# BD4526

## WideBand 2-Way SMT Power Divider

*2700~6000MHz WLAN & 5G*

### Device Features

- Typical Isolation = 25.5 dB @ 4.9GHz
- Typical Insertion Loss = 0.8 dB @ 4.9GHz
- Typical Amplitude Diff. = 0.02 @ 4.9GHz
- Typical Phase Diff. = 1.6 @ 4.9GHz
- RoHS2-compliant 12L QFN 3x3 Plastic Package




BD4526(YYWWXX=Wafer number)

### Product Description

BeRex's Divider BD4526 is designed for LTE, ISM, instrumentation, WLAN and 5G with low Insertion Loss and high Isolation. This chip is fully passivated for enhanced performance and reliability and packaged in RoHS2 -compliant with QFN3x3 surface mount package.

### Typical Performance

All specifications apply to the following test conditions.

Device performance _ measured on BeRex E/B at 25°C, 50ohm system.

| Parameter | Min | Typical | Max | Unit |
|---|---|---|---|---|
| Frequency Range | 2700 | | 6000 | MHz |
| Test Frequency | | 4500 | | MHz |
| Insertion Loss* | | 0.7 | 2 | dB |
| Isolation | 15 | 32.5 | | dB |
| IRL(S11) | | -20.0 | -10.0 | dB |
| ORL(S22/S33) | | -27.0 | -10.0 | dB |
| Amplitude Diff. | | 0.02 | 0.3 | dB |
| Phase Diff. | | 1.4 | 5 | deg |

* Insertion Loss: Above 3.0dB. Evaluation board loss de-embedded.

### Applications

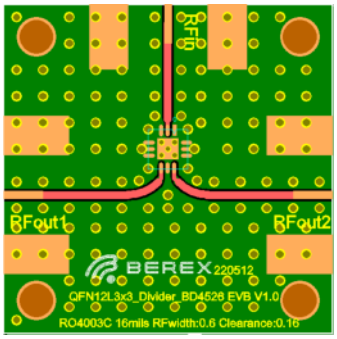
- Base station Infrastructure
- Commercial/Industrial/Military wireless system
- 5G Wireless Infrastructure
- Satellite communications

### Absolute Maximum Ratings

| Parameter | Rating |
|---|---|
| Input Power | 2W CW |
| Storage Temperature | -55 to +155°C |
| Operating Temperature | -40 to +105°C |

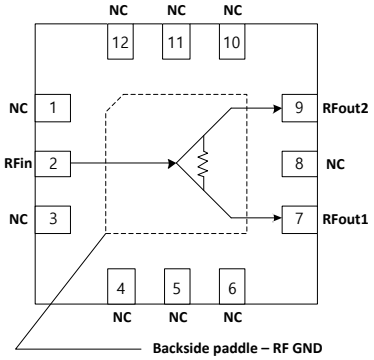
Operation of this device above any of these parameters may result in permanent damage.

### Evaluation Board Drawing




*RO4003C_0.4T, RFwidth:0.6 Clearance:0.16

### Function Block Diagram





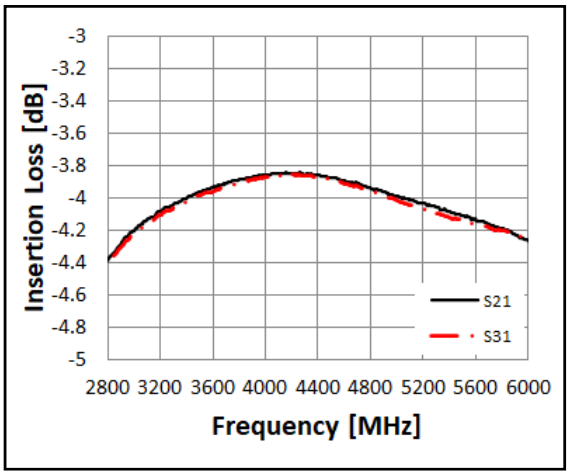

Specifications and information are subject to change without notice. BeRex is a trademark of BeRex.
All other trademarks are the property of their respective owners. © 2022 BeRex

