



**TEST REPORT**  
**ON**  
**2.1 TO 3 GHz (AND FROM 0.5 TO 18 GHz)**  
**SINGLE POLE DOUBLE THROW**  
**ABSORPTIVE / NON-REFLECTIVE SWITCH MODULE**

**AMC MODEL No:**  
**SWN-2013-2DT-407273-D**  
**OPTION CE, TC**

Serial Numbers: 2MS501002 THRU 2MS501006

DESIGNED  
BY  
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TESTED  
BY  
P. Kuhn

REPORTED  
BY  
E. Elder

**April 15, 2005**

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**ISO9001 : 2000 CERTIFIED**

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## SINGLE POLE DOUBLE THROW ABSORPTIVE / NON-REFLECTIVE SWITCH MODULE AMC MODEL No: SWN-2013-2DT-407273-D OPTION CE, TC

### FEATURES:

- **2.1 TO 3 GHz FREQUENCY RANGE**
- **80 dB MINIMUM HIGH ISOLATION**
- **1.4 dB MAXIMUM LOW INSERTION LOSS**



### SPECIFICATIONS:

- |                                |   |
|--------------------------------|---|
| ● FREQUENCY                    | : 2.1 TO 3 GHz  |
| ● INSERTION LOSS               | : 1.4 dB MAXIMUM  |
| ● ISOLATION                    | : 80 dB MINIMUM   |
| ● VSWR                         | : 2.1 – 2.2 GHz: 1.6:1<br>: 2.2 – 2.3 GHz: 1.5:1<br>: 2.3 – 2.8 GHz: 1.35:1<br>: 2.8 – 2.9 GHz: 1.5:1<br>: 2.0 – 3.0 GHz: 1.6:1 |
| ● SWITCHING SPEED              | : 500 nS MAXIMUM  |
| ● POWER INPUT                  | : (CW) +20 dBm NOMINAL, ALL PORTS   |
| ● POWER INPUT (WITHOUT DAMAGE) | : +30 dBm CW  |
| ● CONTROL                      | : TTL LOGIC “0” = J1-J2 IS ON<br>: TTL LOGIC “1” = J1-J3 IS ON  |
| ● POWER SUPPLY                 | : +5V @ 100 mA MAXIMUM<br>: -15V @ 50 mA MAXIMUM  |
| ● CONNECTORS                   | : SMA FEMALE  |
| ● SIZE                         | : 1.50” (L) x 1.50” (W) x 1.00” (H)   |



**PRODUCT FEATURE**

<b>REV. NO.</b>	<b>DESCRIPTION</b>	<b>DATE</b>	<b>APPROVED</b>
1	ORIGINAL RELEASE JOB# 409215E	10/01/04	

**DESCRIPTION**  
 AMC MODEL SWN-2013-2DT-407273-D OPTION: CE, TC IS AN ABSORPTIVE/NON-REFLECTIVE SINGLE POLE TWO THROW SWITCH MODULE DESIGNED TO OPERATE BETWEEN THE 2.1 TO 3.0 GHz FREQUENCY RANGE WITH HIGH ISOLATION AND LOW INSERTION LOSS.

**SPECIFICATIONS**

- FREQUENCY RANGE: 2.1 TO 3.0 GHz
- INSERTION LOSS: 1.4 dB MAXIMUM
- ISOLATION: 80 dB MINIMUM
- VSWR: 2.1-2.2 GHz: 1.6:1  
 2.2-2.3 GHz: 1.5:1  
 2.3-2.8 GHz: 1.35:1  
 2.8-2.9 GHz: 1.5:1  
 2.0-3.0 GHz: 1.6:1
- SWITCHING SPEED: 500 nSec MAXIMUM
- POWER INPUT: (CW)+20 dBm NOMINAL, ALL PORTS
- POWER INPUT (WITHOUT DAMAGE): +30 dBm CW
- CONTROL: TTL LOGIC "0" = J1-J2 ON  
 TTL LOGIC "1" = J1-J3 ON
- POWER SUPPLY: +5V @ 100 mA MAXIMUM  
 -15V @ 50 mA MAXIMUM
- CONNECTORS: SMA FEMALE
- RF: SMA FEMALE
- CONTROL: SMA FEMALE
- SIZE: 1.50" (L) x 1.50" (W) x 1.00" (H)

**ENVIRONMENTAL RATINGS:**

- TEMPERATURE: 0°C TO +70°C (OPERATING)  
 -40°C TO +70°C (STORAGE)
- ALTITUDE: SEA LEVEL TO 1,000 FEET (OPERATING)  
 30,000 FEET (NON-OPERATING)
- SHOCK: MIL-STD-810, METHOD 516.2, PROCEDURE V
- VIBRATION: MIL-STD-810, METHOD 514.2, CATEGORY H, PROCEDURE X  
 FIGURE 514.2-7, CURVE AV
- SALT ATMOSPHERE: OPERATING AND NON-OPERATING CONDITION EXPOSURE TO SALT-SEA ATMOSPHERE
- HUMIDITY: OPERATION SHALL BE POSSIBLE AT RELATIVE HUMIDITIES RANGING UP TO 95% FOR BOTH CONTINUOUS AND INTERMITTENT PERIODS, INCLUDING CONDITIONS WHEREIN CONDENSATION TAKES PLACE IN THE FORM OF WATER AND ICE
- VIBRATION: OPERATING AND NON-OPERATING CONDITION EXPOSURE TO SALT-SEA ATMOSPHERE

NOTE: SPECIFICATIONS MAY VARY OVER OPERATING TEMPERATURE RANGE.  
 NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

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 ISO 9001:2000 CERTIFIED

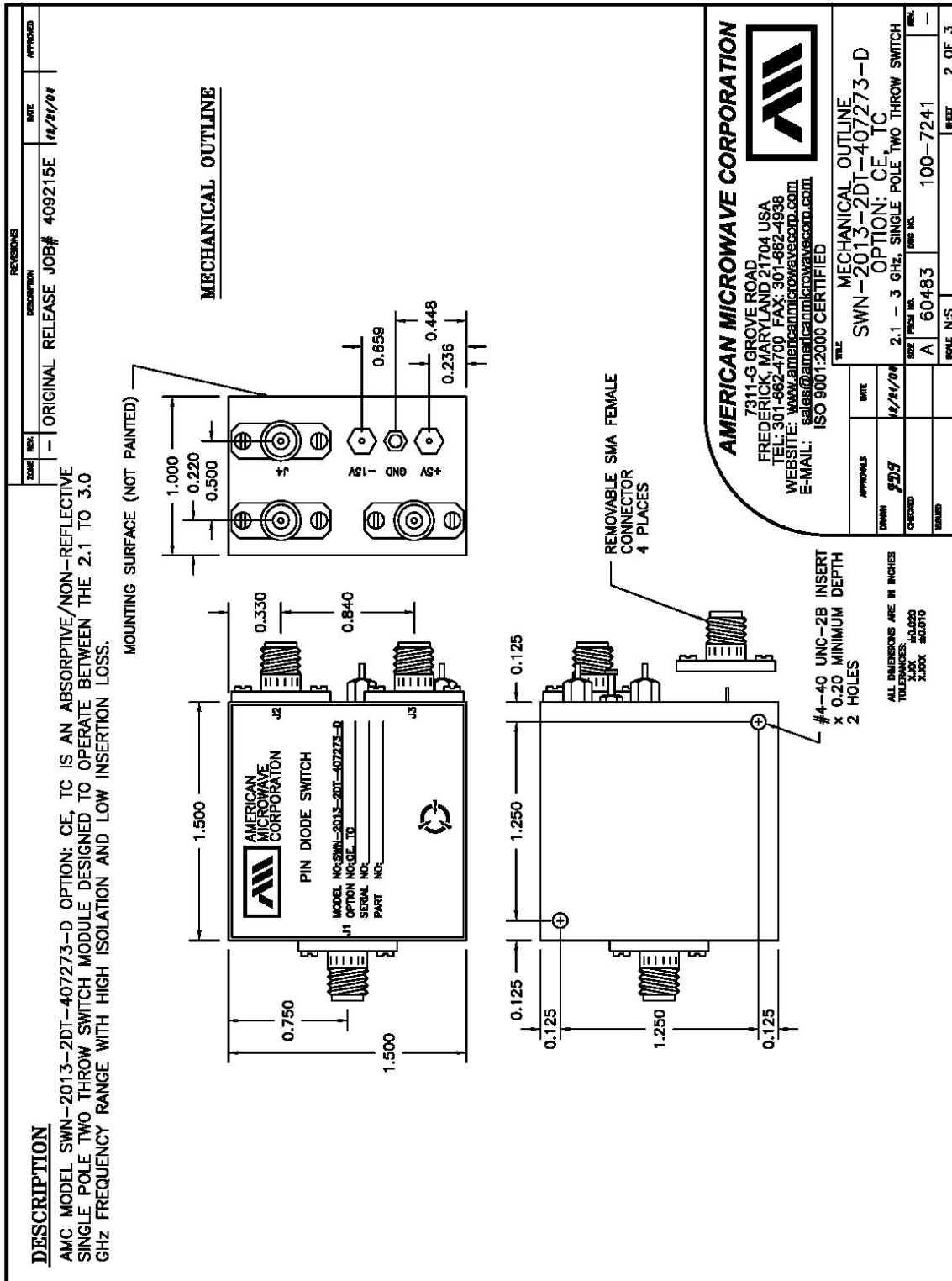
  

<b>DATE</b>	<b>APPROVALS</b>	<b>DATE</b>	<b>REVISION</b>
10/01/04	[Signature]		1

<b>TITLE</b>	<b>PRODUCT FEATURE</b>	<b>REV.</b>	<b>1 OF 3</b>
	SWN-2013-2DT-407273-D		
<b>OPTION:</b>	CE, TC		
<b>SIZE / FROM NO.</b>	2.1 - 3 GHz, SINGLE POLE TWO THROW SWITCH		
<b>FORM NO.</b>	100-7241		
<b>SCALE</b>	N/S		

**OUTLINE DRAWING**



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## FINAL TEST DATA

FINAL TEST DATA SHEETS

FOR

AMC MODEL NUMBER

**SWN-2013-2DT-407273**  
OPTION CE, TC

Serial Numbers:

**2MS501002 THRU 2MS501006**

## FINAL TEST DATA

AMC MODEL NO: SWN-2013-2DT OPTION CE, TC SERIAL NUMBER: 2MS501002

FORM: SW-DTA  
 DATE: March 31, 2005



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### FINAL TEST DATA ON MICROWAVE SWITCH

CUSTOMER: <u>TARGET</u>	TECHNICIAN: <u>P. Kuhn</u>
JOB NO: <u>409215E</u>	CUSTOMER PART NO: _____
MODEL NO: <u>SWN-2013-2DT-407273-D</u>	OPTION NO: <u>CE,TC</u>
SERIAL NO: <u>2MS501002</u>	SPECIFICATION: <u>MIL-STD-454</u>
CURRENT DRAW: <u>+ 5 VDC @ 44 mA; - 15 VDC @ 49 mA</u>	FREQUENCY RANGE: <u>2.1 GHz - 3.0 GHz</u>

	INSERTION LOSS (WORST CASE)	RETURN LOSS (WORST CASE)					
		INPUT dB	INPUT VSWR	OUTPUT ON db	OUTPUT ON VSWR	OUTPUT OFF db	OUTPUT OFF VSWR
J1-J2	0.87 dB @ 2.1-2.2 GHz	34.53 dB	1.04 : 1	27.19 dB	1.09 : 1	34.93 dB	1.04 : 1
J1-J2	0.89 dB @ 2.2-2.3 GHz	34.80 dB	1.04 : 1	27.13 dB	1.09 : 1	33.10 dB	1.05 : 1
J1-J2	1.15 dB @ 2.3-2.8 GHz	35.42 dB	1.03 : 1	23.34 dB	1.15 : 1	26.18 dB	1.10 : 1
J1-J2	1.13 dB @ 2.8-2.9 GHz	35.32 dB	1.03 : 1	22.65 dB	1.16 : 1	25.44 dB	1.11 : 1
J1-J2	1.09 dB @ 2.9-3.0 GHz	31.67 dB	1.05 : 1	22.24 dB	1.17 : 1	24.65 dB	1.12 : 1
J1-J3	0.86 dB @ 2.1-2.2 GHz	27.02 dB	1.09 : 1	24.40 dB	1.13 : 1	34.37 dB	1.04 : 1
J1-J3	0.88 dB @ 2.2-2.3 GHz	26.84 dB	1.10 : 1	24.26 dB	1.13 : 1	32.82 dB	1.05 : 1
J1-J3	1.12 dB @ 2.3-2.8 GHz	26.43 dB	1.10 : 1	24.06 dB	1.13 : 1	26.81 dB	1.10 : 1
J1-J3	1.12 dB @ 2.8-2.9 GHz	26.54 dB	1.10 : 1	23.10 dB	1.15 : 1	26.01 dB	1.11 : 1
J1-J3	1.16 dB @ 2.9-3.0 GHz	27.94 dB	1.08 : 1	23.05 dB	1.15 : 1	25.85 dB	1.11 : 1
	ISOLATION	SWITCHING SPEED					
		DELAY ON	RISE TIME	DELAY OFF	FALLTIME		
J1-J2	88.17dB @ 2.1-2.2 GHz	50 nS		40 nS			
J1-J2	88.15dB @ 2.2-2.3 GHz	50 nS		40 nS			
J1-J2	89.32dB @ 2.3-2.8 GHz	50 nS		40 nS			
J1-J2	90.45dB @ 2.8-2.9 GHz	50 nS		40 nS			
J1-J2	90.43dB @ 2.9-3.0 GHz	50 nS		40 nS			
J1-J3	89.15dB @ 2.1-2.2 GHz	50 nS		40 nS			
J1-J3	89.39dB @ 2.2-2.3 GHz	50 nS		40 nS			
J1-J3	88.18dB @ 2.3-2.8 GHz	50 nS		40 nS			
J1-J3	90.60dB @ 2.8-2.9 GHz	50 nS		40 nS			
J1-J3	90.42dB @ 2.9-3.0 GHz	50 nS		40 nS			

\* DENOTES A FAILURE

TESTED ON: HEWLETT PACKARD,8722ES,US39175265,7.70  
 QA/QC APPROVAL: \_\_\_\_\_ DATED: 3-31-05







## FINAL TEST DATA

AMC MODEL NO: SWN-2013-2DT OPTION CE, TC SERIAL NUMBER: 2MS501004

FORM: SW-DTA  
 DATE: March 15, 2005



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 ISO 9001:1994 CERTIFIED

### FINAL TEST DATA ON MICROWAVE SWITCH

CUSTOMER: <u>TARGET</u>	TECHNICIAN: <u>P. Kuhn</u> <i>P. Kuhn</i>
JOB NO: <u>409215E</u>	CUSTOMER PART NO: _____
MODEL NO: <u>SWN-2013-2DT-407273-D</u>	OPTION NO: <u>CE,TC</u>
SERIAL NO: <u>2MS501004</u>	SPECIFICATION: <u>MIL-STD-454</u>
CURRENT DRAW: <u>+ 5 VDC @ 41 mA; - 15 VDC @ 49 mA</u>	FREQUENCY RANGE: <u>2.1 GHz - 3.0 GHz</u>

