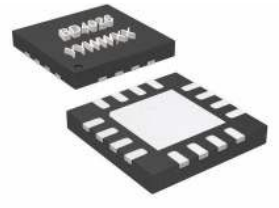
BD4026

WideBand 2-Way SMT Power Divider

600~4500MHz WCDMA, LTE & 5G

Device Features

- Typical Isolation = 25.6 dB @ 2.1GHz
- Typical Insertion Loss = 0.7 dB @ 2.1GHz
- MSL 3 moisture rating
- RoHS2-compliant 16LQFN 3x3 Plastic Package



BD4026(YYWWXX=Wafer number)

Product Description

BeRex's Divider BD4026 is designed for WCDMA, LTE band and 5G with low Insertion Loss and 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	500		4500	MHz
Test Frequency		2100		MHz
Insertion Loss[1]		0.7	2	dB
Isolation	7.3	25.6		dB
IRL(S11)		-26.6	-11.3	dB
ORL(S22/S33)		-19.5	-11.9	dB
Amplitude Balance		0.01	0.15	dB
Phase Balance		0.13	1.5	deg

2. Insertion Loss: Above 3.0dB.

Applications

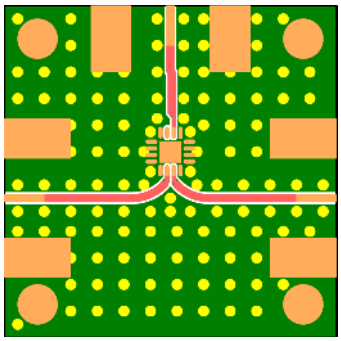
- Base station Infrastructure
- Commercial/Industrial/Military wireless system
- 5G/LTE/WCDMA Wireless Infrastructure

Absolute Maximum Ratings

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

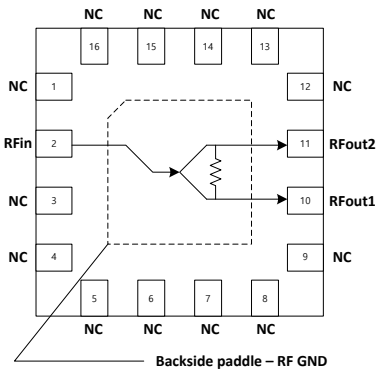
Operation of this device above any of these parameters may result in permanent damage.

Evaluation Board Drawing



*RO4003C_0.4T

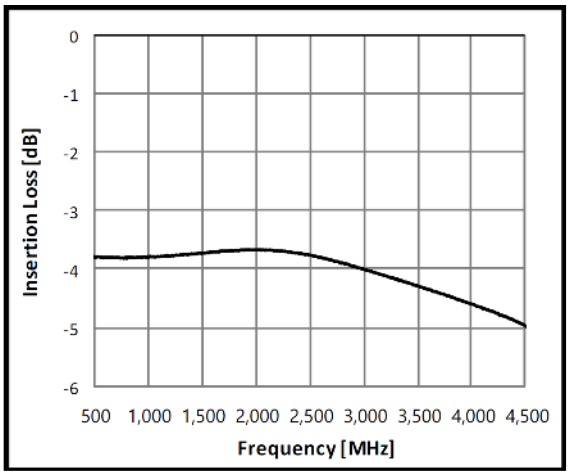
Function Block Diagram



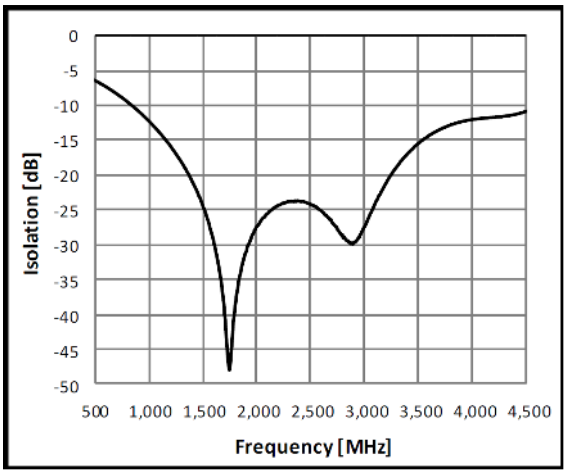
Typical Test Data

Parameters	Unit	*WCDMA, LTE & 5G*				
Frequency Range	MHz	600	1600	2100	2600	3500
Insertion Loss	dB	0.8	0.7	0.7	0.8	1.3
Isolation	dB	7.3	29.3	25.6	25.1	15.6
IRL(S11)	dB	-11.3	-16.6	-26.6	-22.2	-12.8
ORL(S22,S33)	dB	-11.9	-14.8	-19.5	-21.8	-16.8
Phase Diff.	deg	0.13	0.23	0.13	0.05	0.15
Amplitude Balance	dB	0.01	0.02	0.01	0.02	0.04

