

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

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.



BD4526(YYWWXX=Wafer number)

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

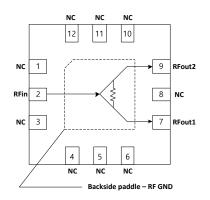
* Insertion Loss: Above 3.0dB. Evaluation board loss de-embedded.

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.

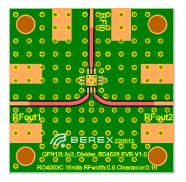
Function Block Diagram



Applications

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

Evaluation Board Drawing



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

BeRex

•website: <u>www.berex.com</u>

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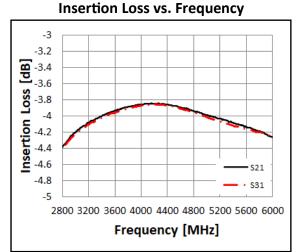
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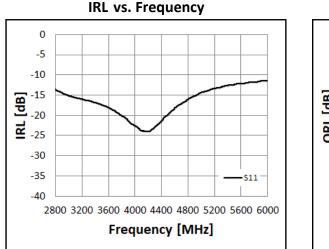
	iyp	ical lest	Data			
Parameters	Unit			WLAN & 5G		
Frequency Range	MHz	2800	3600	4500	4900	5800
Insertion Loss*	dB	1.25	0.8	0.7	0.8	0.9
Isolation	dB	25.0	28.5	32.5	25.5	17.5
IRL(S11)	dB	-13.5	-18.0	-20.0	-15.0	-12.0
ORL(S22,S33)	dB	-12.0	-17.0	-27.0	-22.0	-17.0
Phase Diff.	deg	1.0	1.2	1.4	1.6	1.8
Amplitude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

Typical Test Data

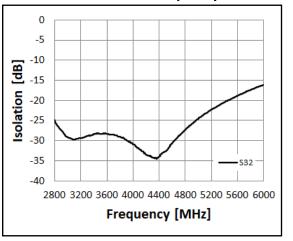
*. Insertion Loss: Above 3.0dB. Evaluation board loss de-embedded.



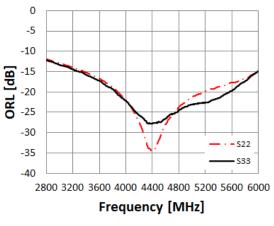
Insertion loss: w/o board loss compensation.



Isolation vs. Frequency



ORL vs. Frequency



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•email: <u>sales@berex.com</u>

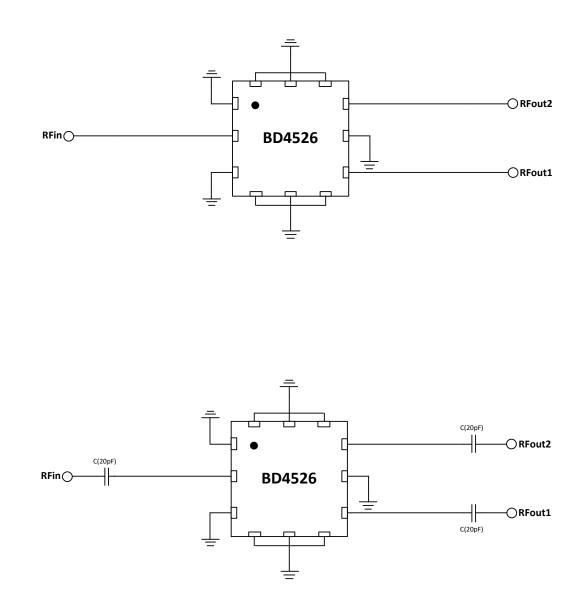
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Typical Divider Application



Notes:

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

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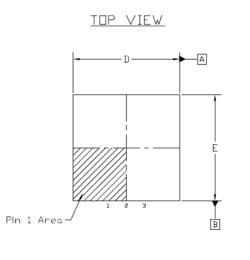
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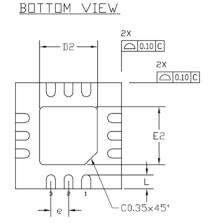


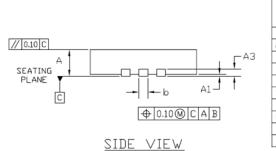
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Package Outline Drawing

