



TEST REPORT

ON

500 MHz TO 2.5 GHz 2 WAY POWER DIVIDER

PMI MODEL No:
APD-2-12 OPTION FD, 500M205

Series Number: PM7081001

DESIGNED
BY
YU RONG

TESTED
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ISO9001 : 2000 CERTIFIED



TABLE OF CONTENTS

• Key Features	3
• Photograph	3
• Specifications	3
• Environmental Ratings	4
• Product Feature	5
• Outline Drawing	6
• Functional Block Diagram	7
• Insertion Loss	8
• Return Loss	9
• Isolation	10
• Amplitude Balance	11
• Phase Balance	12
• Test Data	
Series No: PM7081001	13
Series No: PM7081002	14



500 MHz To 2.5 GHz 2 WAY POWER DIVIDER

KEY FEATURES:

- 500 MHz TO 2.5 GHz Frequency Range
- Insertion Loss: 1.2 dB max.
- Isolation: 10 dB min.
- Amplitude Balance: ± 0.1 dB max.
- Phase Balance: $\pm 1.5^\circ$
- Size: 1.08" L x 1.18" W x 0.47" H



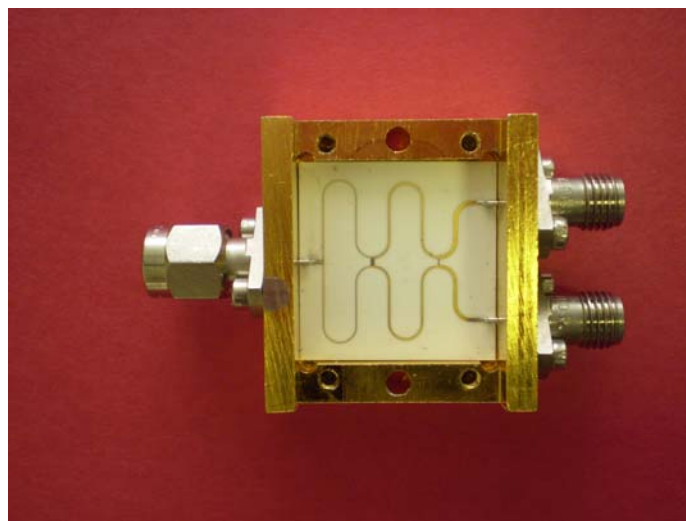
SPECIFICATIONS:

FREQUENCY RANGE	500 MHz TO 2.5 GHz
■ INSERTION LOSS	1.2 dB max.
■ VSWR INPUT	1.9:1 max
■ VSWR OUTPUT	1.9:1 max
■ ISOLATION	10 dB MINIMUM
■ AMPLITUDE BALANCE	+/-0.1 dB
■ PHASE BALANCE	+/-1.5 degrees
■ AVERAGE POWER INTO LOAD VSWR:	1.2:1 25 WATTS 2.0:1 7.5 WATTS 00:1 0.75 WATTS
■ SIZE	1.08"(L) X 1.18"(W) X 0.47(H)"



ENVIRONMENTAL RATINGS:

Temperature:	-55 °C to +85 °C Operating
	-65 °C to +125 °C Non-Operating
Humidity:	MIL-STD-202F, Method 103B Cond. B
Shock:	MIL-STD-202F, Method 213B Cond. B
Vibration:	MIL-STD-202F, Method 204D Cond. B
Altitude:	MIL-STD-202F, Method 105C Cond. B
Temperature Cycle:	MIL-STD-202F, Method 107D Cond. A