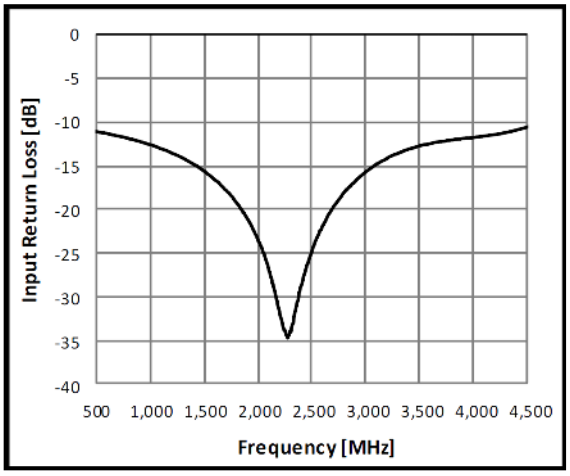
Insertion Loss vs. Frequency



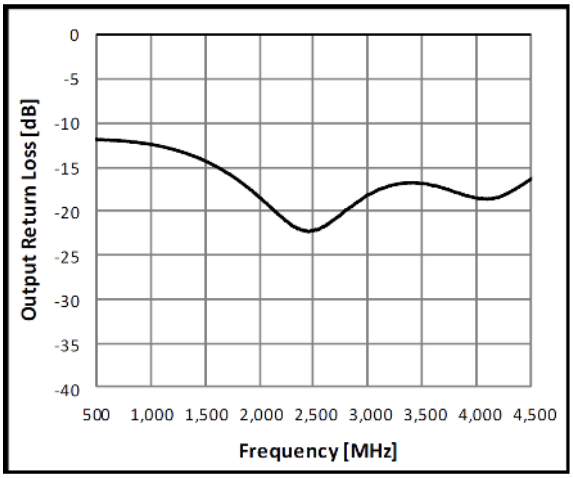
Isolation vs. Frequency



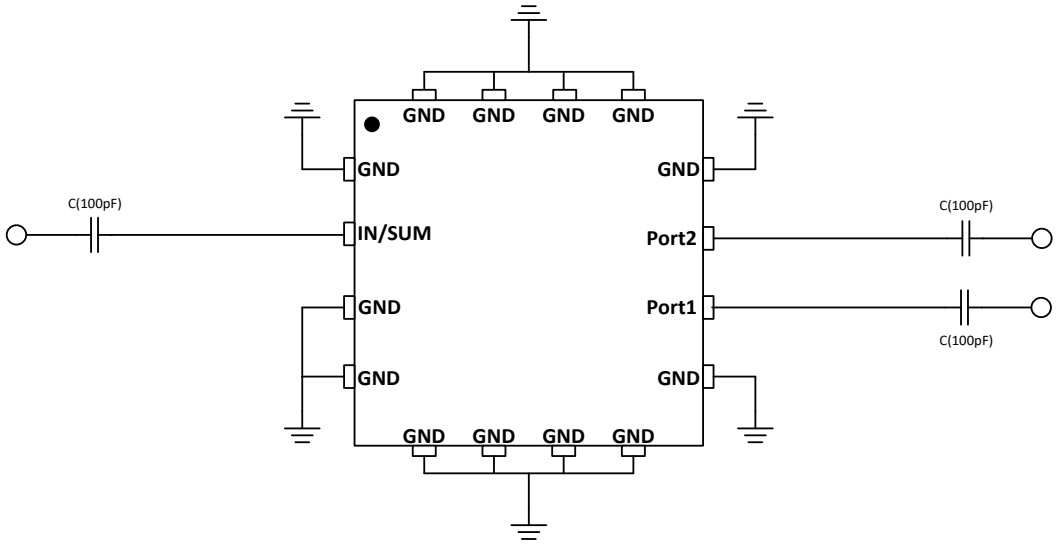
IRL vs. Frequency



ORL vs. Frequency

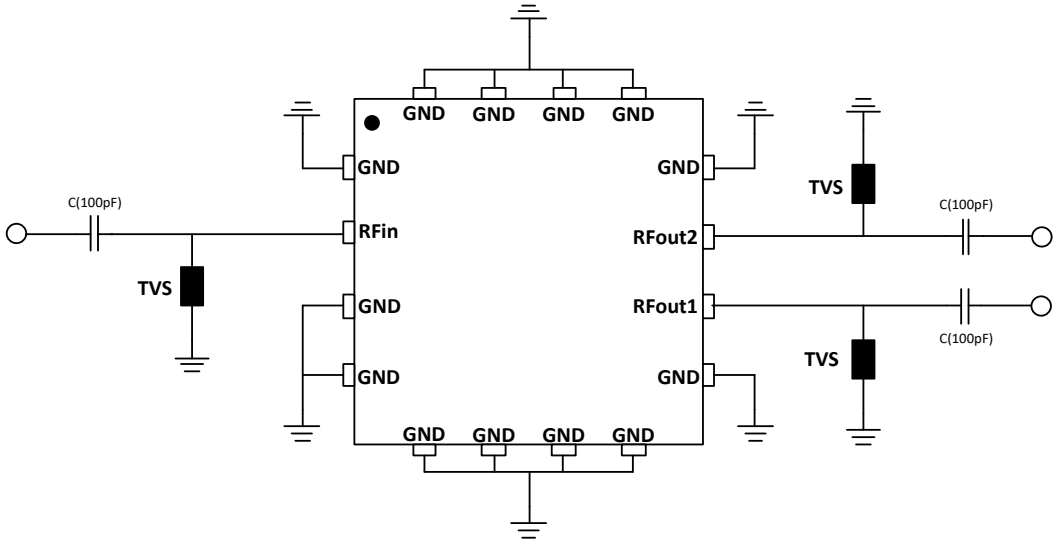


Typical Divider Application



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

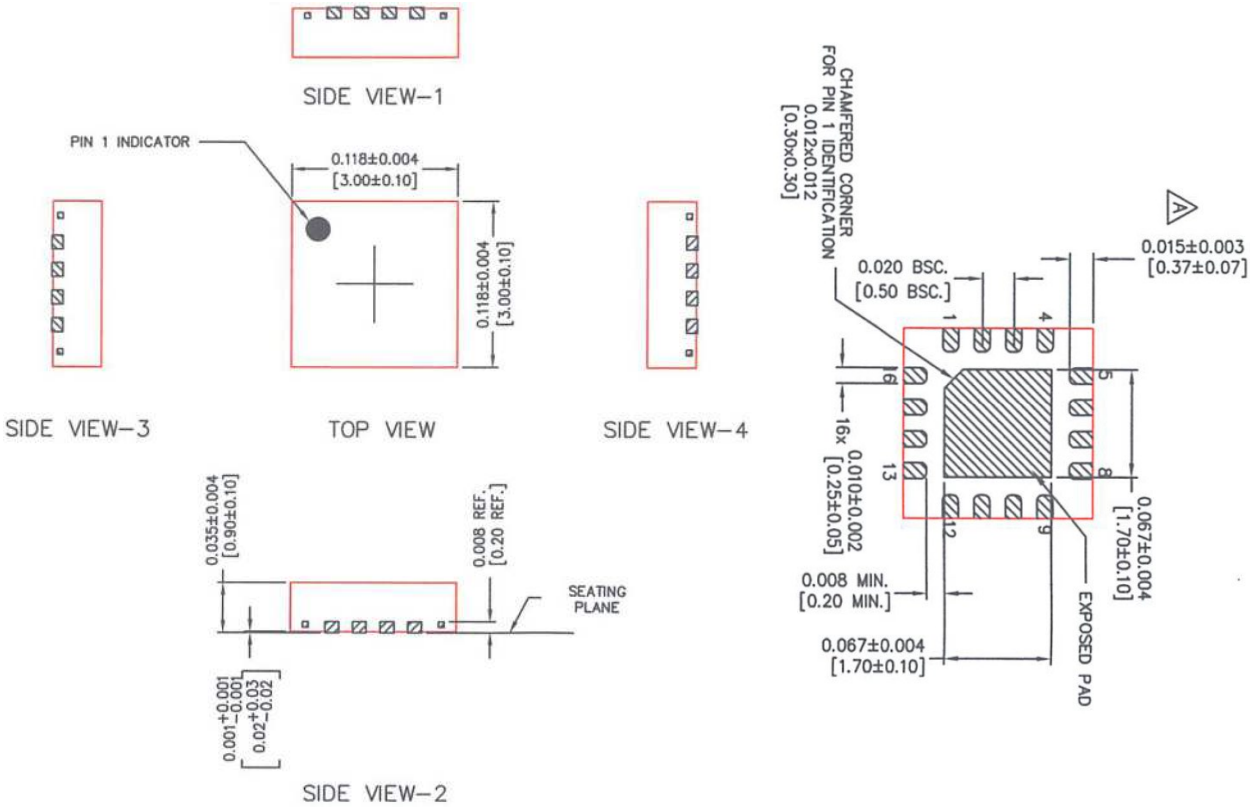
Suggested ESD Protection Application



Notes:
1. Suggest to add Capacitors of DC Blocker between Pins and external circuit to prevent DC signal entry to guarantee parts normal work.
