



Planar Monolithics Industries, INC.

SUMMARY TEST DATA ON DIRECTIONAL DETECTOR

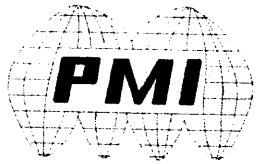
Customer :]
Job No :]
Model No : DD-20-23
Serial No : PM112514

Tested By : Kevin Mason
Temperature : +25°C
Date : 12/13/01

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE			REMARKS QA/QC
1	Frequency	2.5-3.0 GHz	pass			✓
2	Insertion Loss	0.25dB max.	0.60 dB			✓
3	Insertion Loss Variation Over Freq.	0.2dB max.	0.2 dB			✓
4	VSWR	1.25:1 max.	Pass (see plot)			✓
5	Max. Input Power	3 Watts	pass			✓
6	Supply Voltage	±15VDC	ok			✓
7	Impedance	50 Ohms	50 Ohms			✓
8	Min. Directivity	20dB min.	pass			✓
9	Output Voltage Variation With Freq. and Temp.	±0.2dB max.	pass			✓
10	Detector Output Voltage: <u>Power In</u>	<u>Voltage Output</u>	2.5 GHz (mV)	2.75 GHz (mV)	3.0 GHz (mV)	
	+26dBm	150-220 mV	153.75	161.59	166.80	✓
	+23dBm	94-130 mV	101.05	105.48	110.96	✓
	+20dBm	58-83 mV	67.30	69.27	72.76	✓
	+16dBm	31-46mV	39.73	40.35	42.87	✓
11	Video BW	10 MHz min.	pass			✓

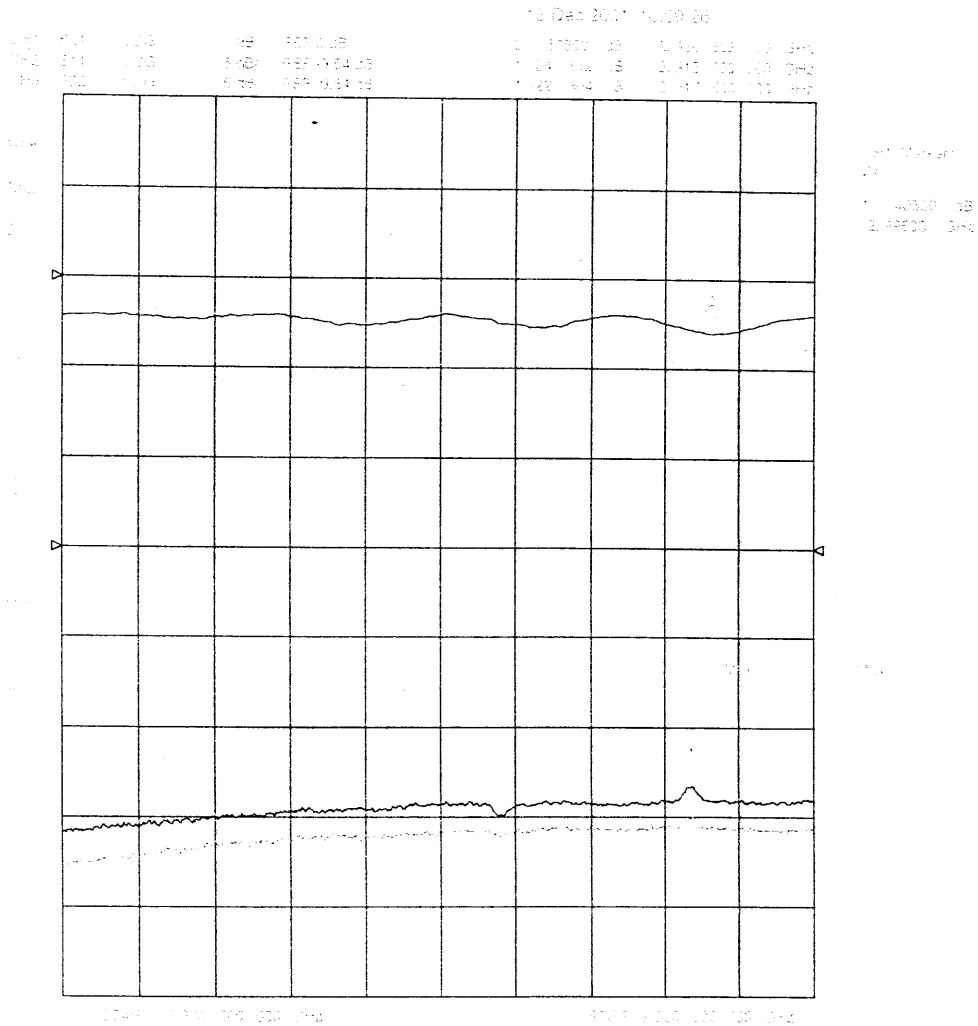
Production Manager Approval: _____ Date: _____