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PRODUCT FEATURE

REVISIONS 1 - ORIGINAL RELEASE JOB# P701002XPE 8/17/07	DATE 8/17/07	APPROVAL 	<p>DESCRIPTION</p> <p>PMI MODEL APD-2-12 OPTION FD IS A TWO WAY POWER DIVIDER FEATURING HIGH ISOLATION, LOW INSERTION LOSS, AND LOW VSWR. IT IS DESIGNED FOR NARROWBAND USE AND HIGH RELIABILITY.</p>
<p>SPECIFICATIONS</p> <ul style="list-style-type: none"> ● FREQUENCY RANGE: 1 TO 2 GHz ● INSERTION LOSS: 0.75 dB MAXIMUM ● VSWR: 1.4:1 MAXIMUM ● ISOLATION: 22 dB MINIMUM ● AMPLITUDE BALANCE: ±0.1 dB ● PHASE BALANCE: ±1° ● AVERAGE POWER INTO LOAD VSWR: <ul style="list-style-type: none"> 1.2:1 25 WATTS 2.0:1 7.5 WATTS ∞:1 0.75 WATTS ● SIZE: 1.08 (L) x 1.18" (W) x 0.47" (H) 			<p>ENVIRONMENTAL RATINGS:</p> <ul style="list-style-type: none"> ● TEMPERATURE: -55°C TO +85°C (OPERATING) -85°C TO +125°C (STORAGE) ● HUMIDITY: MIL-STD-202F, METHOD 103B COND. B ● SHOCK: MIL-STD-202F, METHOD 213B COND. B ● VIBRATION: MIL-STD-202F, METHOD 204D COND. B ● ALTITUDE: MIL-STD-202F, METHOD 105C COND. B ● TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D COND. A
<p>OPTIONS</p> <ul style="list-style-type: none"> ● 500M205 			<p>PLANAR MONOLITHICS INDUSTRIES, INC.</p> <p>7311-G GROVE ROAD FREDERICK, MARYLAND 21704 USA TEL: 301-631-1579 FAX: 301-662-2029 WEBSITE: www.planarmonolithics.com E-MAIL: sales@planarmonolithics.com ISO 9001:2000 CERTIFIED</p>
<p>ALL DIMENSIONS ARE IN INCHES TOLERANCES: ±0.010 ±0.005 ±0.010</p>			<p>PRODUCT FEATURE</p> <p>APD-2-12 OPTION FD</p> <p>DATE FROM IN: 8/17/07 DATE TO: 8/17/07</p> <p>SCALE: N/S</p> <p>REV: 1 OF 3</p>



FUNCTIONAL SCHEMATIC

DATE	-	DESCRIPTION	ORIGINAL RELEASE JOB# P701002XFE	DATE	7/17/07
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DESCRIPTION
 PMI MODEL APD-2-12 OPTION FD IS A TWO WAY POWER DIVIDER FEATURING HIGH ISOLATION, LOW INSERTION LOSS, AND LOW VSWR. IT IS DESIGNED FOR NARROWBAND USE AND HIGH RELIABILITY.

FUNCTIONAL BLOCK DIAGRAM

FUNCTIONAL BLOCK DIAGRAM

PLANAR MONOLITHICS INDUSTRIES, INC.
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APPROVALS	DATE	TITLE FUNCTIONAL BLOCK DIAGRAM			
SWAN	7/17/07	APD-2-12			
SHAW		OPTION FD			
FILED		DATE FROM IN.	DATE NO.	SCALE	NO.
		A, 07XZ8	100-A017-000		
				3 OF 3	

CONFIDENTIAL AND PROPRIETARY



Insertion Loss



(a) Ports J1 and J2 with Port J3 terminated



(b) Ports J1 and J3 with Port J2 terminated



Return Loss



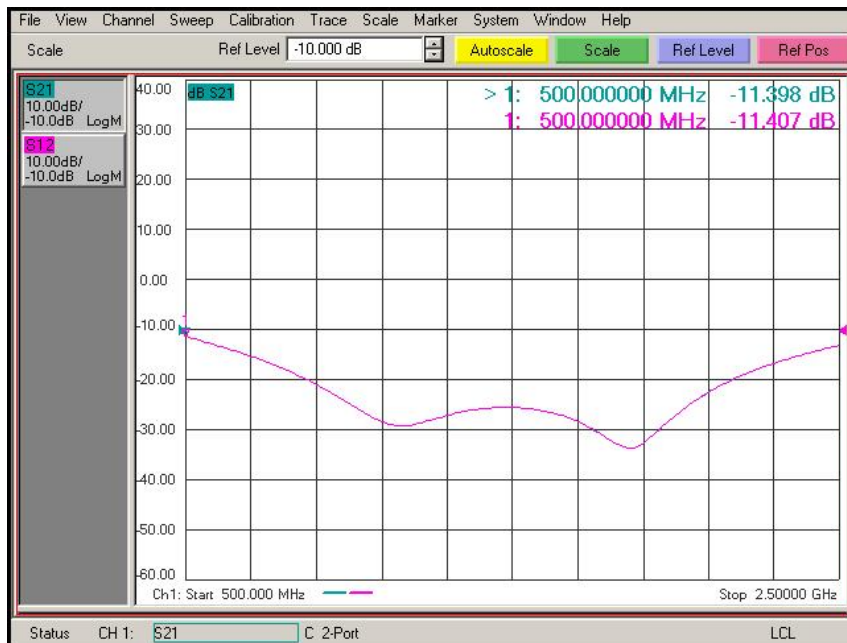
(a) Ports J1 and J2 with Port J3 terminated



