2.4mm Female (Removable)          |
| Power Supply & Control Interface Connectors: | J30J-15ZKP                        |
| Mounting:                                    | 4-Φ2.8mm through-hole             |

[2] Exclude connectors.

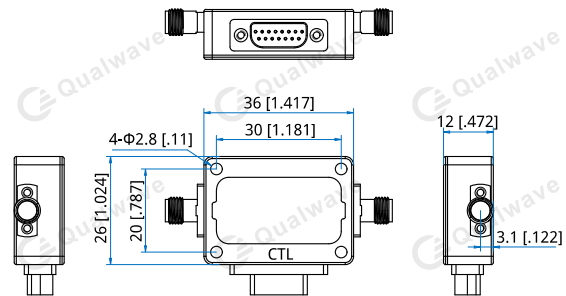
### Pin Numbering

| Pin | Function   | Pin  | Function |
|-----|------------|------|----------|
| 1   | C1:-0.25dB | 7    | C7:-16dB |
| 2   | C2:-0.5dB  | 8    | C8:-30dB |
| 3   | C3:-1dB    | 9-13 | NC       |
| 4   | C4:-2dB    | 14   | VEE      |
| 5   | C5:-4dB    | 15   | GND      |
| 6   | C6:-8dB    |      |          |

### Environmental

|                            |            |
|----------------------------|------------|
| Operating Temperature:     | -45~+85°C  |
| Non-operating Temperature: | -55~+125°C |

### Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

### Logic Table

| State | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | VEE | Attenuation State |
|-------|----|----|----|----|----|----|----|----|-----|-------------------|
| -     | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | -5V | Reference IL      |
| 1     | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | -5V | 0.25dB            |
| 2     | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | -5V | 0.5dB             |
| 3     | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | -5V | 1dB               |
| 4     | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | -5V | 2dB               |
| 5     | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | -5V | 4dB               |
| 6     | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | -5V | 8dB               |
| 7     | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | -5V | 16dB              |
| 8     | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | -5V | 30dB              |
| 9     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | -5V | 61.75dB           |

### How To Order

**QDA-100-50000-61.75-0.25**

Customization is available upon request.

## Typical Performance Curves

