*F*ormosa *W*ireless *S*ystems corp.
http://www.tw-wireless.com
Tel: +886-3-5600768
Fax: +886-3-5600786
3F.-13, No.36, Taiyuan St., Chubei City, Hsinchu County 30265, Taiwan

DATA SHEET

Model No. : DIV50-02

Description : 100~6000MHz 2-WAY POWER DIVIDER

Date : 2011/08/29

Rev : 2

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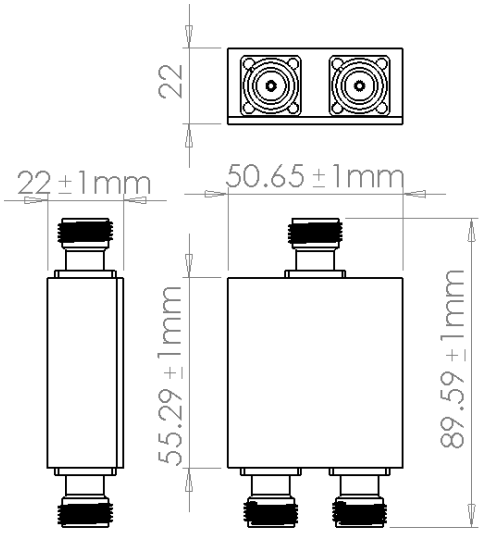
1. OVERVIEW & SPECIFICATIONS



Electrical Specifications:

Frequency Range :	100~ 6000 MHz
Insertion loss :	≤ 2.0 dB
Impedance :	50Ω ± 5Ω
VSWR :	≤ 2.0
Isolation :	≧ 20 dB
Power Handling :	50 watts
Phase unbalance	±10 degrees max

Mechanical Specifications:

Connector :	N Female
Operation Temp. :	-30℃ ~ +60℃
Material :	aluminum
Dimension (L*W*H) :	89.6*50.7*22mm
Weight	160g

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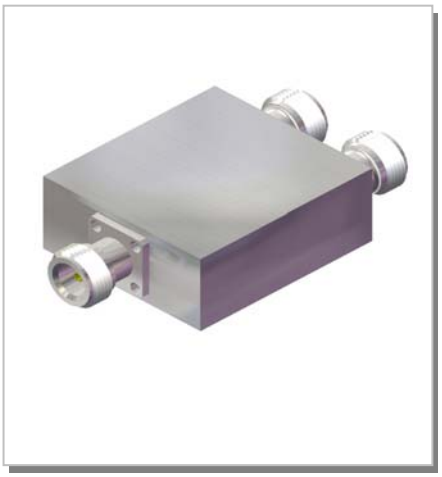
3D Illustration