(b) Ports J1 and J3 with Port J2 terminated

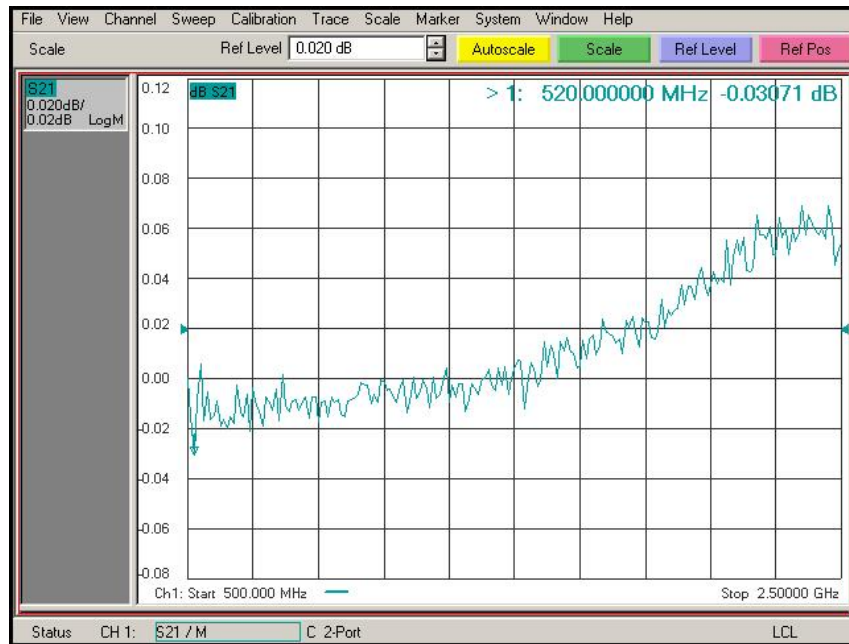


Isolations between Ports 2 and 3

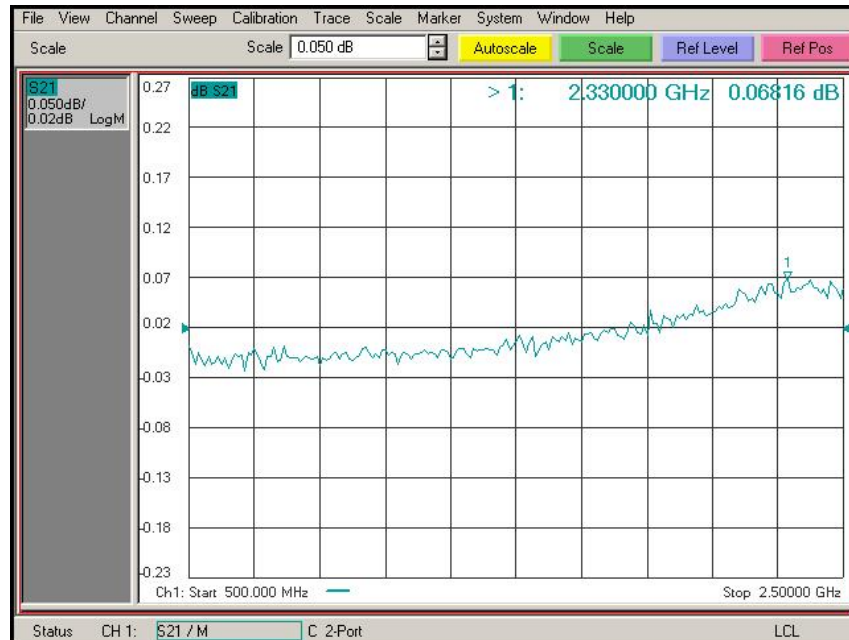




Amplitude Balance: Ports 2 and 3



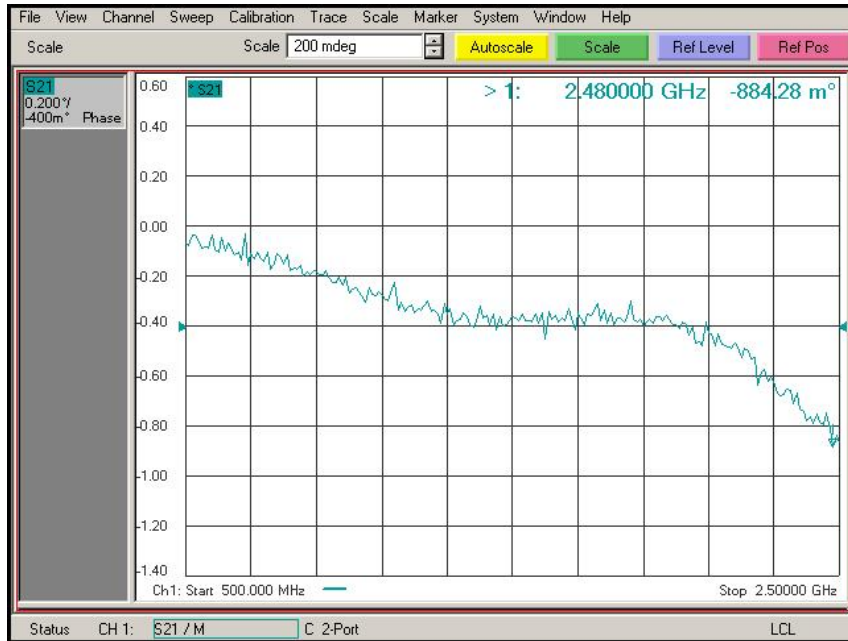
(a) 0.01 dB Scale



(b) 0.05 dB Scale



Phase Balance: Ports 2 and 3



(a) 0.05 Degree Scale



(b) 1.0 Degree Scale



FORM: 006-PD-DTA



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**SUMMARY TEST DATA ON
 POWER DIVIDER**

CUSTOMER: SIMA PERU JOB NO: P701002XPE
 MODEL NO: APD-2-12 TESTED BY: RA
 OPTION NO: FD, 500M205 DATE: 7/18/07
 SERIAL NO: PM7081001

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	Q/A
1	FREQUENCY	1 TO 2 GHz	500 MHz TO 2.5 GHz	
2	INSERTION LOSS	1.2 dB MAXIMUM	J1-J2: 0.93 dB	
			J1-J3: 0.88 dB	
3	ISOLATION (J2 TO J3)	10 dB MINIMUM	11.3 dB	
4	VSWR INPUT	1.9:1 MAXIMUM	1.66:1	