INSERTION LOSS (WORST CASE)		RETURN LOSS (WORST CASE)					
		INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1-J2	0.77 dB @ 2.1-2.2 GHz	25.03 dB	1.12 : 1	21.37 dB	1.19 : 1	27.84 dB	1.08 : 1
J1-J2	0.78 dB @ 2.2-2.3 GHz	25.10 dB	1.12 : 1	21.35 dB	1.19 : 1	26.68 dB	1.10 : 1
J1-J2	0.84 dB @ 2.3-2.8 GHz	25.33 dB	1.11 : 1	21.48 dB	1.18 : 1	22.07 dB	1.17 : 1
J1-J2	0.88 dB @ 2.8-2.9 GHz	34.70 dB	1.04 : 1	24.22 dB	1.13 : 1	21.28 dB	1.19 : 1
J1-J2	0.92 dB @ 2.9-3.0 GHz	34.20 dB	1.04 : 1	24.82 dB	1.12 : 1	20.58 dB	1.21 : 1
J1-J3	0.75 dB @ 2.1-2.2 GHz	25.06 dB	1.12 : 1	23.05 dB	1.15 : 1	33.69 dB	1.04 : 1
J1-J3	0.78 dB @ 2.2-2.3 GHz	25.12 dB	1.12 : 1	22.96 dB	1.15 : 1	32.11 dB	1.05 : 1
J1-J3	0.80 dB @ 2.3-2.8 GHz	25.47 dB	1.11 : 1	23.04 dB	1.15 : 1	25.99 dB	1.11 : 1
J1-J3	0.82 dB @ 2.8-2.9 GHz	33.42 dB	1.04 : 1	27.46 dB	1.09 : 1	24.95 dB	1.12 : 1
J1-J3	0.85 dB @ 2.9-3.0 GHz	40.03 dB	1.02 : 1	29.11 dB	1.07 : 1	24.01 dB	1.13 : 1
ISOLATION		SWITCHING SPEED					
		DELAY ON	RISE TIME	DELAY OFF	FALLTIME		
J1-J2	82.03dB @ 2.1-2.2 GHz	50 nS		40 nS			
J1-J2	84.78dB @ 2.2-2.3 GHz	50 nS		40 nS			
J1-J2	87.15dB @ 2.3-2.8 GHz	50 nS		40 nS			
J1-J2	87.29dB @ 2.8-2.9 GHz	50 nS		40 nS			
J1-J2	87.17dB @ 2.9-3.0 GHz	50 nS		40 nS			
J1-J3	87.24dB @ 2.1-2.2 GHz	50 nS		40 nS			
J1-J3	84.79dB @ 2.2-2.3 GHz	50 nS		40 nS			
J1-J3	86.34dB @ 2.3-2.8 GHz	50 nS		40 nS			
J1-J3	86.13dB @ 2.8-2.9 GHz	50 nS		40 nS			
J1-J3	88.04dB @ 2.9-3.0 GHz	50 nS		40 nS			

\* DENOTES A FAILURE

TESTED ON: HEWLETT PACKARD, 8722ES, US39175265.7.70  
 QA/QC APPROVAL: \_\_\_\_\_ DATED: 3-31-05

## FINAL TEST DATA

AMC MODEL NO: SWN-2013-2DT OPTION CE, TC SERIAL NUMBER: 2MS501005

FORM: SW-DTA  
 DATE: March 22, 2005



AMERICAN MICROWAVE CORPORATION  
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 ISO 9001:1994 CERTIFIED

### FINAL TEST DATA ON MICROWAVE SWITCH

CUSTOMER: <u>TARGET</u>	TECHNICIAN: <u>P. K. E</u>
JOB NO: <u>409215E</u>	CUSTOMER PART NO: _____
MODEL NO: <u>SWN-2013-2DT-407273-D</u>	OPTION NO: <u>CE,TC</u>
SERIAL NO: <u>2MS501005</u>	SPECIFICATION: <u>MIL-STD-454</u>
CURRENT DRAW: <u>+ 5 VDC @ 67 mA; - 15 VDC @ 46 mA</u>	FREQUENCY RANGE: <u>2.1 GHz - 3.0 GHz</u>

INSERTION LOSS (WORST CASE)			RETURN LOSS (WORST CASE)					
			INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1-J2	0.68 dB @ 2.1-2.2 GHz	28.50 dB	1.08 : 1	24.25 dB	1.13 : 1	24.26 dB	1.13 : 1	
J1-J2	0.69 dB @ 2.2-2.3 GHz	28.28 dB	1.08 : 1	24.23 dB	1.13 : 1	30.26 dB	1.06 : 1	
J1-J2	0.76 dB @ 2.3-2.8 GHz	28.27 dB	1.08 : 1	24.26 dB	1.13 : 1	24.92 dB	1.12 : 1	
J1-J2	0.80 dB @ 2.8-2.9 GHz	33.85 dB	1.04 : 1	26.11 dB	1.10 : 1	23.97 dB	1.14 : 1	
J1-J2	0.85 dB @ 2.9-3.0 GHz	33.16 dB	1.04 : 1	25.76 dB	1.11 : 1	22.97 dB	1.15 : 1	
J1-J3	0.74 dB @ 2.1-2.2 GHz	31.24 dB	1.06 : 1	27.20 dB	1.09 : 1	37.96 dB	1.03 : 1	
J1-J3	0.75 dB @ 2.2-2.3 GHz	30.85 dB	1.06 : 1	27.01 dB	1.09 : 1	35.42 dB	1.03 : 1	
J1-J3	0.79 dB @ 2.3-2.8 GHz	30.80 dB	1.06 : 1	26.91 dB	1.09 : 1	27.53 dB	1.09 : 1	
J1-J3	0.83 dB @ 2.8-2.9 GHz	36.41 dB	1.03 : 1	28.93 dB	1.07 : 1	26.30 dB	1.10 : 1	
J1-J3	0.90 dB @ 2.9-3.0 GHz	30.20 dB	1.06 : 1	28.63 dB	1.08 : 1	25.50 dB	1.11 : 1	
ISOLATION			SWITCHING SPEED					
			DELAY ON	RISE TIME	DELAY OFF	FALLTIME		
J1-J2	86.10dB @ 2.1-2.2 GHz	50 nS		40 nS				
J1-J2	86.12dB @ 2.2-2.3 GHz	50 nS		40 nS				
J1-J2	84.10dB @ 2.3-2.8 GHz	50 nS		40 nS				
J1-J2	88.01dB @ 2.8-2.9 GHz	50 nS		40 nS				
J1-J2	87.39dB @ 2.9-3.0 GHz	50 nS		40 nS				
J1-J3	87.10dB @ 2.1-2.2 GHz	50 nS		40 nS				
J1-J3	86.85dB @ 2.2-2.3 GHz	50 nS		40 nS				
J1-J3	84.84dB @ 2.3-2.8 GHz	50 nS		40 nS				
J1-J3	86.93dB @ 2.8-2.9 GHz	50 nS		40 nS				
J1-J3	89.39dB @ 2.9-3.0 GHz	50 nS		40 nS				

\* DENOTES A FAILURE

TESTED ON: HEWLETT PACKARD, 8722ES, US39175265, 770  
 QA/QC APPROVAL: \_\_\_\_\_ DATED: 3-31-05

**FINAL TEST DATA**

AMC MODEL NO: SWN-2013-2DT OPTION CE, TC SERIAL NUMBER: 2MS501006

FORM: SW-DTA  
 DATE: March 22, 2005



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FINAL TEST DATA  
 ON  
 MICROWAVE SWITCH

CUSTOMER: TARGET	TECHNICIAN: P. K.	E 33
JOB NO: 409215E	CUSTOMER PART NO:	
MODEL NO: SWN-2013-2DT-407273-D	OPTION NO: CE,TC	
SERIAL NO: 2MS501006	SPECIFICATION: MIL-STD-454	
CURRENT DRAW: + 5 VDC @ 42 mA; - 15 VDC @ 49 mA	FREQUENCY RANGE: 2.1 GHz - 3.0 GHz	

INSERTION LOSS (WORST CASE)	RETURN LOSS (WORST CASE)					
	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1-J2 0.69 dB @ 2.1-2.2 GHz	33.13 dB	1.05 : 1	25.72 dB	1.11 : 1	31.63 dB	1.05 : 1
J1-J2 0.70 dB @ 2.2-2.3 GHz	32.92 dB	1.05 : 1	25.72 dB	1.11 : 1	30.26 dB	1.06 : 1
J1-J2 0.77 dB @ 2.3-2.8 GHz	30.38 dB	1.06 : 1	25.73 dB	1.11 : 1	24.98 dB	1.12 : 1
J1-J2 0.82 dB @ 2.8-2.9 GHz	28.19 dB	1.08 : 1	24.36 dB	1.13 : 1	24.37 dB	1.13 : 1
J1-J2 0.92 dB @ 2.9-3.0 GHz	26.37 dB	1.10 : 1	22.33 dB	1.17 : 1	23.24 dB	1.15 : 1
J1-J3 0.71 dB @ 2.1-2.2 GHz	27.07 dB	1.09 : 1	23.07 dB	1.15 : 1	23.06 dB	1.15 : 1
J1-J3 0.72 dB @ 2.2-2.3 GHz	26.93 dB	1.09 : 1	22.95 dB	1.15 : 1	28.00 dB	1.08 : 1
J1-J3 0.83 dB @ 2.3-2.8 GHz	26.88 dB	1.09 : 1	22.72 dB	1.16 : 1	23.10 dB	1.15 : 1
J1-J3 0.90 dB @ 2.8-2.9 GHz	27.62 dB	1.09 : 1	23.30 dB	1.15 : 1	23.31 dB	1.15 : 1
J1-J3 1.09 dB @ 2.9-3.0 GHz	27.30 dB	1.09 : 1	22.59 dB	1.16 : 1	21.58 dB	1.18 : 1
ISOLATION	SWITCHING SPEED					
	DELAY ON	RISE TIME	DELAY OFF	FALLTIME		
J1-J2 85.37dB @ 2.1-2.2 GHz	50 nS		40 nS			
J1-J2 86.17dB @ 2.2-2.3 GHz	50 nS		40 nS			
J1-J2 85.19dB @ 2.3-2.8 GHz	50 nS		40 nS			
J1-J2 85.36dB @ 2.8-2.9 GHz	50 nS		40 nS			
J1-J2 86.51dB @ 2.9-3.0 GHz	50 nS		40 nS			
J1-J3 85.30dB @ 2.1-2.2 GHz	50 nS		40 nS			
J1-J3 85.78dB @ 2.2-2.3 GHz	50 nS		40 nS			
J1-J3 85.16dB @ 2.3-2.8 GHz	50 nS		40 nS			
J1-J3 85.89dB @ 2.8-2.9 GHz	50 nS		40 nS			
J1-J3 86.22dB @ 2.9-3.0 GHz	50 nS		40 nS			

\* DENOTES A FAILURE

TESTED ON: HEWLETT PACKARD, 8722ES, US39175265, 7, 70  
 QA/QC APPROVAL: \_\_\_\_\_

DATED: 3-31-05

**TEMPERATURE TEST DATA (-55°C)**

**INSERTION LOSS AND INPUT/OUTPUT RETURN LOSS PLOTS,**

**OFF-ARM TERMINATION PLOTS,**

**AND ISOLATION PLOTS**

**FOR J1-J2 AND J1-J3**

**TAKEN OVER**

**NARROW BAND (2.1 – 3.0 GHz) AND BROAD BAND (.05 – 18 GHz)**

**FREQUENCY RANGES**

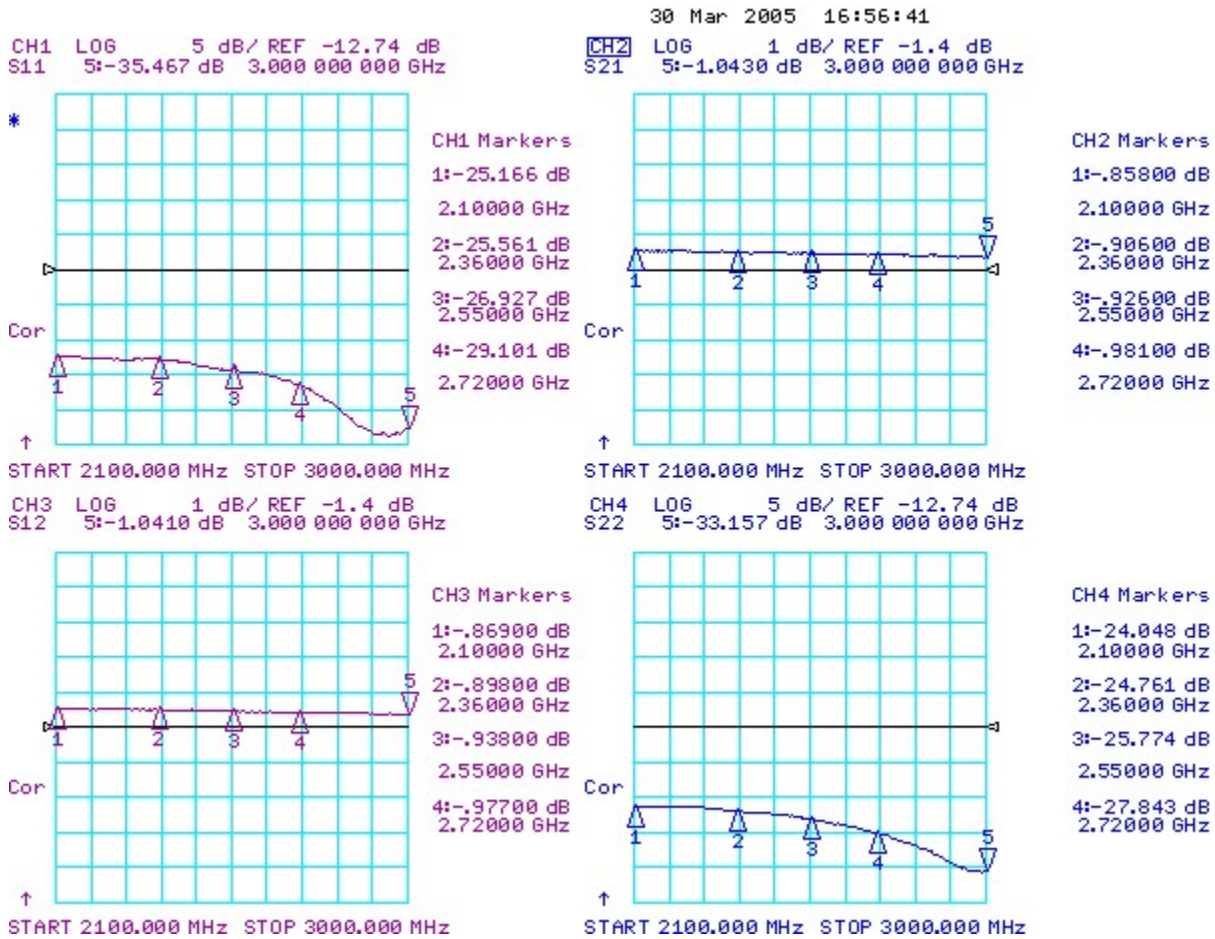
**FOR**

**AMC MODEL NUMBER**

**SWN-2013-2DT-407273**  
**OPTION CE, TC**

**DATA TAKEN AT -55°C**

## J1 – J2 INSERTION LOSS AND INPUT/OUTPUT RETURN LOSS PLOTS MEASURED FROM 2.1 – 3.0 GHz



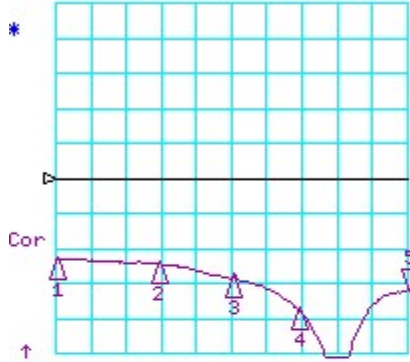
## J1 – J3 INSERTION LOSS AND INPUT/OUTPUT RETURN LOSS PLOTS

### MEASURED FROM 2.1 – 3.0 GHz

30 Mar 2005 16:59:18

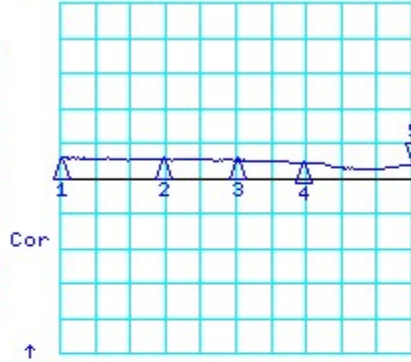
CH1 LOG 5 dB/ REF -12.74 dB  
 S11 5:-28.738 dB 3.000 000 000 GHz