## Typical Test Data

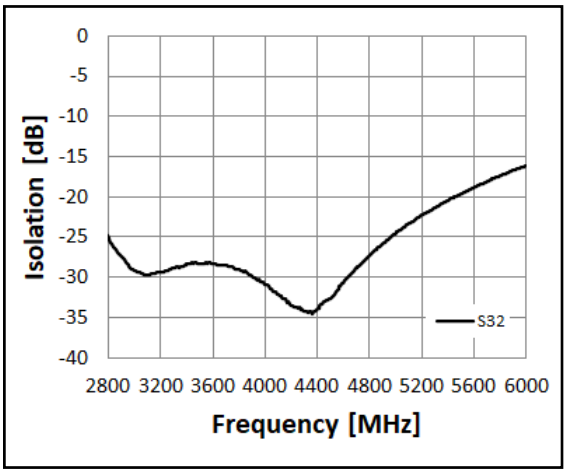
| Parameters | Unit | WLAN & 5G | | | | |
|---|---|---|---|---|---|---|
| **Frequency Range** | MHz | 2800 | 3600 | 4500 | 4900 | 5800 |
| **Insertion Loss*** | dB | 1.25 | 0.8 | 0.7 | 0.8 | 0.9 |
| **Isolation** | dB | 25.0 | 28.5 | 32.5 | 25.5 | 17.5 |
| **IRL(S11)** | dB | -13.5 | -18.0 | -20.0 | -15.0 | -12.0 |
| **ORL(S22,S33)** | dB | -12.0 | -17.0 | -27.0 | -22.0 | -17.0 |
| **Phase Diff.** | deg | 1.0 | 1.2 | 1.4 | 1.6 | 1.8 |
| **Amplitude Diff.** | dB | 0.04 | 0.03 | 0.02 | 0.02 | 0.04 |

*. Insertion Loss: Above 3.0dB. Evaluation board loss de-embedded.

### Insertion Loss vs. Frequency

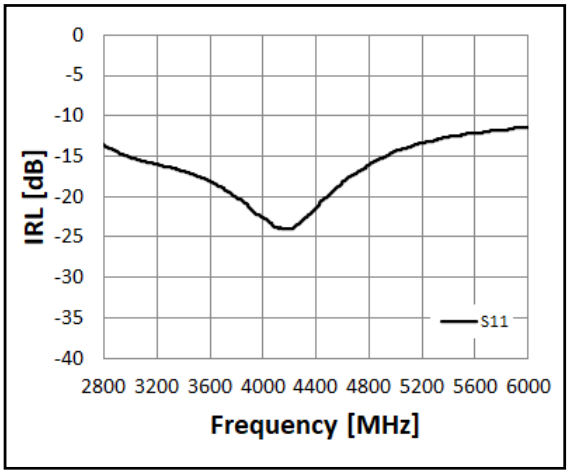



### Isolation vs. Frequency

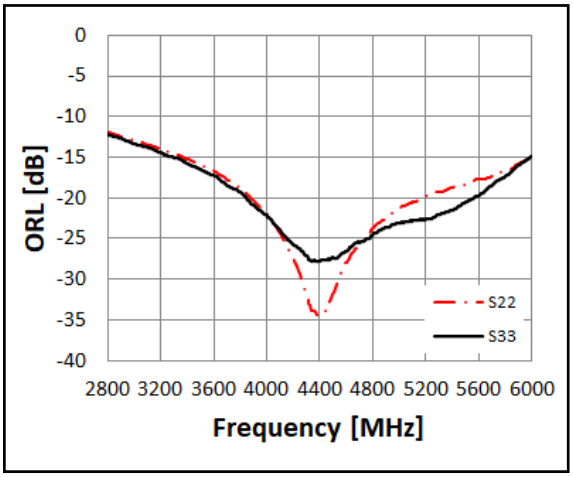



Insertion loss: w/o board loss compensation.