QA/QC Approval: *[Signature]* _____ Date: 12/14/01



Insertion Loss and VSWR Plot for Directional Detector

Serial# PM112514





Planar Monolithics Industries, INC.

SUMMARY TEST DATA ON DIRECTIONAL DETECTOR

Customer :
 Job No :
 Model No : DD-20-23
 Serial No : PM112515

Tested By : Kevin Mason
 Temperature : +25°C
 Date : 12/13/01

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE			REMARKS QA/QC
1	Frequency	2.5-3.0 GHz	pass			✓
2	Insertion Loss	0.25dB max.	0.62 dB			✓
3	Insertion Loss Variation Over Freq.	0.2dB max.	0.18 dB			✓
4	VSWR	1.25:1 max.	Pass (see plot)			✓
5	Max. Input Power	3 Watts	pass			✓
6	Supply Voltage	±15VDC	ok			✓
7	Impedance	50 Ohms	50 Ohms			✓
8	Min. Directivity	20dB min.	pass			✓
9	Output Voltage Variation With Freq. and Temp.	±0.2dB max.	pass			✓
10	Detector Output Voltage:		2.5 GHz (mV)	2.75 GHz (mV)	3.0 GHz (mV)	
	<u>Power In</u>	<u>Voltage Output</u>				
	+26dBm	150-220 mV	151.19	153.49	155.19	✓
	+23dBm	94-130 mV	94.63	99.11	100.29	✓
	+20dBm	58-83 mV	60.40	62.78	64.39	✓
	+16dBm	31-46mV	31.30	33.14	34.35	✓
11	Video BW	10 MHz min.	pass			✓