CH2 LOG 1 dB/ REF -1.4 dB  
 S21 5:-1.0320 dB 3.000 000 000 GHz



CH1 Markers  
 1:-24.185 dB  
 2.10000 GHz  
 2:-24.856 dB  
 2.36000 GHz  
 3:-26.864 dB  
 2.55000 GHz  
 4:-31.410 dB  
 2.72000 GHz  
 5:-28.738 dB  
 3.00000 GHz

START 2100.000 MHz STOP 3000.000 MHz

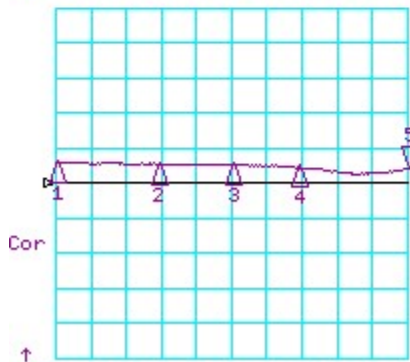


CH2 Markers  
 1:-.82300 dB  
 2.10000 GHz  
 2:-.83800 dB  
 2.36000 GHz  
 3:-.86800 dB  
 2.55000 GHz  
 4:-.95100 dB  
 2.72000 GHz  
 5:-1.03200 dB  
 3.00000 GHz

START 2100.000 MHz STOP 3000.000 MHz

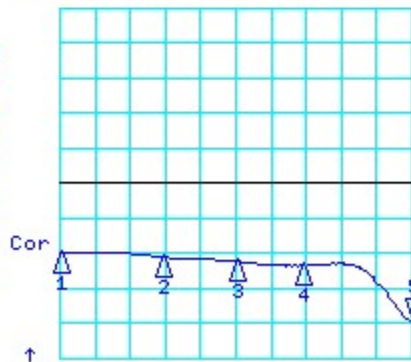
CH3 LOG 1 dB/ REF -1.4 dB  
 S12 5:-1.0100 dB 3.000 000 000 GHz

CH4 LOG 5 dB/ REF -12.74 dB  
 S22 5:-32.487 dB 3.000 000 000 GHz



CH3 Markers  
 1:-.82400 dB  
 2.10000 GHz  
 2:-.85300 dB  
 2.36000 GHz  
 3:-.88100 dB  
 2.55000 GHz  
 4:-.94900 dB  
 2.72000 GHz  
 5:-1.01000 dB  
 3.00000 GHz

START 2100.000 MHz STOP 3000.000 MHz



CH4 Markers  
 1:-22.530 dB  
 2.10000 GHz  
 2:-23.280 dB  
 2.36000 GHz  
 3:-23.896 dB  
 2.55000 GHz  
 4:-24.468 dB  
 2.72000 GHz  
 5:-32.487 dB  
 3.00000 GHz

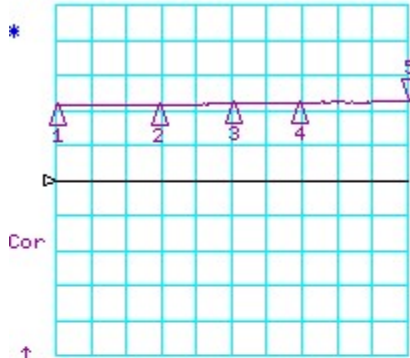
START 2100.000 MHz STOP 3000.000 MHz

## J2 OFF-ARM TERMINATION PLOTS (S22) MEASURED FROM 2.1 – 3.0 GHz

30 Mar 2005 16:57:03

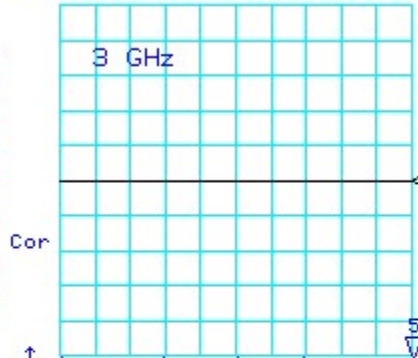
CH1 LOG 5 dB/ REF -12.74 dB  
 S11 5:-1.4210 dB 3.000 000 000 GHz

CH2 LOG 1 dB/ REF -1.4 dB  
 S21 5:-81.504 dB 3.000 000 000 GHz



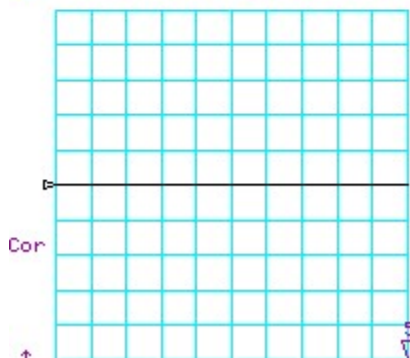
CH1 Markers  
 1:-2.0960 dB  
 2.10000 GHz  
 2:-1.9250 dB  
 2.36000 GHz  
 3:-1.7410 dB  
 2.55000 GHz  
 4:-1.6140 dB  
 2.72000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH3 LOG 1 dB/ REF -1.4 dB  
 S12 5:-80.551 dB 3.000 000 000 GHz



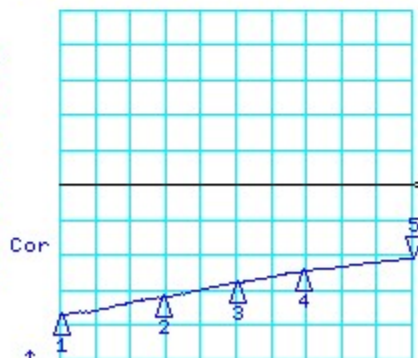
CH2 Markers  
 1:-83.389 dB  
 2.10000 GHz  
 2:-75.239 dB  
 2.36000 GHz  
 3:-76.012 dB  
 2.55000 GHz  
 4:-77.902 dB  
 2.72000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH4 LOG 5 dB/ REF -12.74 dB  
 S22 5:-23.237 dB 3.000 000 000 GHz



CH3 Markers  
 1:-73.798 dB  
 2.10000 GHz  
 2:-84.767 dB  
 2.36000 GHz  
 3:-75.111 dB  
 2.55000 GHz  
 4:-77.842 dB  
 2.72000 GHz

START 2100.000 MHz STOP 3000.000 MHz



CH4 Markers  
 1:-31.242 dB  
 2.10000 GHz  
 2:-28.743 dB  
 2.36000 GHz  
 3:-26.707 dB  
 2.55000 GHz  
 4:-24.983 dB  
 2.72000 GHz

START 2100.000 MHz STOP 3000.000 MHz

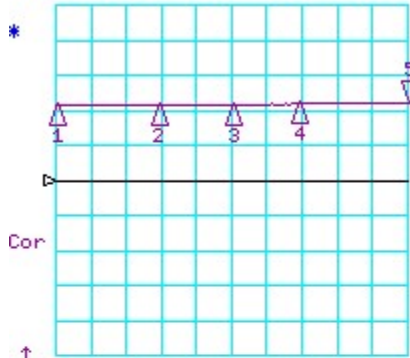


## J3 OFF-ARM TERMINATION PLOTS (S22) MEASURED FROM 2.1 – 3.0 GHz

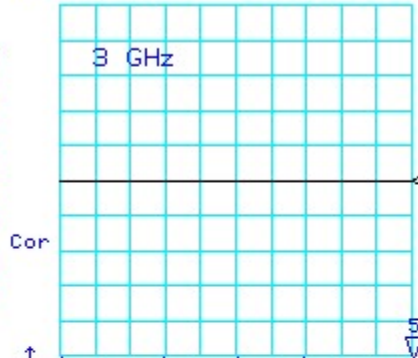
30 Mar 2005 16:59:39

CH1 LOG 5 dB/ REF -12.74 dB  
 S11 5:-1.6780 dB 3.000 000 000 GHz

CH2 LOG 1 dB/ REF -1.4 dB  
 S21 5:-84.027 dB 3.000 000 000 GHz



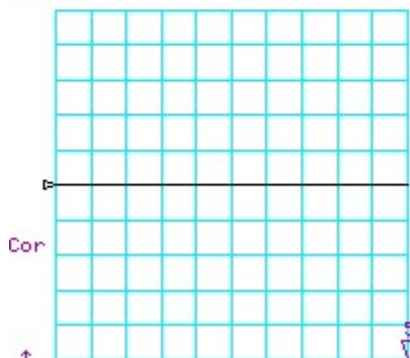
CH1 Markers  
 1:-2.1100 dB  
 2.10000 GHz  
 2:-1.9650 dB  
 2.36000 GHz  
 3:-1.8400 dB  
 2.55000 GHz  
 4:-1.7770 dB  
 2.72000 GHz



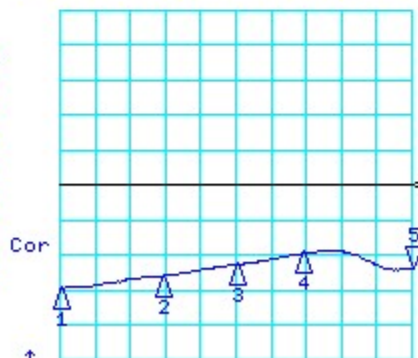
CH2 Markers  
 1:-84.806 dB  
 2.10000 GHz  
 2:-78.054 dB  
 2.36000 GHz  
 3:-71.385 dB  
 2.55000 GHz  
 4:-80.148 dB  
 2.72000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH3 LOG 1 dB/ REF -1.4 dB  
 S12 5:-76.047 dB 3.000 000 000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH4 LOG 5 dB/ REF -12.74 dB  
 S22 5:-24.580 dB 3.000 000 000 GHz



CH3 Markers  
 1:-76.319 dB  
 2.10000 GHz  
 2:-76.006 dB  
 2.36000 GHz  
 3:-84.376 dB  
 2.55000 GHz  
 4:-86.415 dB  
 2.72000 GHz



CH4 Markers  
 1:-27.523 dB  
 2.10000 GHz  
 2:-25.674 dB  
 2.36000 GHz  
 3:-24.077 dB  
 2.55000 GHz  
 4:-22.486 dB  
 2.72000 GHz

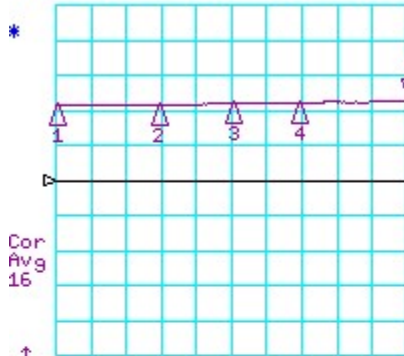
## J1 – J2 ISOLATION PLOTS

### MEASURED FROM 2.1 – 3.0 GHz

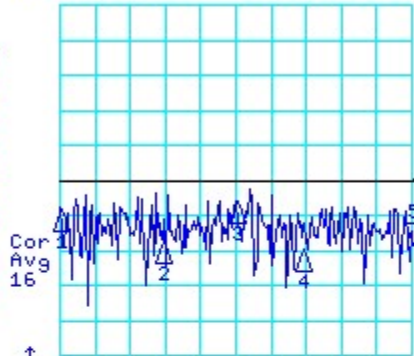
30 Mar 2005 16:57:58

CH1 LOG 5 dB/ REF -12.74 dB  
 S11 5:-1.4230 dB 3.000 000 000 GHz

CH2 LOG 10 dB/ REF -80 dB  
 S21 5:-98.610 dB 3.000 000 000 GHz



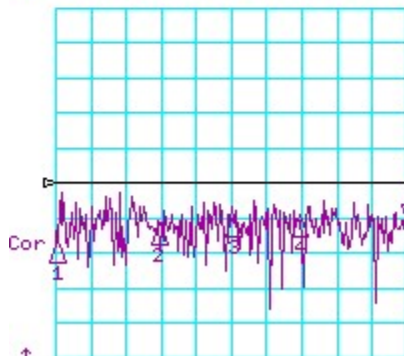
CH1 Markers  
 1:-2.0930 dB  
 2.1000 GHz  
 2:-1.9210 dB  
 2.3600 GHz  
 3:-1.7360 dB  
 2.5500 GHz  
 4:-1.6170 dB  
 2.7200 GHz



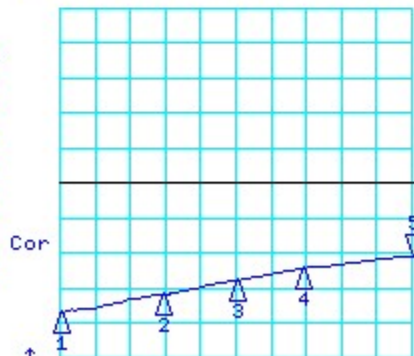
CH2 Markers  
 1:-88.780 dB  
 2.1000 GHz  
 2:-97.681 dB  
 2.3600 GHz  
 3:-86.193 dB  
 2.5500 GHz  
 4:-99.891 dB  
 2.7200 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH3 LOG 10 dB/ REF -80 dB  
 S12 5:-92.483 dB 3.000 000 000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH4 LOG 5 dB/ REF -12.74 dB  
 S22 5:-23.157 dB 3.000 000 000 GHz