### IRL vs. Frequency



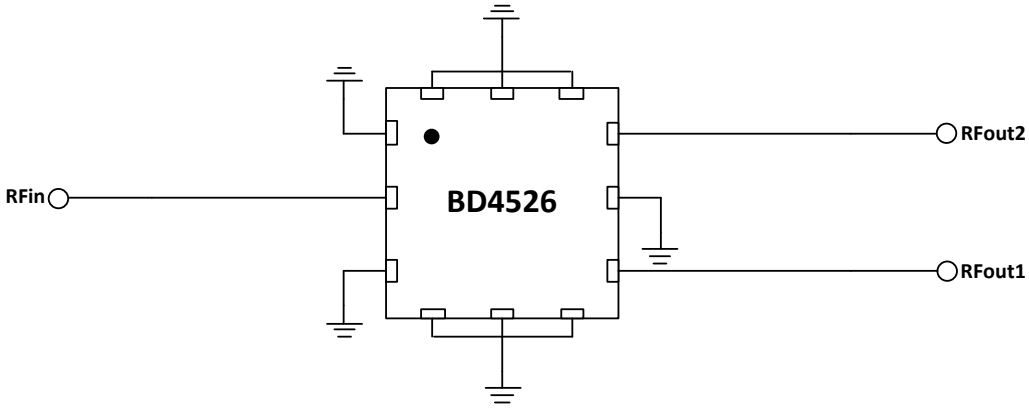

### ORL vs. Frequency

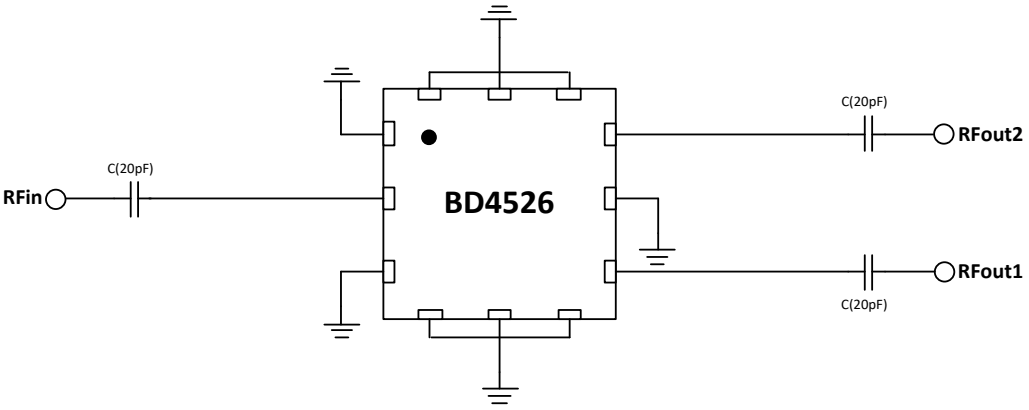





Specifications and information are subject to change without notice. BeRex is a trademark of BeRex.
All other trademarks are the property of their respective owners. © 2022 BeRex