Production Manager Approval: _____ Date: _____

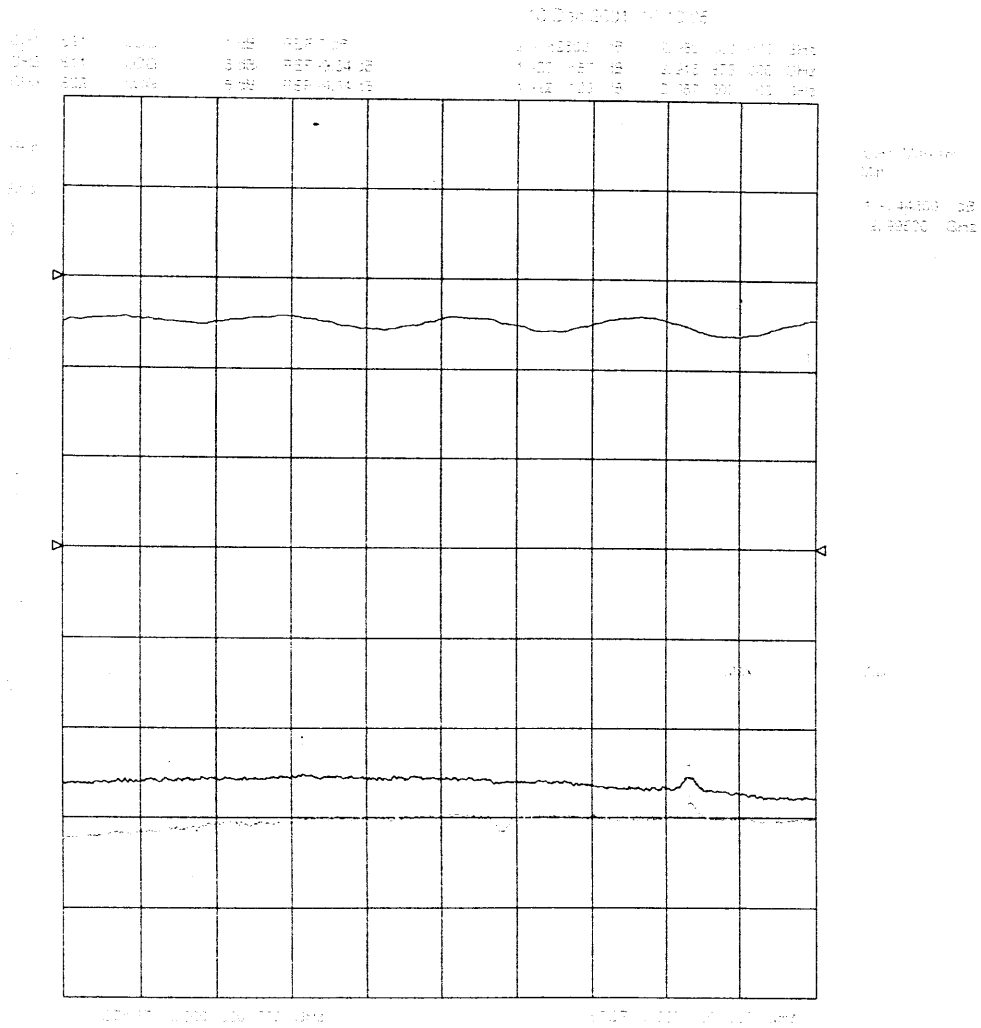
QA/QC Approval: 705 _____ Date: 12/14/01

7311-G Grove Road Frederick, MD 21704 USA Phone: (301)631-1579 Fax: (301)662-2029
 email: planarsales@aol.com



Insertion Loss and VSWR Plot for Directional Detector

Serial# PM112515





Planar Monolithics Industries, INC.

SUMMARY TEST DATA ON DIRECTIONAL DETECTOR

Customer
 Job No
 Model No : DD-20-23
 Serial No : PM112516

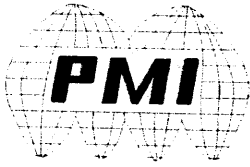
Tested By : Kevin Mason
 Temperature : +25°C
 Date : 12/13/01

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE			REMARKS QA/QC
			2.5 GHz (mV)	2.75 GHz (mV)	3.0 GHz (mV)	
1	Frequency	2.5-3.0 GHz	pass			✓
2	Insertion Loss	0.25dB max.	0.62 dB			✓
3	Insertion Loss Variation Over Freq.	0.2dB max.	0.21 dB			✓
4	VSWR	1.25:1 max.	Pass (see plot)			✓
5	Max. Input Power	3 Watts	pass			✓
6	Supply Voltage	±15VDC	ok			✓
7	Impedance	50 Ohms	50 Ohms			✓
8	Min. Directivity	20dB min.	pass			✓
9	Output Voltage Variation With Freq. and Temp.	±0.2dB max.	pass			✓
10	Detector Output Voltage: <u>Power In</u>	<u>Voltage Output</u>				
	+26dBm	150-220 mV	151.31	155.59	162.59	✓
	+23dBm	94-130 mV	95.28	97.95	102.53	✓
	+20dBm	58-83 mV	58.30	59.25	62.81	✓
	+16dBm	31-46mV	31.81	31.01	31.06	✓
11	Video BW	10 MHz min.	pass			✓