CH3 Markers  
 1:-96.754 dB  
 2.1000 GHz  
 2:-91.602 dB  
 2.3600 GHz  
 3:-89.500 dB  
 2.5500 GHz  
 4:-89.620 dB  
 2.7200 GHz



CH4 Markers  
 1:-31.190 dB  
 2.1000 GHz  
 2:-28.652 dB  
 2.3600 GHz  
 3:-26.604 dB  
 2.5500 GHz  
 4:-24.896 dB  
 2.7200 GHz

START 2100.000 MHz STOP 3000.000 MHz

START 2100.000 MHz STOP 3000.000 MHz

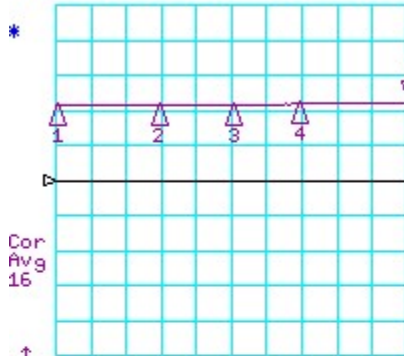
## J1 – J3 ISOLATION PLOTS

### MEASURED FROM 2.1 – 3.0 GHz

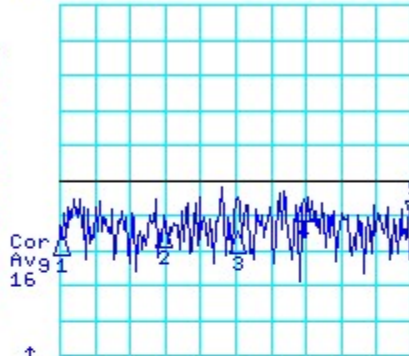
30 Mar 2005 17:00:29

CH1 LOG 5 dB/ REF -12.74 dB  
 S11 5:-1.6840 dB 3.000 000 000 GHz

CH2 LOG 10 dB/ REF -80 dB  
 S21 5:-92.383 dB 3.000 000 000 GHz



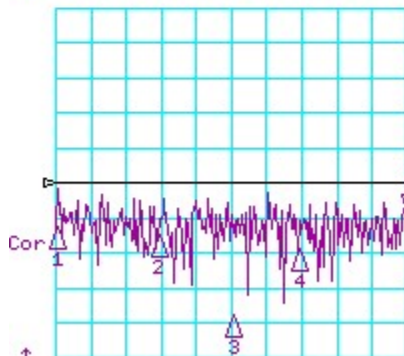
CH1 Markers  
 1:-2.1140 dB  
 2.10000 GHz  
 2:-1.9580 dB  
 2.35000 GHz  
 3:-1.8410 dB  
 2.55000 GHz  
 4:-1.7900 dB  
 2.72000 GHz



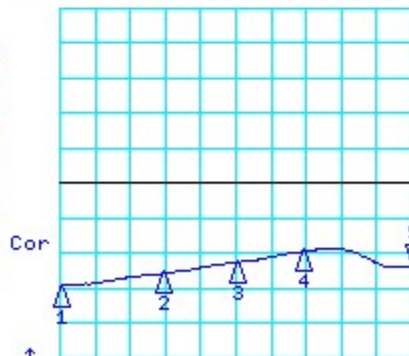
CH2 Markers  
 1:-95.664 dB  
 2.10000 GHz  
 2:-93.268 dB  
 2.35000 GHz  
 3:-94.916 dB  
 2.55000 GHz  
 4:-85.645 dB  
 2.72000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH3 LOG 10 dB/ REF -80 dB  
 S12 5:-89.722 dB 3.000 000 000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH4 LOG 5 dB/ REF -12.74 dB  
 S22 5:-24.541 dB 3.000 000 000 GHz



CH3 Markers  
 1:-92.690 dB  
 2.10000 GHz  
 2:-95.364 dB  
 2.35000 GHz  
 3:-117.85 dB  
 2.55000 GHz  
 4:-99.225 dB  
 2.72000 GHz



CH4 Markers  
 1:-27.442 dB  
 2.10000 GHz  
 2:-25.626 dB  
 2.35000 GHz  
 3:-24.031 dB  
 2.55000 GHz  
 4:-22.463 dB  
 2.72000 GHz

START 2100.000 MHz STOP 3000.000 MHz

START 2100.000 MHz STOP 3000.000 MHz

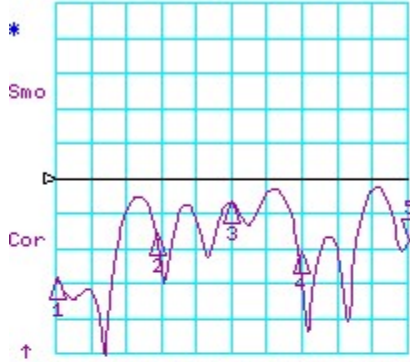
## J1 – J2 INSERTION LOSS AND INPUT/OUTPUT RETURN LOSS PLOTS

**MEASURED FROM 0.5 – 18 GHz**

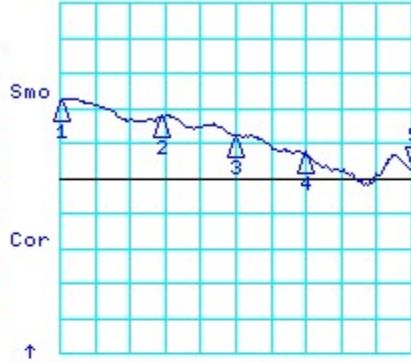
30 Mar 2005 17:01:30

CH1 LOG 5 dB/ REF -9.54 dB  
 S11 5:-18.386 dB 18.000 000 000 GHz

CH2 LOG 1 dB/ REF -3 dB  
 S21 5:-2.7570 dB 18.000 000 000 GHz



CH1 Markers  
 1:-23.806 dB  
 500.000 MHz  
 2:-17.508 dB  
 5.50000 GHz  
 3:-13.009 dB  
 9.20000 GHz  
 4:-20.179 dB  
 12.6000 GHz



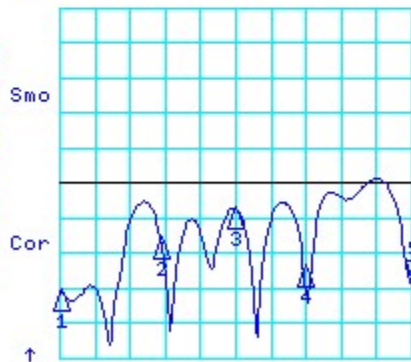
CH2 Markers  
 1:-.77200 dB  
 500.000 MHz  
 2:-1.2560 dB  
 5.50000 GHz  
 3:-1.7300 dB  
 9.20000 GHz  
 4:-2.2700 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz  
 CH3 LOG 1 dB/ REF -3 dB  
 S12 5:-2.6940 dB 18.000 000 000 GHz

CH4 LOG 5 dB/ REF -9.54 dB  
 S22 5:-23.861 dB 18.000 000 000 GHz



CH3 Markers  
 1:-.75900 dB  
 500.000 MHz  
 2:-1.2640 dB  
 5.50000 GHz  
 3:-1.7760 dB  
 9.20000 GHz  
 4:-2.3850 dB  
 12.6000 GHz



CH4 Markers  
 1:-24.872 dB  
 500.000 MHz  
 2:-17.390 dB  
 5.50000 GHz  
 3:-13.112 dB  
 9.20000 GHz  
 4:-21.357 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz

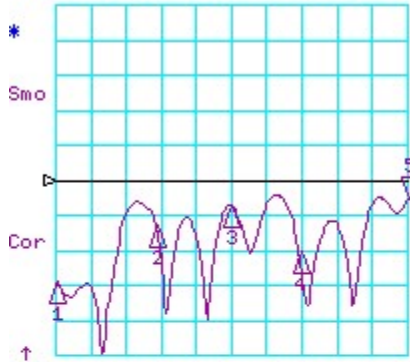
START 500.000 MHz STOP18000.000 MHz

## J1 – J3 INSERTION LOSS AND INPUT/OUTPUT RETURN LOSS PLOTS

**MEASURED FROM 0.5 – 18 GHz**

30 Mar 2005 17:04:06

CH1 LOG 5 dB/ REF -9.54 dB  
 S11 5:-12.150 dB 18.000 000 000 GHz



CH1 Markers  
 1:-24.189 dB  
 500.000 MHz  
 2:-16.056 dB  
 5.50000 GHz  
 3:-13.150 dB  
 9.20000 GHz  
 4:-19.766 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz

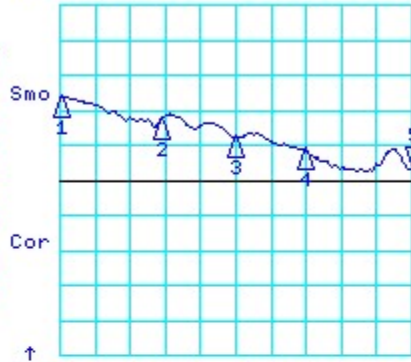
CH3 LOG 1 dB/ REF -3 dB  
 S12 5:-2.6120 dB 18.000 000 000 GHz



CH3 Markers  
 1:-.61600 dB  
 500.000 MHz  
 2:-1.2830 dB  
 5.50000 GHz  
 3:-1.7590 dB  
 9.20000 GHz  
 4:-2.2580 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz

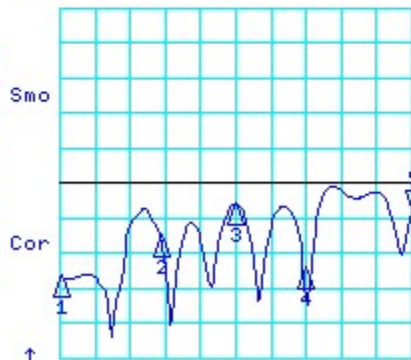
CH2 LOG 1 dB/ REF -3 dB  
 S21 5:-2.7000 dB 18.000 000 000 GHz



CH2 Markers  
 1:-.62300 dB  
 500.000 MHz  
 2:-1.2720 dB  
 5.50000 GHz  
 3:-1.7570 dB  
 9.20000 GHz  
 4:-2.1100 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz

CH4 LOG 5 dB/ REF -9.54 dB  
 S22 5:-13.652 dB 18.000 000 000 GHz



CH4 Markers  
 1:-22.933 dB  
 500.000 MHz  
 2:-17.189 dB  
 5.50000 GHz  
 3:-12.559 dB  
 9.20000 GHz  
 4:-21.685 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz

## J2 OFF-ARM TERMINATION PLOTS (S22) MEASURED FROM 0.5 – 18 GHz

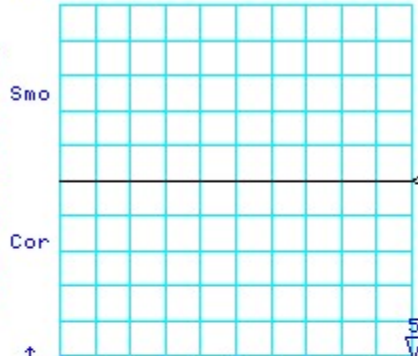
30 Mar 2005 17:01:51

CH1 LOG 5 dB/ REF -9.54 dB  
 S11 5:-6.0530 dB 18.000 000 000 GHz

CH2 LOG 1 dB/ REF -3 dB  
 S21 5:-73.151 dB 18.000 000 000 GHz



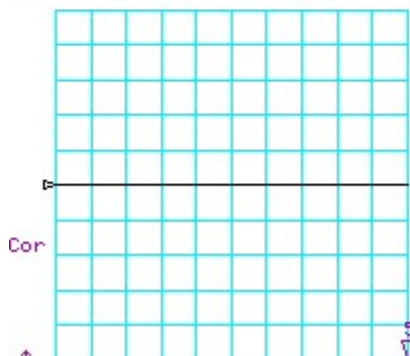
CH1 Markers  
 1:-4.7600 dB  
 500.000 MHz  
 2:-1.9190 dB  
 5.50000 GHz  
 3:-2.4250 dB  
 9.20000 GHz  
 4:-4.7830 dB  
 12.60000 GHz



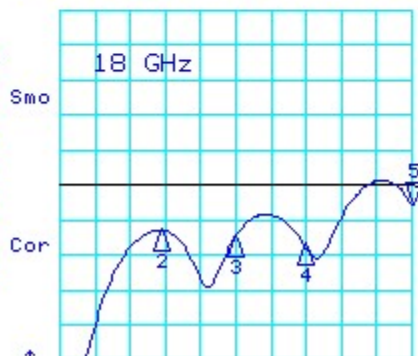
CH2 Markers  
 1:-79.598 dB  
 500.000 MHz  
 2:-80.566 dB  
 5.50000 GHz  
 3:-76.488 dB  
 9.20000 GHz  
 4:-73.346 dB  
 12.60000 GHz

START 500.000 MHz STOP 18000.000 MHz  
 CH3 LOG 1 dB/ REF -3 dB  
 S12 5:-69.462 dB 18.000 000 000 GHz

START 500.000 MHz STOP 18000.000 MHz  
 CH4 LOG 5 dB/ REF -9.54 dB  
 S22 5:-12.225 dB 18.000 000 000 GHz



CH3 Markers  
 1:-74.522 dB  
 500.000 MHz  
 2:-73.948 dB  
 5.50000 GHz  
 3:-76.034 dB  
 9.20000 GHz  
 4:-67.401 dB  
 12.60000 GHz



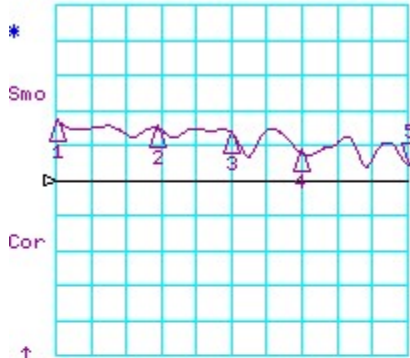
CH4 Markers  
 1:-37.617 dB  
 500.000 MHz  
 2:-15.894 dB  
 5.50000 GHz  
 3:-16.855 dB  
 9.20000 GHz  
 4:-17.876 dB  
 12.60000 GHz