2. Suggest to add a TVS Diode in parallel between Electrode and Capacitor of DC Blocker to provide ESD protection for the product. TVS Diode use Protek Device's PDT5039 is recommended.
3. For the RF performance of the Suggested ESD Protection Application, please refer to the ESD Protection application note.

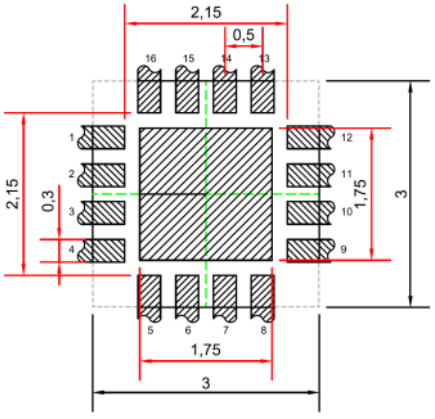
ESD Rating (with ESD TVS)
Human Body Model (HBM): ≤ 2000V in accordance with JEDEC Standard JS-001-2017

Package Outline Drawing

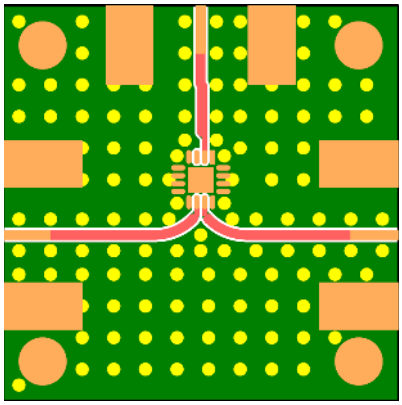


Suggested PCB Land Pattern and PAD Layout

PCB Land Pattern



PCB Mounting



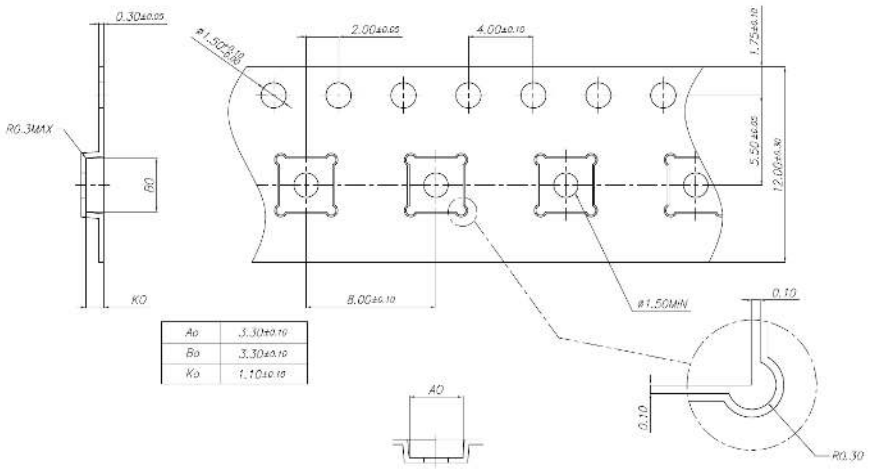
Note : All dimension _ millimeters

PCB lay out _ on BeRex website

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.)

MSL / ESD Rating

ESD Rating:	Class 0B
Value:	**Passes ≤ 125V**
Test:	Human Body Model (HBM)
Standard:	JEDEC Standard JS-001-2017
ESD Rating:	Class 2 (with ESD TVS)
Value:	**Passes ≤ 2000V**
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**