Production Manager Approval: _____ Date: _____

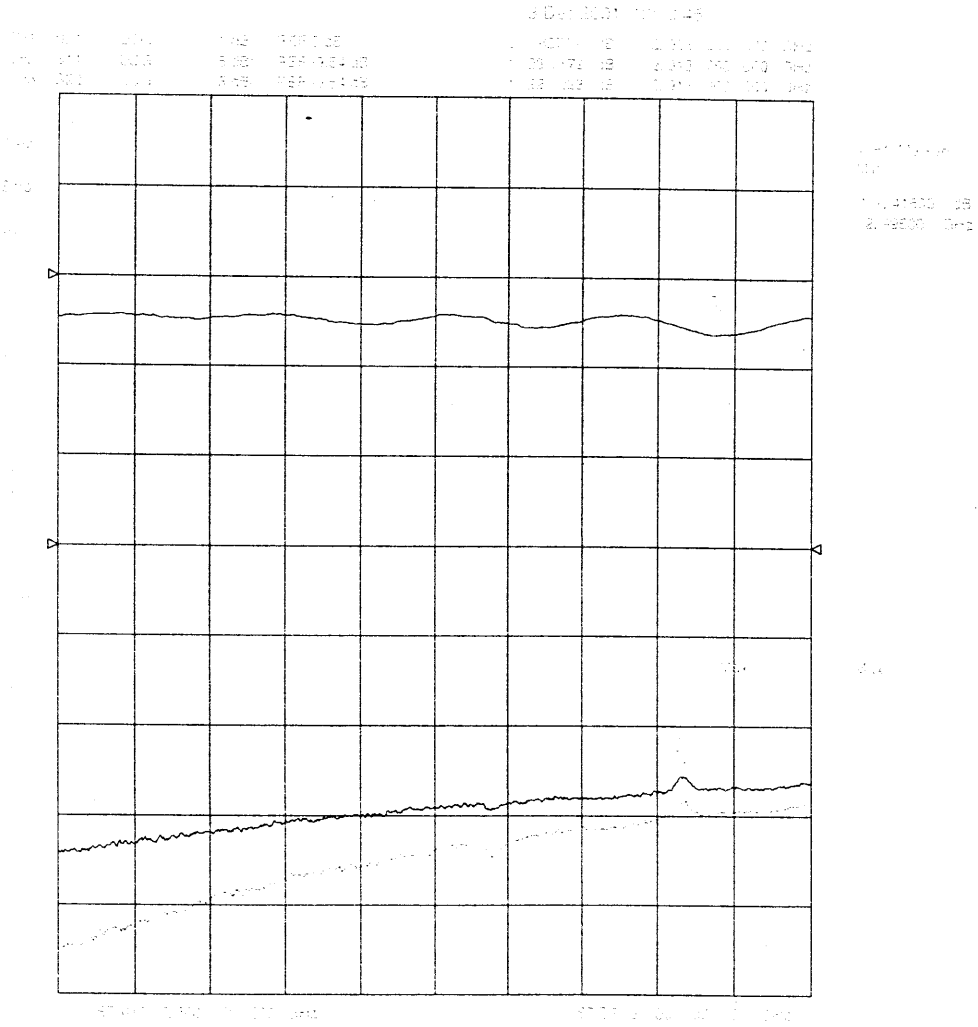
QA/QC Approval: ms Date: 12/14/01

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Insertion Loss and VSWR Plot for Directional Detector

Serial# PM112516





Planar Monolithics Industries, INC.