## J3 OFF-ARM TERMINATION PLOTS (S22) MEASURED FROM 0.5 – 18 GHz

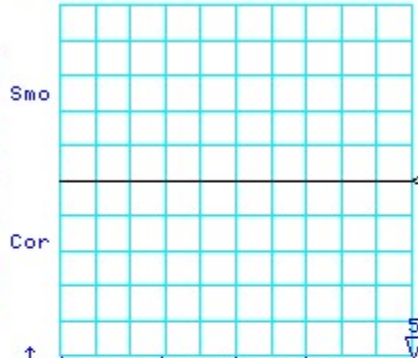
30 Mar 2005 17:04:26

CH1 LOG 5 dB/ REF -9.54 dB  
 S11 5:-7.3430 dB 18.000 000 000 GHz

CH2 LOG 1 dB/ REF -3 dB  
 S21 5:-69.815 dB 18.000 000 000 GHz



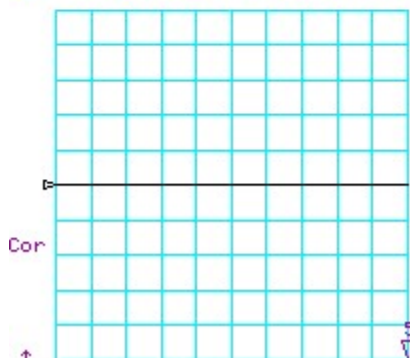
CH1 Markers  
 1:-9.6400 dB  
 500.000 MHz  
 2:-2.0520 dB  
 5.50000 GHz  
 3:-2.6350 dB  
 9.20000 GHz  
 4:-5.3490 dB  
 12.6000 GHz



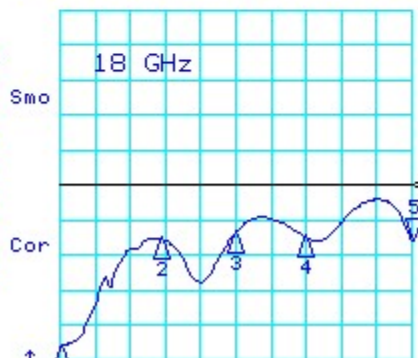
CH2 Markers  
 1:-79.690 dB  
 500.000 MHz  
 2:-79.673 dB  
 5.50000 GHz  
 3:-78.811 dB  
 9.20000 GHz  
 4:-73.293 dB  
 12.6000 GHz

START 500.000 MHz STOP 18000.000 MHz  
 CH3 LOG 1 dB/ REF -3 dB  
 S12 5:-70.053 dB 18.000 000 000 GHz

START 500.000 MHz STOP 18000.000 MHz  
 CH4 LOG 5 dB/ REF -9.54 dB  
 S22 5:-17.443 dB 18.000 000 000 GHz



CH3 Markers  
 1:-81.634 dB  
 500.000 MHz  
 2:-78.332 dB  
 5.50000 GHz  
 3:-75.938 dB  
 9.20000 GHz  
 4:-74.269 dB  
 12.6000 GHz



CH4 Markers  
 1:-32.467 dB  
 500.000 MHz  
 2:-17.222 dB  
 5.50000 GHz  
 3:-16.397 dB  
 9.20000 GHz  
 4:-16.751 dB  
 12.6000 GHz

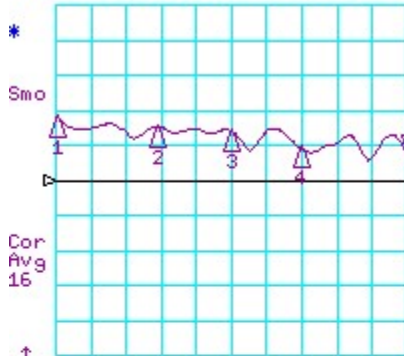
## J1 – J2 ISOLATION PLOTS

### MEASURED FROM 0.5 – 18 GHz

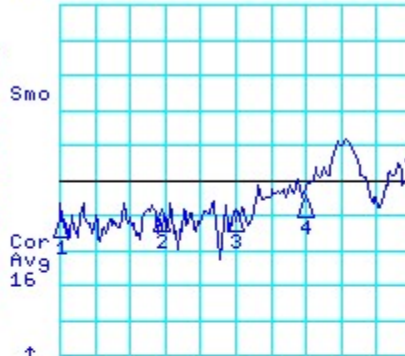
30 Mar 2005 17:02:57

CH1 LOG 5 dB/ REF -9.54 dB  
 S11 5:-6.0820 dB 18.000 000 000 GHz

CH2 LOG 10 dB/ REF -80 dB  
 S21 5:-79.934 dB 18.000 000 000 GHz



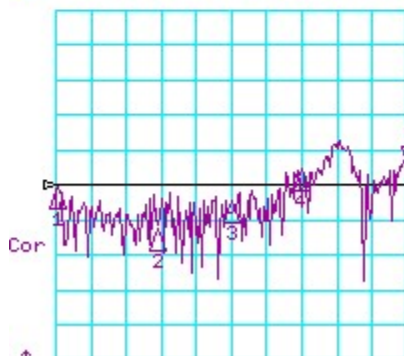
CH1 Markers  
 1:-4.8100 dB  
 500.000 MHz  
 2:-1.9250 dB  
 5.50000 GHz  
 3:-2.4280 dB  
 9.20000 GHz  
 4:-4.7840 dB  
 12.6000 GHz



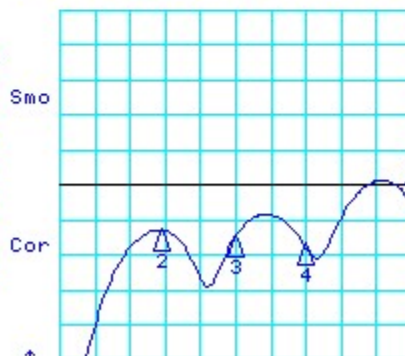
CH2 Markers  
 1:-90.686 dB  
 500.000 MHz  
 2:-88.945 dB  
 5.50000 GHz  
 3:-88.943 dB  
 9.20000 GHz  
 4:-84.352 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz  
 CH3 LOG 10 dB/ REF -80 dB  
 S12 5:-75.041 dB 18.000 000 000 GHz

START 500.000 MHz STOP18000.000 MHz  
 CH4 LOG 5 dB/ REF -9.54 dB  
 S22 5:-12.220 dB 18.000 000 000 GHz



CH3 Markers  
 1:-80.790 dB  
 500.000 MHz  
 2:-92.786 dB  
 5.50000 GHz  
 3:-84.932 dB  
 9.20000 GHz  
 4:-75.846 dB  
 12.6000 GHz



CH4 Markers  
 1:-37.495 dB  
 500.000 MHz  
 2:-15.891 dB  
 5.50000 GHz  
 3:-16.842 dB  
 9.20000 GHz  
 4:-17.896 dB  
 12.6000 GHz



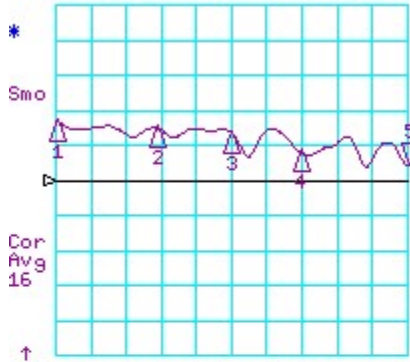
## J1 – J3 ISOLATION PLOTS

**MEASURED FROM 0.5 – 18 GHz**

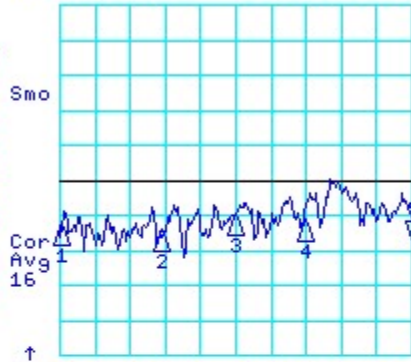
30 Mar 2005 17:07:23

CH1 LOG 5 dB/ REF -9.54 dB  
 S11 5:-7.3470 dB 18.000 000 000 GHz

CH2 LOG 10 dB/ REF -80 dB  
 S21 5:-97.819 dB 18.000 000 000 GHz



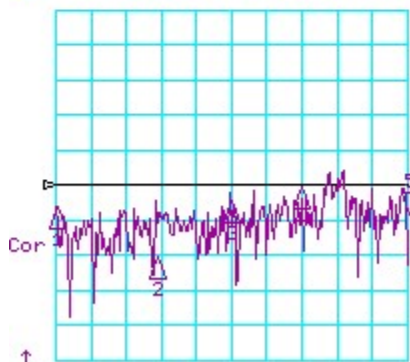
CH1 Markers  
 1:-7.3470 dB  
 500.000 MHz  
 2:-7.0380 dB  
 5.50000 GHz  
 3:-7.6340 dB  
 9.20000 GHz  
 4:-5.3530 dB  
 12.6000 GHz



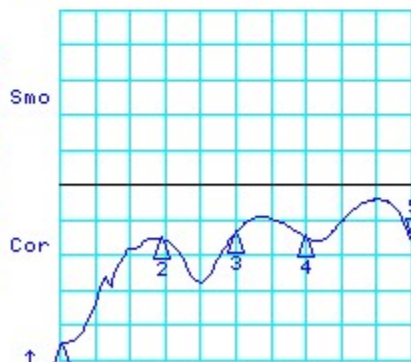
CH2 Markers  
 1:-93.008 dB  
 500.000 MHz  
 2:-94.419 dB  
 5.50000 GHz  
 3:-89.907 dB  
 9.20000 GHz  
 4:-91.370 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz  
 CH3 LOG 10 dB/ REF -80 dB  
 S12 5:-88.404 dB 18.000 000 000 GHz

START 500.000 MHz STOP18000.000 MHz  
 CH4 LOG 5 dB/ REF -9.54 dB  
 S22 5:-17.424 dB 18.000 000 000 GHz



CH3 Markers  
 1:-86.939 dB  
 500.000 MHz  
 2:-101.13 dB  
 5.50000 GHz  
 3:-84.787 dB  
 9.20000 GHz  
 4:-80.695 dB  
 12.6000 GHz



CH4 Markers  
 1:-32.429 dB  
 500.000 MHz  
 2:-17.210 dB  
 5.50000 GHz  
 3:-16.384 dB  
 9.20000 GHz  
 4:-16.748 dB  
 12.6000 GHz

**TEMPERATURE TEST DATA (+25°C)**

**INSERTION LOSS AND INPUT/OUTPUT RETURN LOSS PLOTS,**

**OFF-ARM TERMINATION PLOTS,**

**AND ISOLATION PLOTS**

**FOR J1-J2 AND J1-J3**

**TAKEN OVER**

**NARROW BAND (2.1 – 3.0 GHz) AND BROAD BAND (.05 – 18 GHz)**

**FREQUENCY RANGES**

**FOR**

**AMC MODEL NUMBER**

**SWN-2013-2DT-407273**  
**OPTION CE, TC**

**DATA TAKEN AT +25°C**

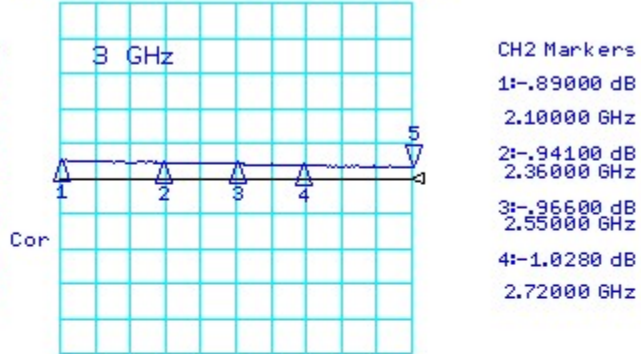
## J1 – J2 INSERTION LOSS AND INPUT/OUTPUT RETURN LOSS PLOTS

### MEASURED FROM 2.1 – 3.0 GHz

30 Mar 2005 16:29:48

CH1 LOG 5 dB/ REF -12.74 dB  
 S11 5:-36.108 dB 3.000 000 000 GHz

CH2 LOG 1 dB/ REF -1.4 dB  
 S21 5:-1.0730 dB 3.000 000 000 GHz

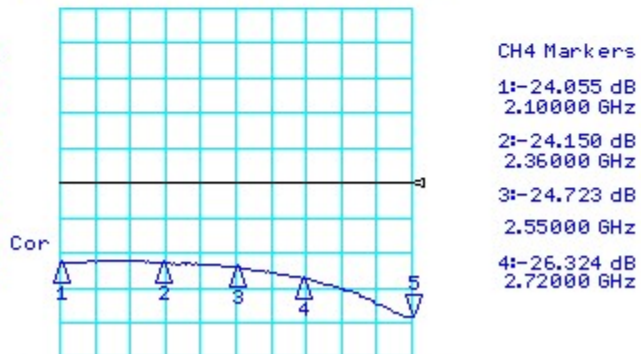
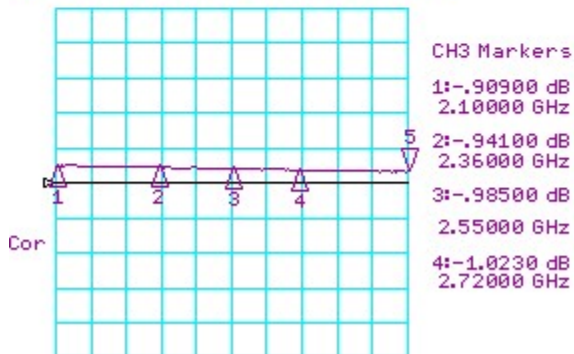


START 2100.000 MHz STOP 3000.000 MHz

START 2100.000 MHz STOP 3000.000 MHz

CH3 LOG 1 dB/ REF -1.4 dB  
 S12 5:-1.0620 dB 3.000 000 000 GHz

CH4 LOG 5 dB/ REF -12.74 dB  
 S22 5:-31.848 dB 3.000 000 000 GHz



START 2100.000 MHz STOP 3000.000 MHz

START 2100.000 MHz STOP 3000.000 MHz

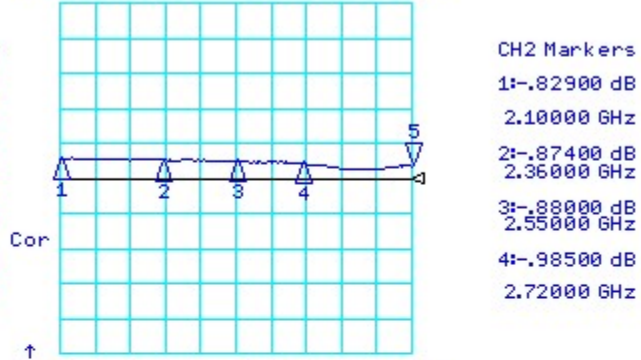
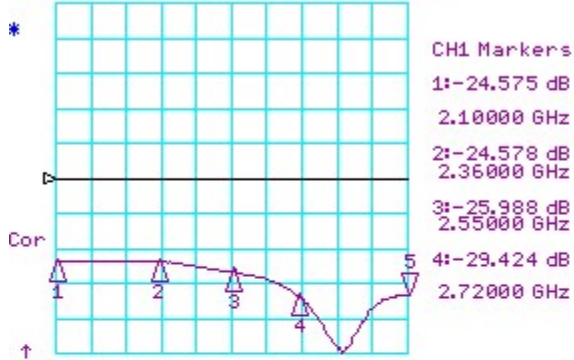
## J1 – J3 INSERTION LOSS AND INPUT/OUTPUT RETURN LOSS PLOTS