## Typical Divider Application



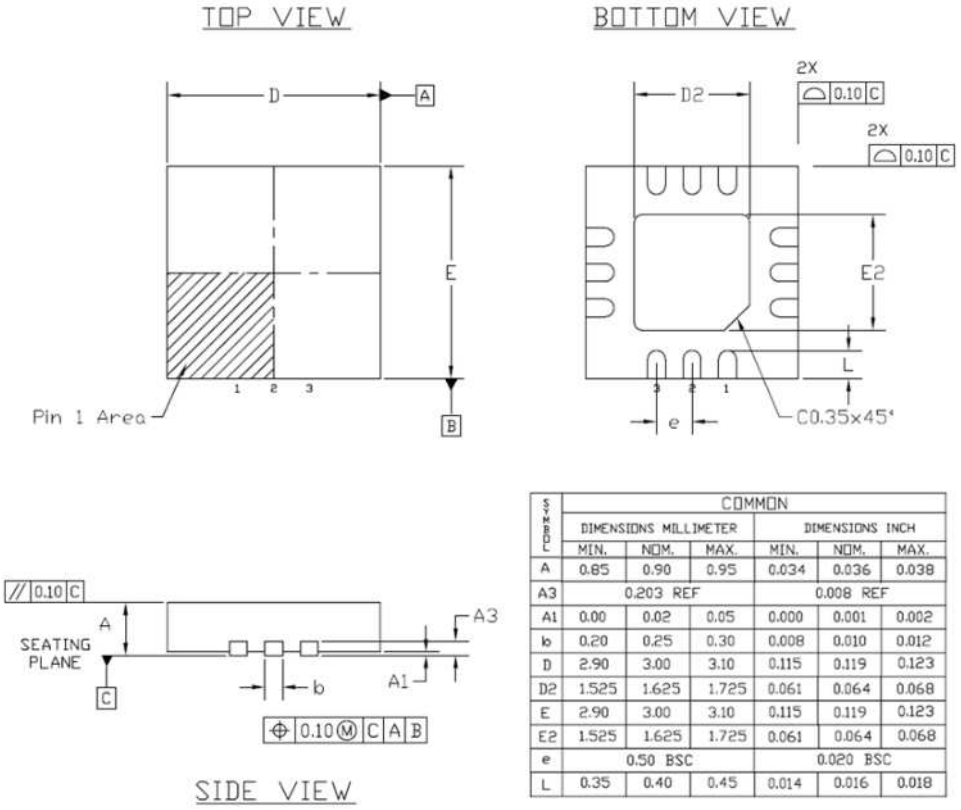




Notes:
1. Suggest to add Capacitors of DC Blocker between Pins and external circuit to prevent DC signal entry to guarantee parts normal work.



Specifications and information are subject to change without notice. BeRex is a trademark of BeRex.
All other trademarks are the property of their respective owners. © 2022 BeRex

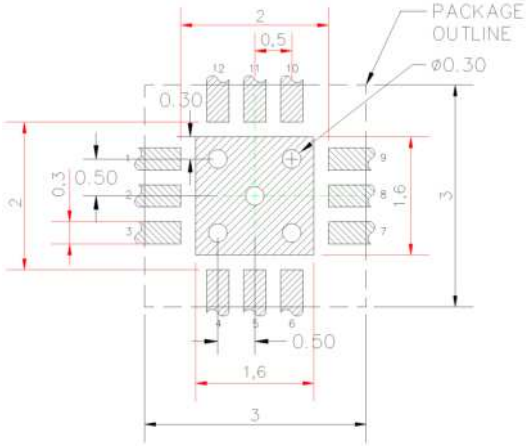
## Package Outline Drawing




| SYMBOL | COMMON | | | | | |
|---|---|---|---|---|---|---|
| | DIMENSIONS MILLIMETER | | | DIMENSIONS INCH | | |
| | MIN. | NOM. | MAX. | MIN. | NOM. | MAX. |
| A | 0.85 | 0.90 | 0.95 | 0.034 | 0.036 | 0.038 |
| A3 | | 0.203 REF | | | 0.008 REF | |
| A1 | 0.00 | 0.02 | 0.05 | 0.000 | 0.001 | 0.002 |
| b | 0.20 | 0.25 | 0.30 | 0.008 | 0.010 | 0.012 |
| D | 2.90 | 3.00 | 3.10 | 0.115 | 0.119 | 0.123 |
| D2 | 1.525 | 1.625 | 1.725 | 0.061 | 0.064 | 0.068 |
| E | 2.90 | 3.00 | 3.10 | 0.115 | 0.119 | 0.123 |
| E2 | 1.525 | 1.625 | 1.725 | 0.061 | 0.064 | 0.068 |
| e | | 0.50 BSC | | | 0.020 BSC | |
| L | 0.35 | 0.40 | 0.45 | 0.014 | 0.016 | 0.018 |