SUMMARY TEST DATA ON DIRECTIONAL DETECTOR

Customer :
 Job No :
 Model No : DD-20-23
 Serial No : PM112517

Tested By : Kevin Mason
 Temperature : +25°C
 Date : 12/13/01

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE			REMARKS QA/QC
1	Frequency	2.5-3.0 GHz	pass			OK
2	Insertion Loss	0.25dB max.	0.61 dB			
3	Insertion Loss Variation Over Freq.	0.2dB max.	0.21 dB			
4	VSWR	1.25:1 max.	Pass (see plot)			OK
5	Max. Input Power	3 Watts	pass			OK
6	Supply Voltage	±15VDC	ok			OK
7	Impedance	50 Ohms	50 Ohms			OK
8	Min. Directivity	20dB min.	pass			OK
9	Output Voltage Variation With Freq. and Temp.	±0.2dB max.	pass			OK
10	Detector Output Voltage:		2.5 GHz (mV)	2.75 GHz (mV)	3.0 GHz (mV)	
	<u>Power In</u>	<u>Voltage Output</u>				
	+26dBm	150-220 mV	150.08	150.18	158.35	OK
	+23dBm	94-130 mV	94.01	95.84	104.03	OK
	+20dBm	58-83 mV	59.14	62.68	67.61	OK
	+16dBm	31-46mV	33.70	36.02	38.96	OK
11	Video BW	10 MHz min.	pass			OK