### MEASURED FROM 2.1 – 3.0 GHz

30 Mar 2005 16:34:52

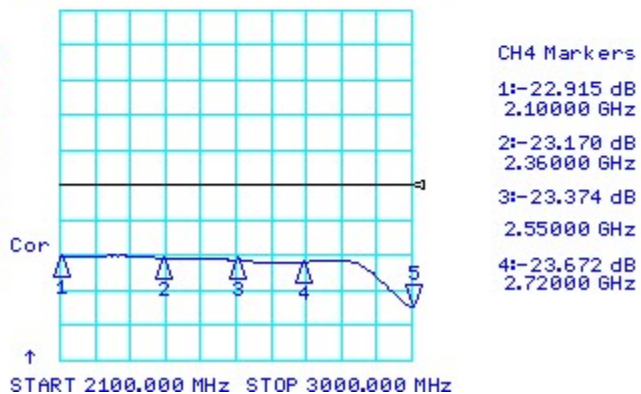
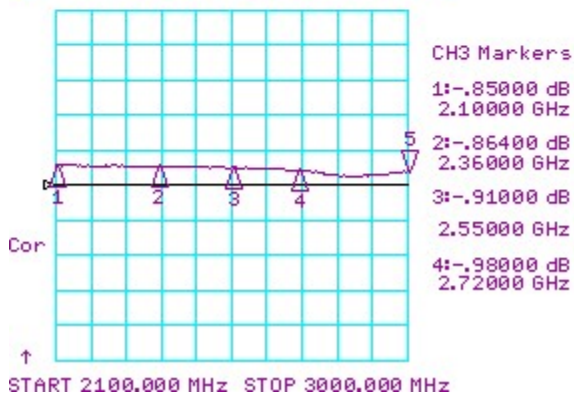
CH1 LOG 5 dB/ REF -12.74 dB  
 S11 5:-29.256 dB 3.000 000 000 GHz

CH2 LOG 1 dB/ REF -1.4 dB  
 S21 5:-1.0350 dB 3.000 000 000 GHz



START 2100.000 MHz STOP 3000.000 MHz  
 CH3 LOG 1 dB/ REF -1.4 dB  
 S12 5:-1.0210 dB 3.000 000 000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH4 LOG 5 dB/ REF -12.74 dB  
 S22 5:-30.170 dB 3.000 000 000 GHz

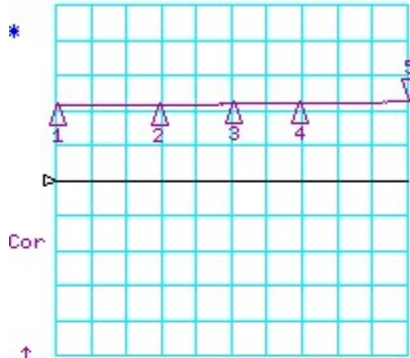


## J2 OFF-ARM TERMINATION PLOTS (S22) MEASURED FROM 2.1 – 3.0 GHz

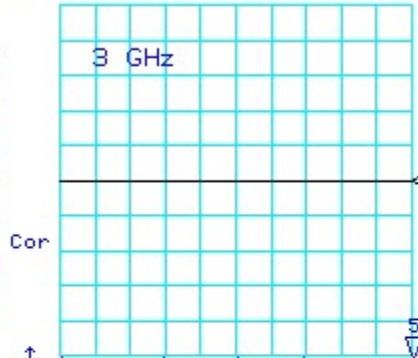
30 Mar 2005 16:31:45

CH1 LOG 5 dB/ REF -12.74 dB  
 S11 5:-1.4730 dB 3.000 000 000 GHz

CH2 LOG 1 dB/ REF -1.4 dB  
 S21 5:-86.357 dB 3.000 000 000 GHz



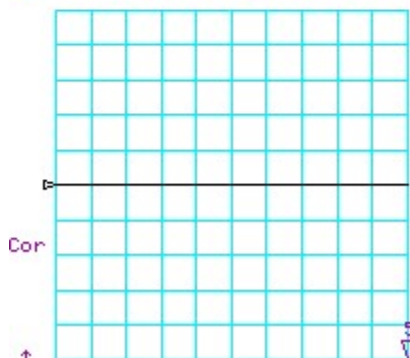
CH1 Markers  
 1:-2.0680 dB  
 2.10000 GHz  
 2:-1.9470 dB  
 2.35000 GHz  
 3:-1.7860 dB  
 2.55000 GHz  
 4:-1.6880 dB  
 2.72000 GHz



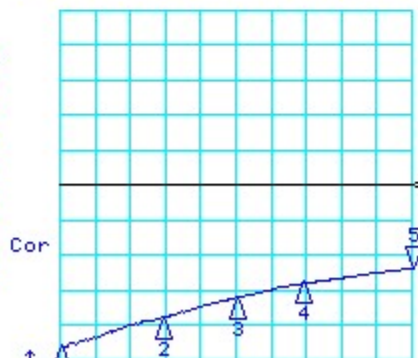
CH2 Markers  
 1:-73.975 dB  
 2.10000 GHz  
 2:-74.927 dB  
 2.35000 GHz  
 3:-78.979 dB  
 2.55000 GHz  
 4:-77.198 dB  
 2.72000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH3 LOG 1 dB/ REF -1.4 dB  
 S12 5:-74.566 dB 3.000 000 000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH4 LOG 5 dB/ REF -12.74 dB  
 S22 5:-24.646 dB 3.000 000 000 GHz



CH3 Markers  
 1:-80.952 dB  
 2.10000 GHz  
 2:-82.385 dB  
 2.35000 GHz  
 3:-84.496 dB  
 2.55000 GHz  
 4:-81.575 dB  
 2.72000 GHz



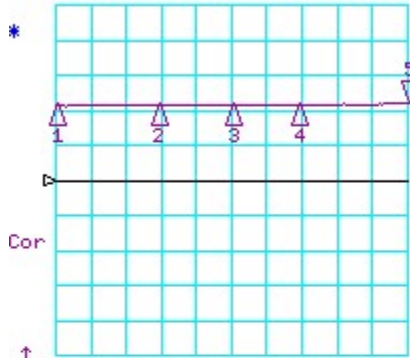
CH4 Markers  
 1:-35.938 dB  
 2.10000 GHz  
 2:-31.631 dB  
 2.35000 GHz  
 3:-28.844 dB  
 2.55000 GHz  
 4:-26.754 dB  
 2.72000 GHz

## J3 OFF-ARM TERMINATION PLOTS (S22) MEASURED FROM 2.1 – 3.0 GHz

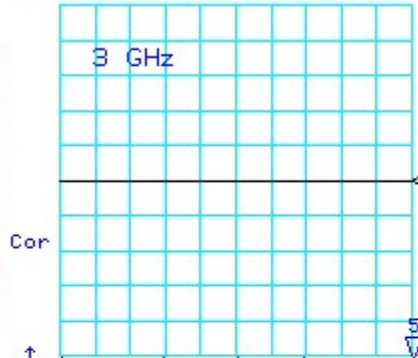
30 Mar 2005 16:35:17

CH1 LOG 5 dB/ REF -12.74 dB  
 S11 5:-1.7620 dB 3.000 000 000 GHz

CH2 LOG 1 dB/ REF -1.4 dB  
 S21 5:-85.027 dB 3.000 000 000 GHz



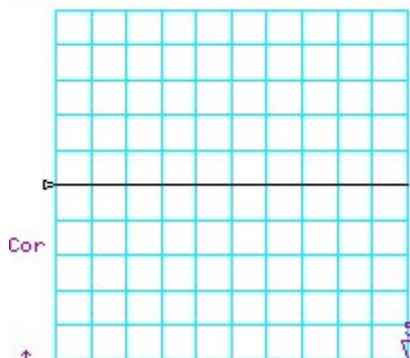
CH1 Markers  
 1:-2.1220 dB  
 2.10000 GHz  
 2:-2.0080 dB  
 2.36000 GHz  
 3:-1.9240 dB  
 2.55000 GHz  
 4:-1.8920 dB  
 2.72000 GHz  
 5:-1.7620 dB  
 3.00000 GHz



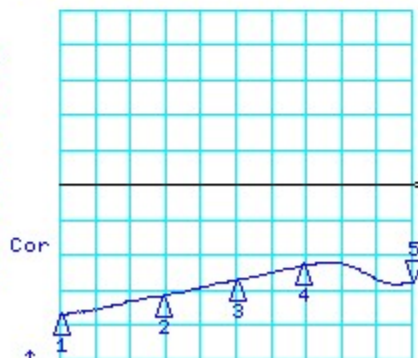
CH2 Markers  
 1:-79.110 dB  
 2.10000 GHz  
 2:-79.286 dB  
 2.36000 GHz  
 3:-80.401 dB  
 2.55000 GHz  
 4:-80.854 dB  
 2.72000 GHz  
 5:-85.027 dB  
 3.00000 GHz

CH3 LOG 1 dB/ REF -1.4 dB  
 S12 5:-84.741 dB 3.000 000 000 GHz

CH4 LOG 5 dB/ REF -12.74 dB  
 S22 5:-26.673 dB 3.000 000 000 GHz



CH3 Markers  
 1:-75.024 dB  
 2.10000 GHz  
 2:-72.598 dB  
 2.36000 GHz  
 3:-75.851 dB  
 2.55000 GHz  
 4:-89.588 dB  
 2.72000 GHz  
 5:-84.741 dB  
 3.00000 GHz



CH4 Markers  
 1:-31.324 dB  
 2.10000 GHz  
 2:-28.503 dB  
 2.36000 GHz  
 3:-26.283 dB  
 2.55000 GHz  
 4:-24.200 dB  
 2.72000 GHz  
 5:-26.673 dB  
 3.00000 GHz

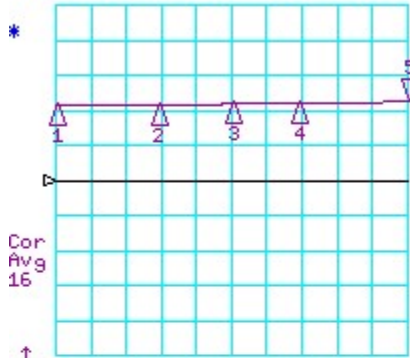
## J1 – J2 ISOLATION PLOTS

### MEASURED FROM 2.1 – 3.0 GHz

30 Mar 2005 16:33:16

CH1 LOG 5 dB/ REF -12.74 dB  
 S11 5:-1.4740 dB 3.000 000 000 GHz

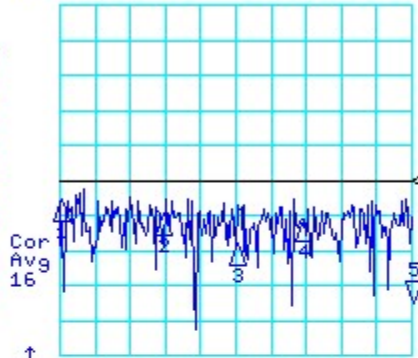
CH2 LOG 10 dB/ REF -80 dB  
 S21 5:-115.02 dB 3.000 000 000 GHz



CH1 Markers  
 1:-2.0930 dB  
 2.10000 GHz  
 2:-1.9480 dB  
 2.36000 GHz  
 3:-1.7800 dB  
 2.55000 GHz  
 4:-1.6780 dB  
 2.72000 GHz  
 5

START 2100.000 MHz STOP 3000.000 MHz

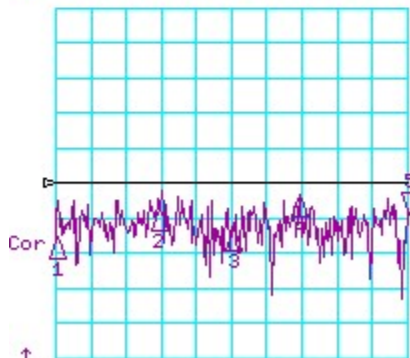
CH3 LOG 10 dB/ REF -80 dB  
 S12 5:-89.162 dB 3.000 000 000 GHz



CH2 Markers  
 1:-85.765 dB  
 2.10000 GHz  
 2:-89.705 dB  
 2.36000 GHz  
 3:-98.710 dB  
 2.55000 GHz  
 4:-91.751 dB  
 2.72000 GHz  
 5

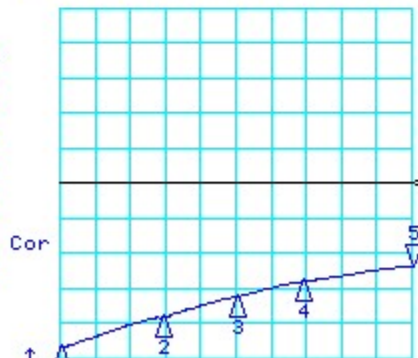
START 2100.000 MHz STOP 3000.000 MHz

CH4 LOG 5 dB/ REF -12.74 dB  
 S22 5:-24.605 dB 3.000 000 000 GHz



CH3 Markers  
 1:-95.817 dB  
 2.10000 GHz  
 2:-87.679 dB  
 2.36000 GHz  
 3:-93.560 dB  
 2.55000 GHz  
 4:-83.945 dB  
 2.72000 GHz  
 5

START 2100.000 MHz STOP 3000.000 MHz



CH4 Markers  
 1:-36.132 dB  
 2.10000 GHz  
 2:-31.736 dB  
 2.36000 GHz  
 3:-28.878 dB  
 2.55000 GHz  
 4:-26.750 dB  
 2.72000 GHz  
 5

START 2100.000 MHz STOP 3000.000 MHz

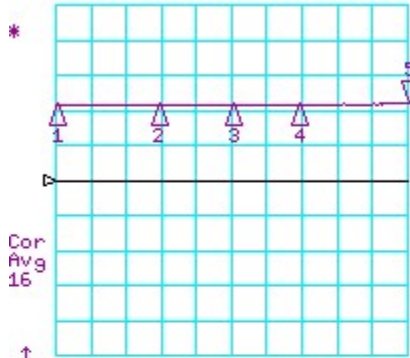
## J1 – J3 ISOLATION PLOTS

### MEASURED FROM 2.1 – 3.0 GHz

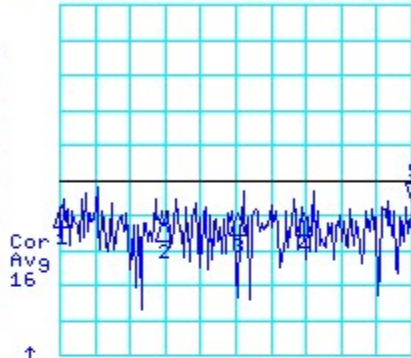
30 Mar 2005 16:36:14

CH1 LOG 5 dB/ REF -12.74 dB  
 S11 5:-1.7660 dB 3.000 000 000 GHz

CH2 LOG 10 dB/ REF -80 dB  
 S21 5:-87.127 dB 3.000 000 000 GHz



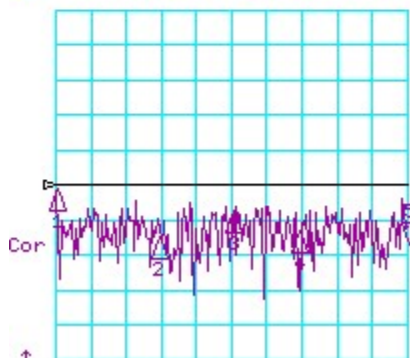
CH1 Markers  
 1:-2.1290 dB  
 2.10000 GHz  
 2:-2.0090 dB  
 2.36000 GHz  
 3:-1.9200 dB  
 2.55000 GHz  
 4:-1.8790 dB  
 2.72000 GHz  
 5



