

[CLASSIFICATION] APPLICATION NOTE

[DATE] 2020.05

[REVISION NO.] REV.A

[MEASURING INSTRUMENTS]

- NA_AGILENT E5071

BD4026 ESD Protection Circuit

Application Note



Contents

RF MMIC INNOVATOR WWW.BEREX.COM1

1. DIVIER BD40263

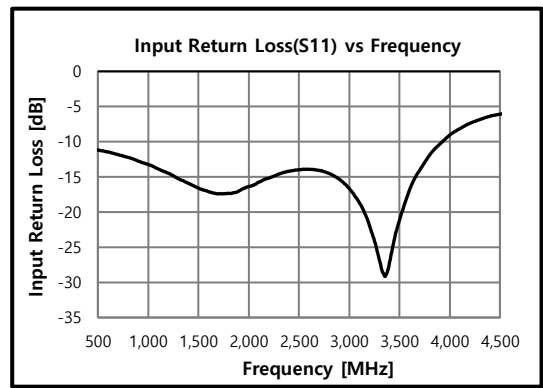
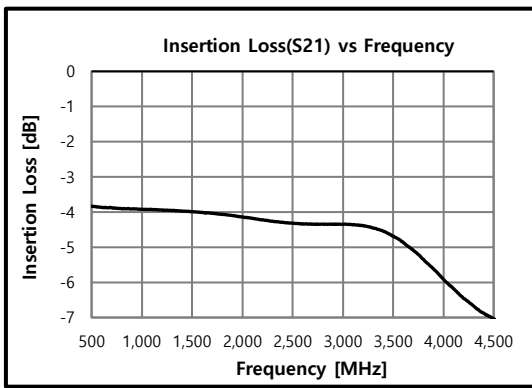
1.1 SUGGESTED ESD PROTECTION APPLICATION CIRCUIT TEST DATA3

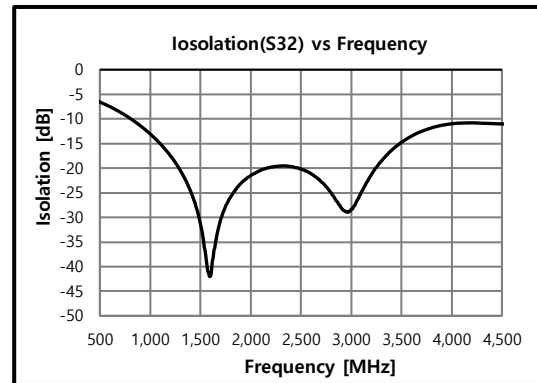
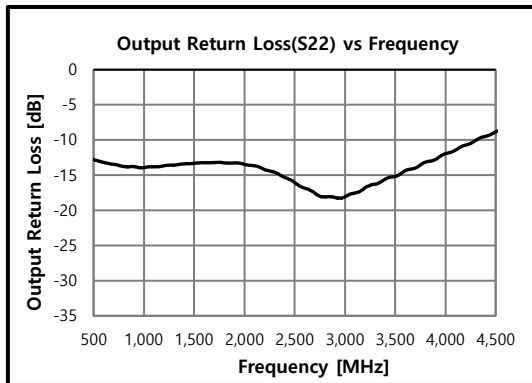
1.1 Suggested ESD Protection Application Circuit Test Data :

Test condition : Measured on BeRex E/B with ESD TV 25°C, 50ohm system

Application Circuit		BOM			Remark
		Ref	Size	Value	
		Cap	0603	100pF	
		TVS	DFN-2-0402 PKG	-	PDT5039

Parameters	Unit	WCDMA, LTE & 5G				
		600	1600	2100	2600	3500
Frequency Range	MHz	600	1600	2100	2600	3500
Insertion Loss	dB	0.9	1.0	1.2	1.3	1.7
Isolation	dB	7.5	42.0	20.4	21.0	14.8
IRL(S11)	dB	-11.5	-17.1	-15.8	-13.9	-21.2
ORL(S22,S33)	dB	-13.2	-13.2	-13.7	-16.8	-15.2
Phase Diff.	deg	0.04	0.44	0.38	0.48	0.28
Amplitude Balance	dB	0.01	0.01	0.05	0.04	0.11





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): $\leq 2000V$ in accordance with JEDEC Standard JS-001-2017