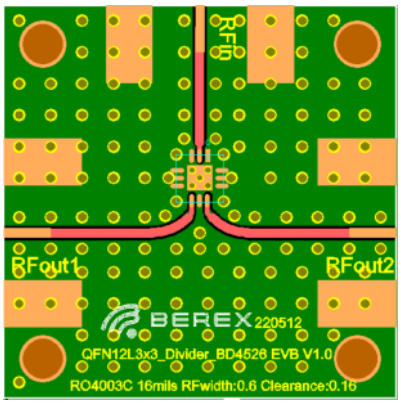
## Suggested PCB Land Pattern and PAD Layout

### PCB Land Pattern




**Note : All dimension _ millimeters**

### PCB Mounting




*RO4003C_0.4T, RFwidth:0.6 Clearance:0.16



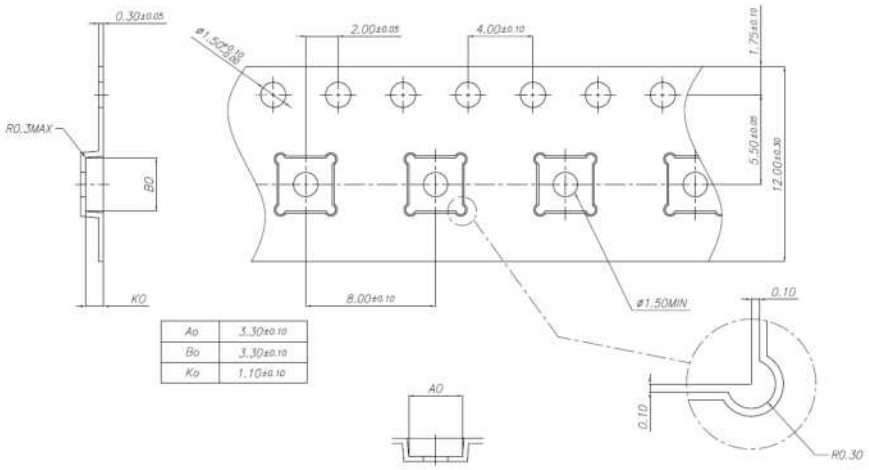
Specifications and information are subject to change without notice. BeRex is a trademark of BeRex.
All other trademarks are the property of their respective owners. © 2022 BeRex

## Package Marking




YYWWXX = Wafer No.

## Tape & Reel




Packaging information:

Tape Width (mm): 8

Reel Size (inches): 7

Device Cavity Pitch (mm): 4

Devices Per Reel: 1000

## Lead plating finish

### 100% Tin Matte finish

(All BeRex products undergoes a 1 hour, 150 degree C, Anneal bake to eliminate thin whisker growth concerns.)



Specifications and information are subject to change without notice. BeRex is a trademark of BeRex.
All other trademarks are the property of their respective owners. © 2022 BeRex

## MSL / ESD Rating

| | |
|---|---|
| **ESD Rating:** | Class 0B |
| **Value:** | **Passes ≤ 125V** |
| **Test:** | Human Body Model (HBM) |
| **Standard:** | JEDEC Standard JS-001-2017 |

| | |
|---|---|
| **MSL Rating:** | **Level 1 at +260°C convection reflow** |
| **Standard:** | JEDEC Standard J-STD-020 |




Proper ESD procedures should be followed when handling this device.

### RoHS Compliance

This part is compliant with Restrictions on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive 2011/65/EU as amended by Directive 2015/863/EU.
This product also is compliant with a concentration of the Substances of Very High Concern (SVHC) candidate list which are contained in a quantity of less than 0.1%(w/w) in each components of a product and/or its packaging placed on the European Community market by the BeRex and Suppliers.

## NATO CAGE code:

| | | | | |
|---|---|---|---|---|
| **2** | **N** | **9** | **6** | **F** |



Specifications and information are subject to change without notice. BeRex is a trademark of BeRex.
All other trademarks are the property of their respective owners. © 2022 BeRex