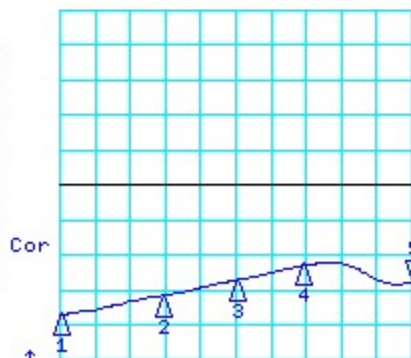
CH2 Markers  
 1:-87.507 dB  
 2.10000 GHz  
 2:-91.787 dB  
 2.36000 GHz  
 3:-89.976 dB  
 2.55000 GHz  
 4:-89.666 dB  
 2.72000 GHz  
 5

START 2100.000 MHz STOP 3000.000 MHz  
 CH3 LOG 10 dB/ REF -80 dB  
 S12 5:-97.059 dB 3.000 000 000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH4 LOG 5 dB/ REF -12.74 dB  
 S22 5:-26.638 dB 3.000 000 000 GHz



CH3 Markers  
 1:-81.715 dB  
 2.10000 GHz  
 2:-95.350 dB  
 2.36000 GHz  
 3:-87.546 dB  
 2.55000 GHz  
 4:-93.308 dB  
 2.72000 GHz  
 5



CH4 Markers  
 1:-31.310 dB  
 2.10000 GHz  
 2:-28.521 dB  
 2.36000 GHz  
 3:-26.300 dB  
 2.55000 GHz  
 4:-24.219 dB  
 2.72000 GHz  
 5

START 2100.000 MHz STOP 3000.000 MHz

START 2100.000 MHz STOP 3000.000 MHz



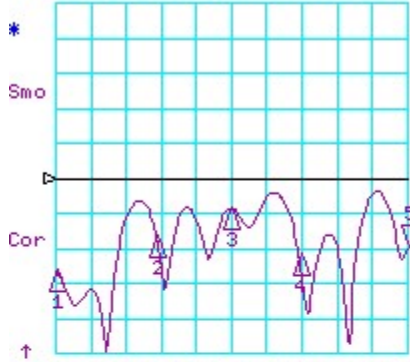
## J1 – J2 INSERTION LOSS AND INPUT/OUTPUT RETURN LOSS PLOTS

**MEASURED FROM 0.5 – 18 GHz**

30 Mar 2005 16:42:36

CH1 LOG 5 dB/ REF -9.54 dB  
 S11 5:-19.409 dB 18.000 000 000 GHz

CH2 LOG 1 dB/ REF -3 dB  
 S21 5:-2.8080 dB 18.000 000 000 GHz



CH1 Markers  
 1:-22.902 dB  
 500.000 MHz  
 2:-17.721 dB  
 5.50000 GHz  
 3:-13.739 dB  
 9.20000 GHz  
 4:-20.407 dB  
 12.6000 GHz



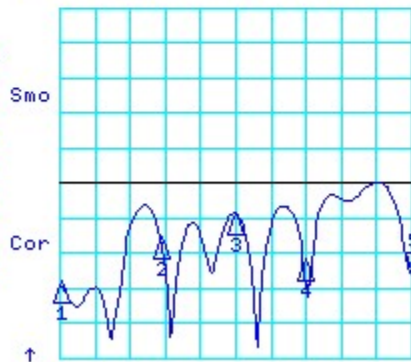
CH2 Markers  
 1:-.78100 dB  
 500.000 MHz  
 2:-1.3160 dB  
 5.50000 GHz  
 3:-1.8020 dB  
 9.20000 GHz  
 4:-2.4190 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz  
 CH3 LOG 1 dB/ REF -3 dB  
 S12 5:-2.7250 dB 18.000 000 000 GHz

CH4 LOG 5 dB/ REF -9.54 dB  
 S22 5:-22.586 dB 18.000 000 000 GHz



CH3 Markers  
 1:-.77900 dB  
 500.000 MHz  
 2:-1.3150 dB  
 5.50000 GHz  
 3:-1.8010 dB  
 9.20000 GHz  
 4:-2.5450 dB  
 12.6000 GHz



CH4 Markers  
 1:-23.861 dB  
 500.000 MHz  
 2:-17.458 dB  
 5.50000 GHz  
 3:-13.875 dB  
 9.20000 GHz  
 4:-20.668 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz

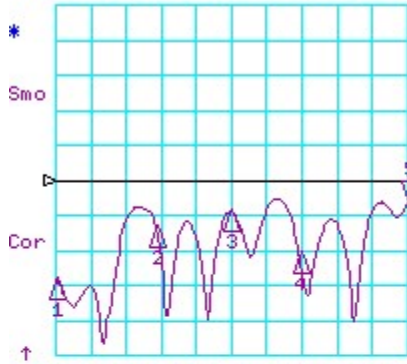
START 500.000 MHz STOP18000.000 MHz

## J1 – J3 INSERTION LOSS AND INPUT/OUTPUT RETURN LOSS PLOTS

**MEASURED FROM 0.5 – 18 GHz**

30 Mar 2005 16:45:38

CH1 LOG 5 dB/ REF -9.54 dB  
 S11 5:-12.822 dB 18.000 000 000 GHz



CH1 Markers  
 1:-23.639 dB  
 500.000 MHz  
 2:-16.303 dB  
 5.50000 GHz  
 3:-13.978 dB  
 9.20000 GHz  
 4:-19.856 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz

CH2 LOG 1 dB/ REF -3 dB  
 S21 5:-2.7080 dB 18.000 000 000 GHz



CH2 Markers  
 1:-6.2500 dB  
 500.000 MHz  
 2:-1.3060 dB  
 5.50000 GHz  
 3:-1.7380 dB  
 9.20000 GHz  
 4:-2.2490 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz

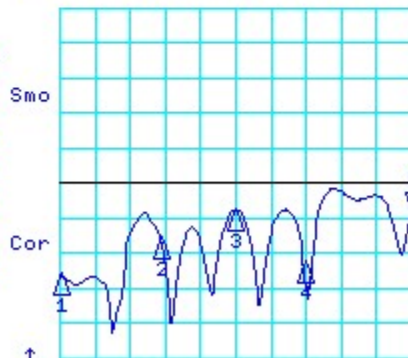
CH3 LOG 1 dB/ REF -3 dB  
 S12 5:-2.6100 dB 18.000 000 000 GHz



CH3 Markers  
 1:-6.2000 dB  
 500.000 MHz  
 2:-1.3060 dB  
 5.50000 GHz  
 3:-1.7360 dB  
 9.20000 GHz  
 4:-2.3780 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz

CH4 LOG 5 dB/ REF -9.54 dB  
 S22 5:-13.889 dB 18.000 000 000 GHz



CH4 Markers  
 1:-22.616 dB  
 500.000 MHz  
 2:-17.372 dB  
 5.50000 GHz  
 3:-13.304 dB  
 9.20000 GHz  
 4:-20.776 dB  
 12.6000 GHz

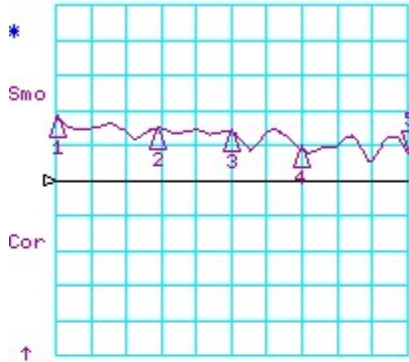
START 500.000 MHz STOP18000.000 MHz

## J2 OFF-ARM TERMINATION PLOTS (S22) MEASURED FROM 0.5 – 18 GHz

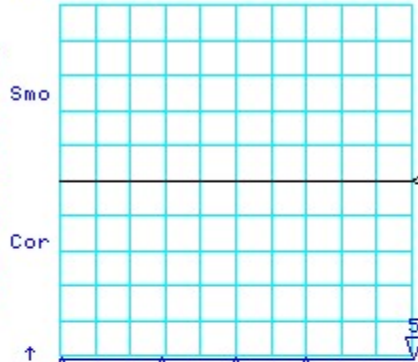
30 Mar 2005 16:43:02

CH1 LOG 5 dB/ REF -9.54 dB  
 S11 5:-5.5960 dB 18.000 000 000 GHz

CH2 LOG 1 dB/ REF -3 dB  
 S21 5:-65.189 dB 18.000 000 000 GHz



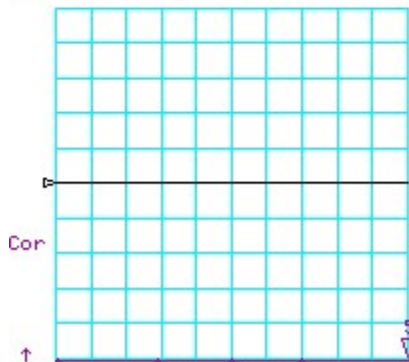
CH1 Markers  
 1:-4.9800 dB  
 500.000 MHz  
 2:-2.0550 dB  
 5.50000 GHz  
 3:-2.5130 dB  
 9.20000 GHz  
 4:-4.8220 dB  
 12.60000 GHz



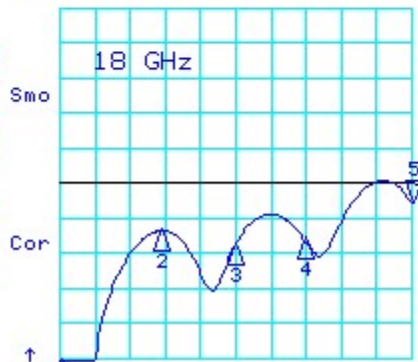
CH2 Markers  
 1:-74.292 dB  
 500.000 MHz  
 2:-73.689 dB  
 5.50000 GHz  
 3:-76.708 dB  
 9.20000 GHz  
 4:-72.370 dB  
 12.60000 GHz

START 500.000 MHz STOP 18000.000 MHz  
 CH3 LOG 1 dB/ REF -3 dB  
 S12 5:-71.813 dB 18.000 000 000 GHz

START 500.000 MHz STOP 18000.000 MHz  
 CH4 LOG 5 dB/ REF -9.54 dB  
 S22 5:-12.337 dB 18.000 000 000 GHz



CH3 Markers  
 1:-71.111 dB  
 500.000 MHz  
 2:-77.004 dB  
 5.50000 GHz  
 3:-72.374 dB  
 9.20000 GHz  
 4:-81.632 dB  
 12.60000 GHz



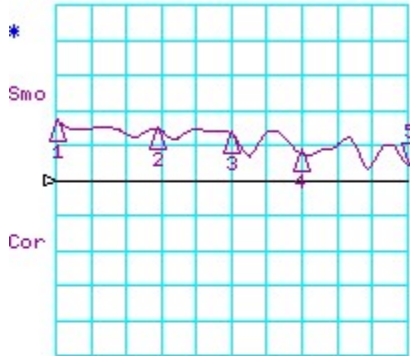
CH4 Markers  
 1:-38.025 dB  
 500.000 MHz  
 2:-16.339 dB  
 5.50000 GHz  
 3:-18.353 dB  
 9.20000 GHz  
 4:-17.351 dB  
 12.60000 GHz

## J3 OFF-ARM TERMINATION PLOTS (S22) MEASURED FROM 0.5 – 18 GHz

30 Mar 2005 16:46:00

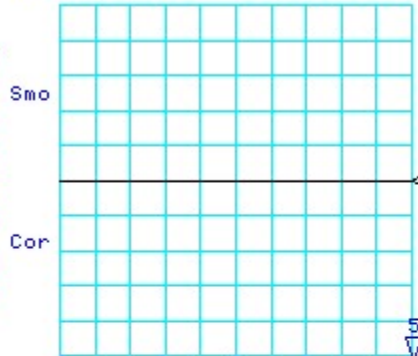
CH1 LOG 5 dB/ REF -9.54 dB  
 S11 5:-7.2300 dB 18.000 000 000 GHz

CH2 LOG 1 dB/ REF -3 dB  
 S21 5:-77.381 dB 18.000 000 000 GHz



CH1 Markers  
 1:-9.97200 dB  
 500.000 MHz  
 2:-2.1840 dB  
 5.50000 GHz  
 3:-2.7210 dB  
 9.20000 GHz  
 4:-5.4400 dB  
 12.6000 GHz

START 500.000 MHz STOP 18000.000 MHz

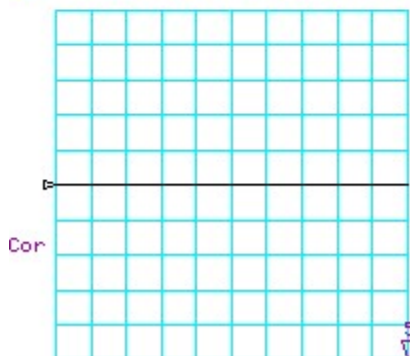


CH2 Markers  
 1:-78.237 dB  
 500.000 MHz  
 2:-79.276 dB  
 5.50000 GHz  
 3:-74.310 dB  
 9.20000 GHz  
 4:-75.853 dB  
 12.6000 GHz

START 500.000 MHz STOP 18000.000 MHz

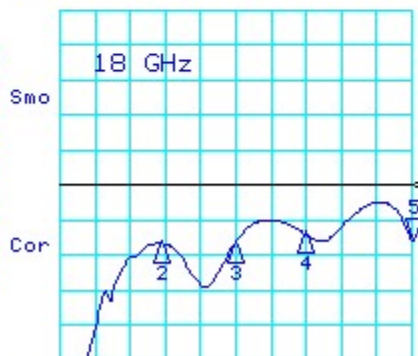
CH3 LOG 1 dB/ REF -3 dB  
 S12 5:-74.614 dB 18.000 000 000 GHz

CH4 LOG 5 dB/ REF -9.54 dB  
 S22 5:-17.465 dB 18.000 000 000 GHz



CH3 Markers  
 1:-77.293 dB  
 500.000 MHz  
 2:-104.79 dB  
 5.50000 GHz  
 3:-80.769 dB  
 9.20000 GHz  
 4:-71.517 dB  
 12.6000 GHz

START 500.000 MHz STOP 18000.000 MHz



CH4 Markers  
 1:-34.863 dB  
 500.000 MHz  
 2:-17.816 dB  
 5.50000 GHz  
 3:-17.764 dB  
 9.20000 GHz  
 4:-16.316 dB  
 12.6000 GHz