2. TESTING CONDITION

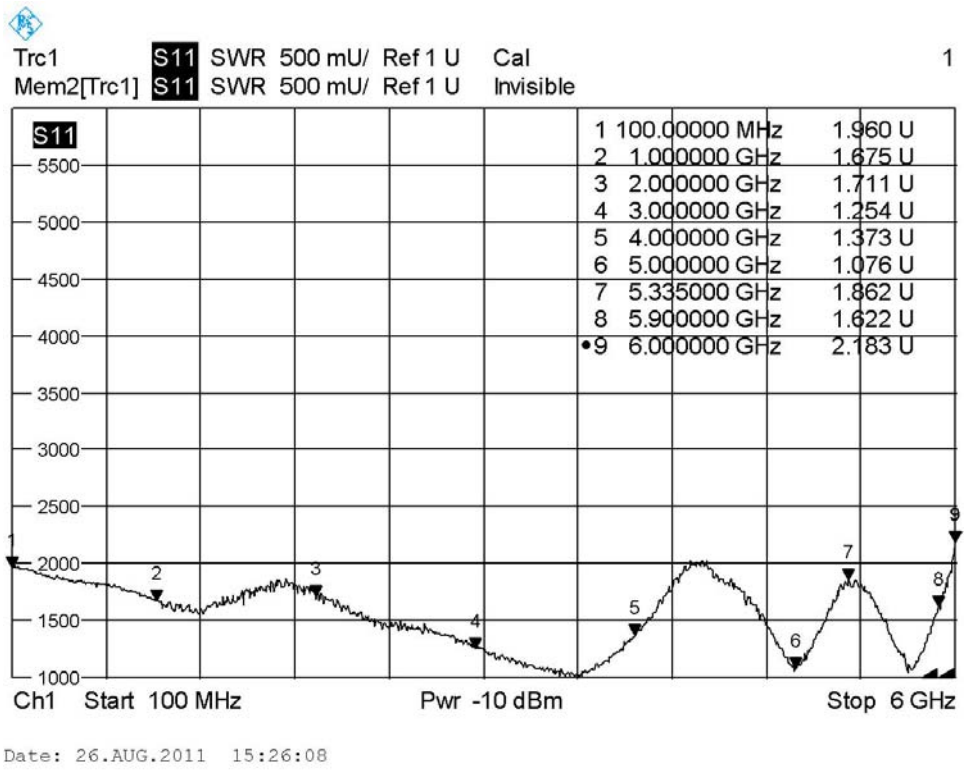
2.1 TEST SETUP

VSWR measurement (S11): Use ROHDE & SCHWARZ ZV8 Network Analyzer with Harbour RG-142 coaxial cable: 1000mm length in free space.

2.1.1 VSWR

The table as below summarizes concern about Return loss measurement according to The frequency band is based on FWS design. The detail be shown as appendix that is from ROHDE & SCHWARZ ZV8 Network Analyzer

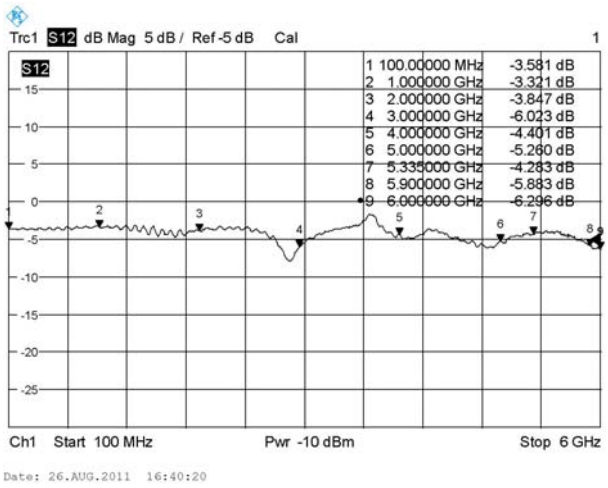
VSWR Performance						
Freq(MHz)	**1000**	**2000**	**3000**	**4000**	**5000**	**6000**
Free space	**1.67**	**1.71**	**1.25**	**1.37**	**1.07**	**2.18**



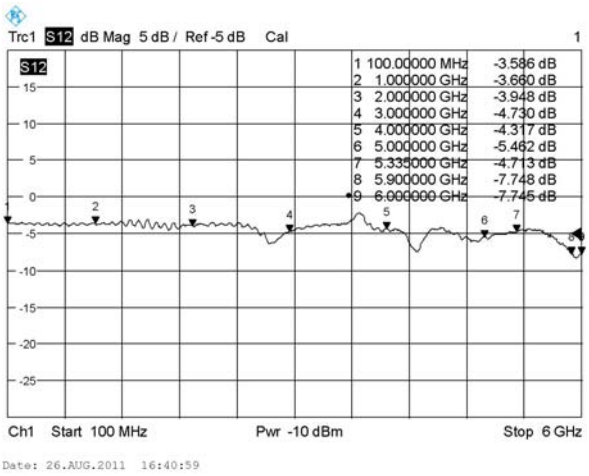
2.1.2 INSERTION LOSS MEASUREMENT

The insertion loss of the power divider was measured by ROHDE & SCHWARZ ZV8 Network Analyzer. The way to measured insertion loss is connect input and output port. The other ports mount with 50 ohm matches respectively. The table as below compared with S_{12} and S_{13} insertion loss measurement according to The frequency band is based on FWS design. The table as below have already reduced 3 dB of measurement.

Insertion loss Performance						
Freq(MHz)	**1000**	**2000**	**3000**	**4000**	**5000**	**6000**
Insertion(S_{21}) dB	**-3.3**	**-3.8**	**-6.0**	**-4.4**	**-5.3**	**-6.3**
Freq(MHz)	**1000**	**2000**	**3000**	**4000**	**5000**	**6000**
Insertion(S_{31}) dB	**-3.7**	**-3.9**	**-4.7**	**-4.3**	**-5.4**	**-7.7**



S21



S31

2.1.3 PHASE MEASUREMENT

The method to measured phase variety of power divider is connect input and output port with ROHDE & SCHWARZ ZV8 Network Analyzer. Other ports mounted 50 ohm matches respectively. The table as below compared with S_{12} and S_{13} phase measurement according to The frequency band is based on FWS design.

Performance						
Freq(MHz)	**1000**	**2000**	**3000**	**4000**	**5000**	**6000**
Degree(S_{21})	**130.0°**	**-111.4°**	**5.2°**	**148.2°**	**-92.7°**	**35.6°**