5	VSWR OUTPUT	1.9:1 MAXIMUM	J2: 1.50:1	
			J3: 1.44:1	
6	PHASE BALANCE (J2 TO J3)	±1.5° MAXIMUM	0.87°	
7	AMPLITUDE BALANCE (J2 TO J3)	±0.1dB MAXIMUM	0.02 dB	

QA/QC APPROVAL: DATED: 8/29/07



FORM: 006-PD-DTA



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**SUMMARY TEST DATA ON
 POWER DIVIDER**

CUSTOMER: SIMA PERU
 MODEL NO: APD-2-12
 OPTION NO: FD, 500M205
 SERIAL NO: PM7081002

JOB NO: P701002XPE
 TESTED BY: RA
 DATE: 7/18/07

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	Q/A
1	FREQUENCY	1 TO 2 GHz	500 MHz TO 2.5 GHz	
2	INSERTION LOSS	1.2 dB MAXIMUM	J1-J2: 0.99 dB	
			J1-J3: 0.93 dB	
3	ISOLATION (J2 TO J3)	10 dB MINIMUM	11.3 dB	
4	VSWR INPUT	1.9:1 MAXIMUM	1.73:1	
5	VSWR OUTPUT	1.9:1 MAXIMUM	J2: 1.50:1	
			J3: 1.46:1	
6	PHASE BALANCE (J2 TO J3)	±1.5° MAXIMUM	1.47°	
7	AMPLITUDE BALANCE (J2 TO J3)	±0.1dB MAXIMUM	0.06 dB	

QA/QC APPROVAL: _____  _____ DATED: 8/20/07