Production Manager Approval: _____ Date: 12/13/01

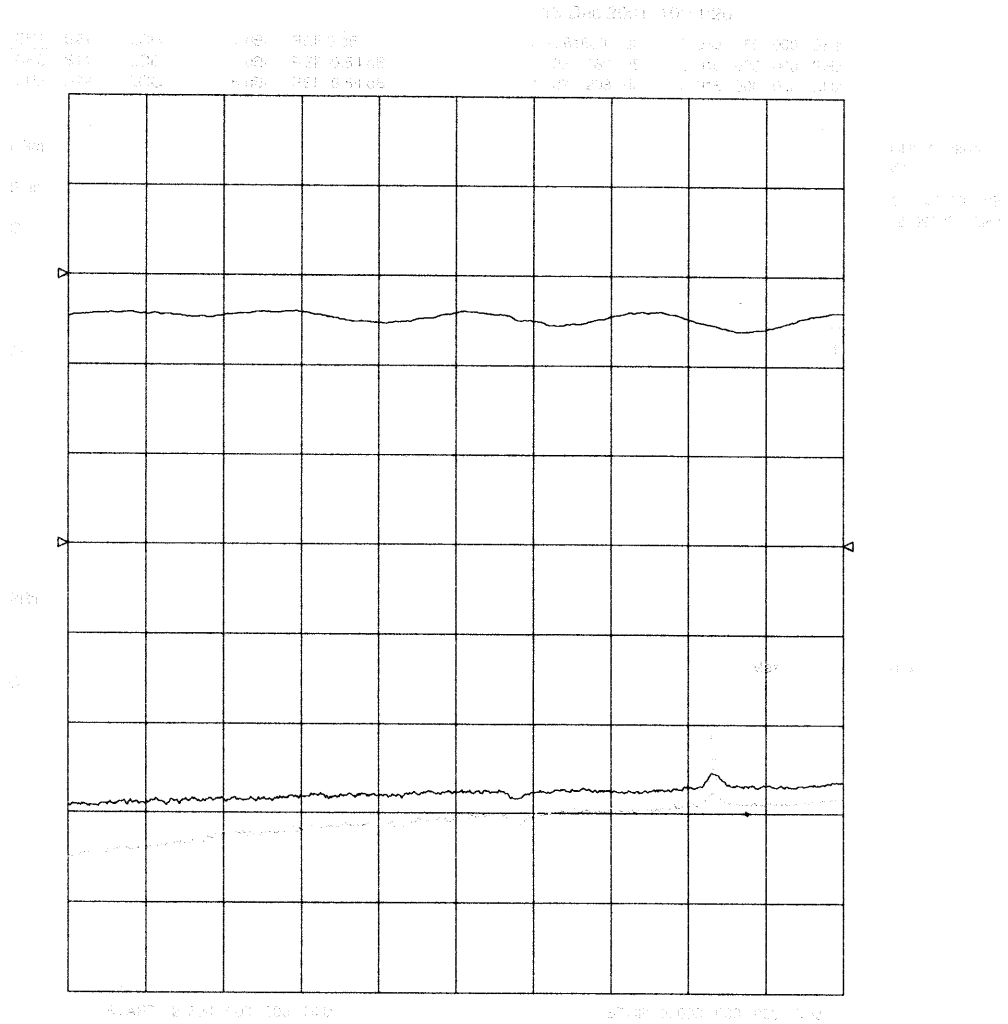
QA/QC Approval: _____ Date: 12/14/01

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Insertion Loss and VSWR Plot for Directional Detector

Serial# PM112517





Planar Monolithics Industries, INC.

SUMMARY TEST DATA ON DIRECTIONAL DETECTOR

Customer : _____
 Job No : _____
 Model No : DD-20-23
 Serial No : PM112518

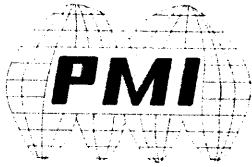
Tested By : Kevin Mason
 Temperature : +25°C
 Date : 12/13/01

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE			REMARKS QA/QC
			2.5 GHz (mV)	2.75 GHz (mV)	3.0 GHz (mV)	
1	Frequency	2.5-3.0 GHz	pass			✓
2	Insertion Loss	0.25dB max.	0.69 dB			✓
3	Insertion Loss Variation Over Freq.	0.2dB max.	0.28 dB			✓
4	VSWR	1.25:1 max.	Pass (see plot)			✓
5	Max. Input Power	3 Watts	pass			✓
6	Supply Voltage	±15VDC	ok			✓
7	Impedance	50 Ohms	50 Ohms			✓
8	Min. Directivity	20dB min.	pass			✓
9	Output Voltage Variation With Freq. and Temp.	±0.2dB max.	pass			✓
10	Detector Output Voltage:	<u>Voltage Output</u>				
	<u>Power In</u>					
	+26dBm	150-220 mV	150.50	156.08	152.66	✓
	+23dBm	94-130 mV	95.51	99.90	94.16	✓
	+20dBm	58-83 mV	61.13	62.64	59.84	✓
	+16dBm	31-46mV	33.77	32.01	30.92	✓
11	Video BW	10 MHz min.	pass			✓