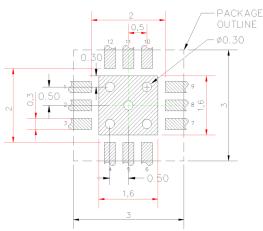




COMMON					
DIMENSIONS MILLIMETER			DIMENSIONS INCH		
MIN.	NDM.	MAX.	MIN.	NDM.	MAX.
0.85	0.90	0.95	0.034	0.036	0.038
0.203 REF			0.008 REF		F
0.00	0.02	0.05	0.000	0.001	0.002
0.20	0.25	0.30	800.0	0.010	0.012
2.90	3.00	3.10	0.115	0.119	0.123
1.525	1.625	1.725	0.061	0.064	0.068
2.90	3.00	3.10	0.115	0.119	0.123
1.525	1.625	1.725	0.061	0.064	0.068
	0.50 BSC	;		0.020 BS	C
0.35	0.40	0.45	0.014	0.016	0.018
	MIN. 0.85 0.00 0.20 2.90 1.525 2.90 1.525	MIN. NOM. 0.85 0.90 0.203 RE 0.02 0.00 0.02 2.90 3.00 1.525 1.625 2.90 3.00 1.525 1.625 2.90 3.00 1.525 1.625	DIMENSIINS MILLIFER MIN. NDM. MAX. 0.85 0.90 0.95 0.203 REF 0.00 0.02 0.00 0.02 0.30 0.20 0.25 0.30 0.20 3.00 3.10 1.525 1.625 1.725 2.90 3.00 3.10 1.525 1.625 1.725 0.50 BSC V 0.50 BSC	DIMENSIDNS MILLIMETER DII MIN. NQM. MAX. MIN. 0.85 0.90 0.95 0.034 0.203 REF 0 0 0 0 0.00 0.02 0.05 0.000 0.008 0.203 REF 0 <td>DIMENSIDNS MILLIME TER DIMENSIDNS MIN. NDM. MAX. MIN. NDM. 0.85 0.90 0.95 0.034 0.036 0.203 REF 0.000 0.001 0.001 0.010 0.20 0.25 0.30 0.008 0.010 0.20 0.25 0.30 0.008 0.010 0.20 0.25 0.30 0.008 0.010 2.90 3.00 3.10 0.115 0.119 1.525 1.625 1.725 0.061 0.064 2.90 3.00 3.10 0.115 0.119 1.525 1.625 1.725 0.061 0.064 0.50 BSC 0.020 BS 0.020 BS 0.020 BS</td>	DIMENSIDNS MILLIME TER DIMENSIDNS MIN. NDM. MAX. MIN. NDM. 0.85 0.90 0.95 0.034 0.036 0.203 REF 0.000 0.001 0.001 0.010 0.20 0.25 0.30 0.008 0.010 0.20 0.25 0.30 0.008 0.010 0.20 0.25 0.30 0.008 0.010 2.90 3.00 3.10 0.115 0.119 1.525 1.625 1.725 0.061 0.064 2.90 3.00 3.10 0.115 0.119 1.525 1.625 1.725 0.061 0.064 0.50 BSC 0.020 BS 0.020 BS 0.020 BS

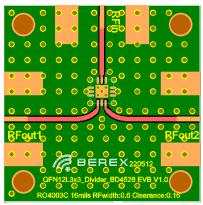
Suggested PCB Land Pattern and PAD Layout





Note : All dimension _ millimeters

PCB Mounting



•email: sales@berex.com



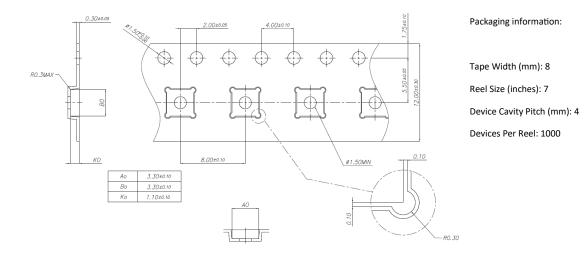
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Package Marking



Tape & Reel



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.)



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MSL / ESD Rating

ESD Rating:	Class OB
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
	Caution: ESD Sensitive Appropriate precautions in handling, packaging

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