Production Manager Approval: _____ Date: _____

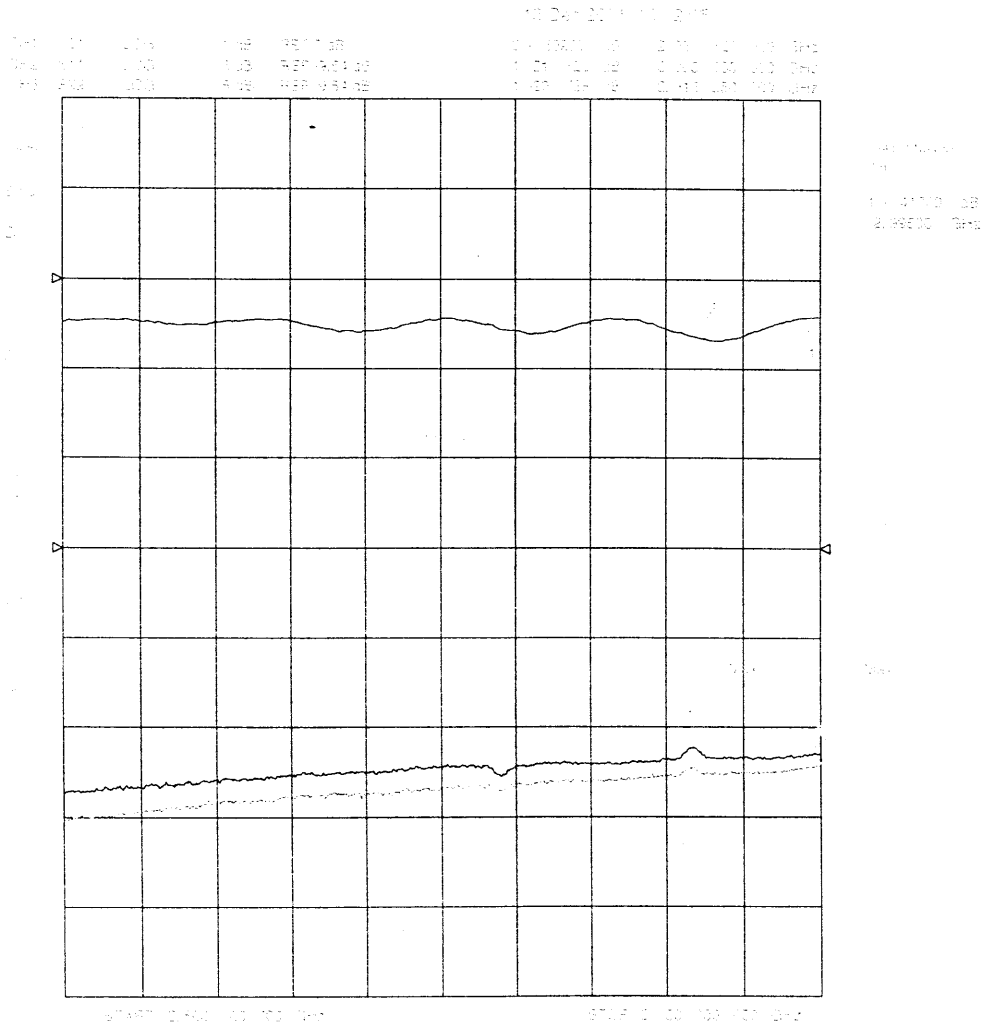
QA/QC Approval: ms Date: 12/24/01

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 email: planarsales@aol.com



Insertion Loss and VSWR Plot for Directional Detector

Serial# PM112518





Planar Monolithics Industries, INC.

SUMMARY TEST DATA ON DIRECTIONAL DETECTOR

Customer Job No _____
 Model No : DD-20-23
 Serial No : PM112519

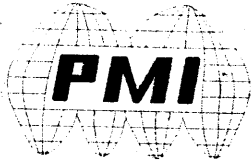
Tested By : Kevin Mason
 Temperature : +25°C
 Date : 12/13/01

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE			REMARKS QA/QC
			2.5 GHz (mV)	2.75 GHz (mV)	3.0 GHz (mV)	
1	Frequency	2.5-3.0 GHz	pass			✓
2	Insertion Loss	0.25dB max.	0.60 dB			✓
3	Insertion Loss Variation Over Freq.	0.2dB max.	0.21 dB			✓
4	VSWR	1.25:1 max.	Pass (see plot)			✓
5	Max. Input Power	3 Watts	pass			✓
6	Supply Voltage	±15VDC	ok			✓
7	Impedance	50 Ohms	50 Ohms			✓
8	Min. Directivity	20dB min.	pass			✓
9	Output Voltage Variation With Freq. and Temp.	±0.2dB max.	pass			✓
10	Detector Output Voltage:	<u>Voltage Output</u>				
	<u>Power In</u>					
	+26dBm	150-220 mV	151.10	152.18	158.01	✓
	+23dBm	94-130 mV	97.98	101.66	106.92	✓
	+20dBm	58-83 mV	67.02	69.22	72.93	✓
+16dBm	31-46mV	41.75	42.61	44.83	✓	
11	Video BW	10 MHz min.	pass			✓

Production Manager Approval: _____ Date: _____

QA/QC Approval: jms Date: 12/14/01

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Insertion Loss and VSWR Plot for Directional Detector

Serial# PM112519