START 500.000 MHz STOP 18000.000 MHz

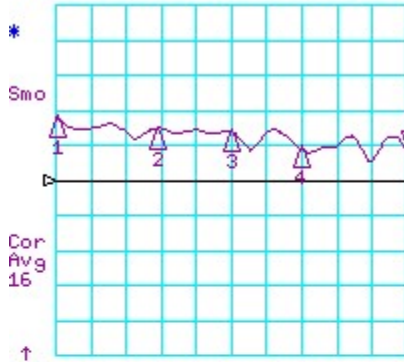
## J1 – J2 ISOLATION PLOTS

### MEASURED FROM 0.5 – 18 GHz

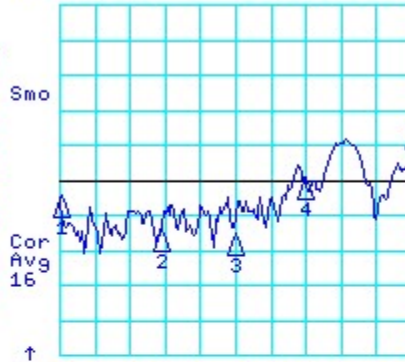
30 Mar 2005 16:44:15

CH1 LOG 5 dB/ REF -9.54 dB  
 S11 5:-5.5840 dB 18.000 000 000 GHz

CH2 LOG 10 dB/ REF -80 dB  
 S21 5:-76.645 dB 18.000 000 000 GHz



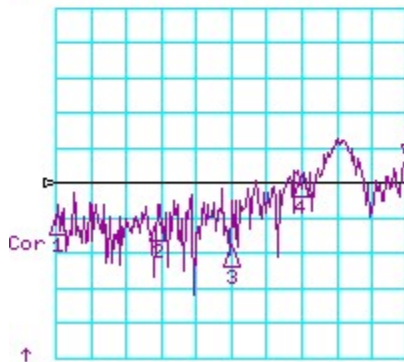
CH1 Markers  
 1:-4.9200 dB  
 500.000 MHz  
 2:-2.0530 dB  
 5.50000 GHz  
 3:-2.5210 dB  
 9.20000 GHz  
 4:-4.8270 dB  
 12.6000 GHz



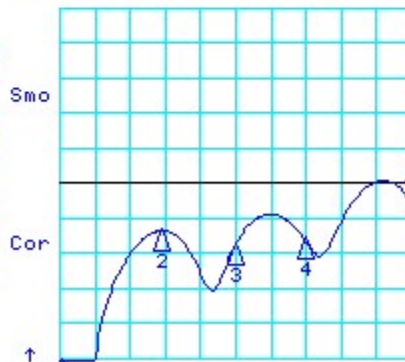
CH2 Markers  
 1:-84.939 dB  
 500.000 MHz  
 2:-94.723 dB  
 5.50000 GHz  
 3:-95.311 dB  
 9.20000 GHz  
 4:-79.718 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz  
 CH3 LOG 10 dB/ REF -80 dB  
 S12 5:-75.388 dB 18.000 000 000 GHz

START 500.000 MHz STOP18000.000 MHz  
 CH4 LOG 5 dB/ REF -9.54 dB  
 S22 5:-12.342 dB 18.000 000 000 GHz



CH3 Markers  
 1:-89.080 dB  
 500.000 MHz  
 2:-90.449 dB  
 5.50000 GHz  
 3:-97.780 dB  
 9.20000 GHz  
 4:-77.991 dB  
 12.6000 GHz



CH4 Markers  
 1:-38.057 dB  
 500.000 MHz  
 2:-16.339 dB  
 5.50000 GHz  
 3:-18.339 dB  
 9.20000 GHz  
 4:-17.332 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz

START 500.000 MHz STOP18000.000 MHz

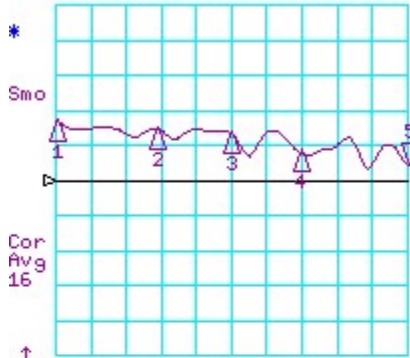
## J1 – J3 ISOLATION PLOTS

### MEASURED FROM 0.5 – 18 GHz

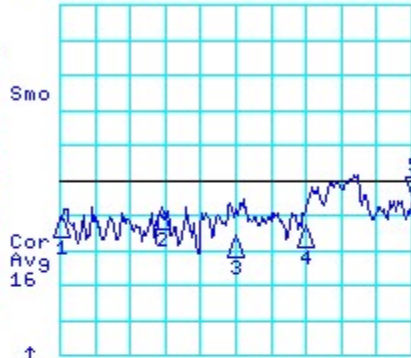
30 Mar 2005 16:49:21

CH1 LOG 5 dB/ REF -9.54 dB  
 S11 5:-7.2400 dB 18.000 000 000 GHz

CH2 LOG 10 dB/ REF -80 dB  
 S21 5:-85.066 dB 18.000 000 000 GHz



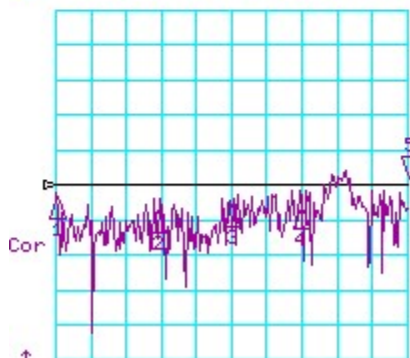
CH1 Markers  
 1:-7.2400 dB  
 500.000 MHz  
 2:-2.1820 dB  
 5.50000 GHz  
 3:-2.7270 dB  
 9.20000 GHz  
 4:-5.4420 dB  
 12.6000 GHz



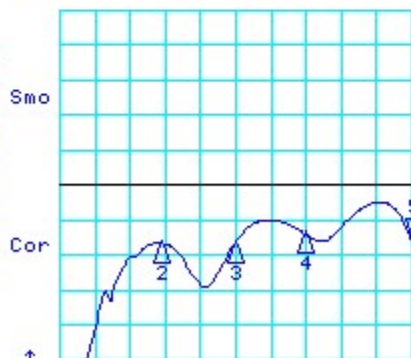
CH2 Markers  
 1:-90.676 dB  
 500.000 MHz  
 2:-87.993 dB  
 5.50000 GHz  
 3:-96.148 dB  
 9.20000 GHz  
 4:-93.077 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz  
 CH3 LOG 10 dB/ REF -80 dB  
 S12 5:-78.178 dB 18.000 000 000 GHz

START 500.000 MHz STOP18000.000 MHz  
 CH4 LOG 5 dB/ REF -9.54 dB  
 S22 5:-17.434 dB 18.000 000 000 GHz



CH3 Markers  
 1:-83.556 dB  
 500.000 MHz  
 2:-87.818 dB  
 5.50000 GHz  
 3:-86.189 dB  
 9.20000 GHz  
 4:-86.919 dB  
 12.6000 GHz



CH4 Markers  
 1:-34.863 dB  
 500.000 MHz  
 2:-17.818 dB  
 5.50000 GHz  
 3:-17.753 dB  
 9.20000 GHz  
 4:-16.311 dB  
 12.6000 GHz

**TEMPERATURE TEST DATA (+85°C)**

**INSERTION LOSS AND INPUT/OUTPUT RETURN LOSS PLOTS,**

**OFF-ARM TERMINATION PLOTS,**

**AND ISOLATION PLOTS**

**FOR J1-J2 AND J1-J3**

**TAKEN OVER**

**NARROW BAND (2.1 – 3.0 GHz) AND BROAD BAND (.05 – 18 GHz)**

**FREQUENCY RANGES**

**FOR**

**AMC MODEL NUMBER**

**SWN-2013-2DT-407273**  
**OPTION CE, TC**

**DATA TAKEN AT +85°C**

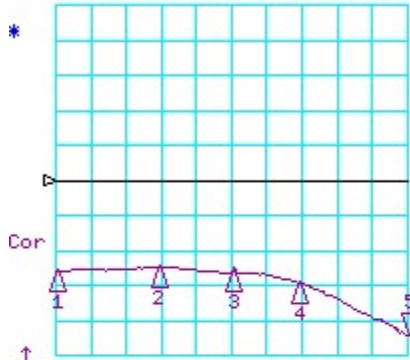
## J1 – J2 INSERTION LOSS AND INPUT/OUTPUT RETURN LOSS PLOTS

### MEASURED FROM 2.1 – 3.0 GHz

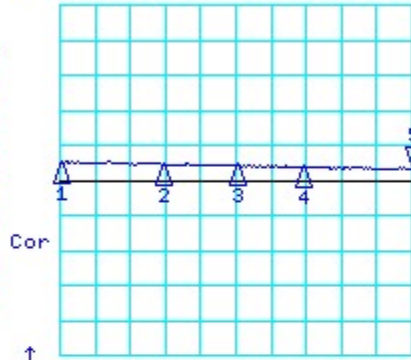
30 Mar 2005 17:17:59

CH1 LOG 5 dB/ REF -12.74 dB  
 S11 5:-34.743 dB 3.000 000 000 GHz

CH2 LOG 1 dB/ REF -1.4 dB  
 S21 5:-1.0640 dB 3.000 000 000 GHz



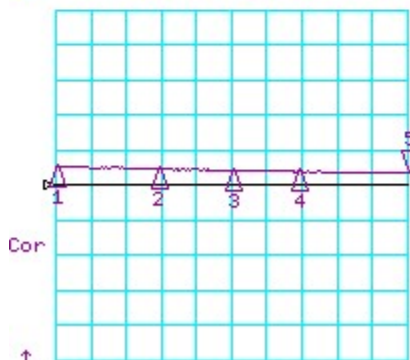
CH1 Markers  
 1:-25.643 dB  
 2.10000 GHz  
 2:-25.150 dB  
 2.36000 GHz  
 3:-25.739 dB  
 2.55000 GHz  
 4:-27.281 dB  
 2.72000 GHz



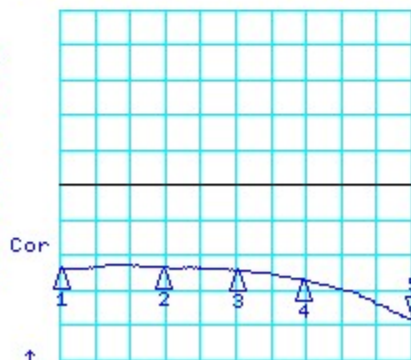
CH2 Markers  
 1:-.88000 dB  
 2.10000 GHz  
 2:-.93500 dB  
 2.36000 GHz  
 3:-.96600 dB  
 2.55000 GHz  
 4:-1.0150 dB  
 2.72000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH3 LOG 1 dB/ REF -1.4 dB  
 S12 5:-1.0650 dB 3.000 000 000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH4 LOG 5 dB/ REF -12.74 dB  
 S22 5:-31.806 dB 3.000 000 000 GHz



CH3 Markers  
 1:-.89100 dB  
 2.10000 GHz  
 2:-.93400 dB  
 2.36000 GHz  
 3:-.97900 dB  
 2.55000 GHz  
 4:-1.0060 dB  
 2.72000 GHz



CH4 Markers  
 1:-24.631 dB  
 2.10000 GHz  
 2:-24.506 dB  
 2.36000 GHz  
 3:-24.890 dB  
 2.55000 GHz  
 4:-26.269 dB  
 2.72000 GHz

START 2100.000 MHz STOP 3000.000 MHz

START 2100.000 MHz STOP 3000.000 MHz



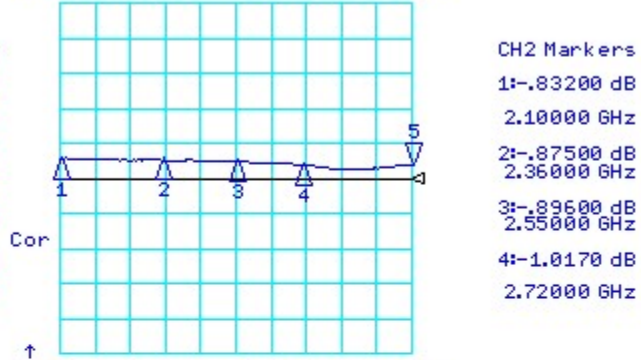
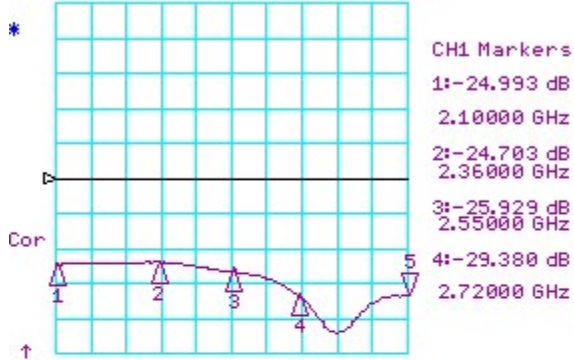
## J1 – J3 INSERTION LOSS AND INPUT/OUTPUT RETURN LOSS PLOTS

### MEASURED FROM 2.1 – 3.0 GHz

30 Mar 2005 17:20:50

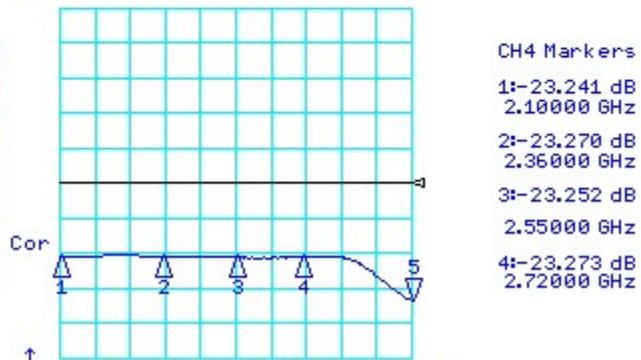
CH1 LOG 5 dB/ REF -12.74 dB  
 S11 5:-29.405 dB 3.000 000 000 GHz

CH2 LOG 1 dB/ REF -1.4 dB  
 S21 5:-1.0330 dB 3.000 000 000 GHz



START 2100.000 MHz STOP 3000.000 MHz  
 CH3 LOG 1 dB/ REF -1.4 dB  
 S12 5:-1.0230 dB 3.000 000 000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH4 LOG 5 dB/ REF -12.74 dB  
 S22 5:-29.430 dB 3.000 000 000 GHz



START 2100.000 MHz STOP 3000.000 MHz

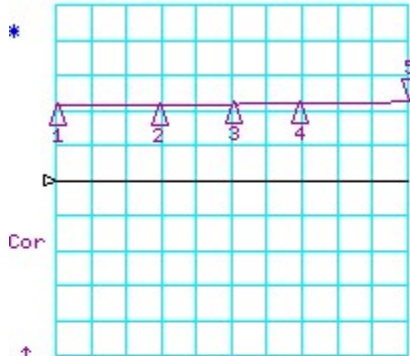
START 2100.000 MHz STOP 3000.000 MHz

## J2 OFF-ARM TERMINATION PLOTS (S22) MEASURED FROM 2.1 – 3.0 GHz

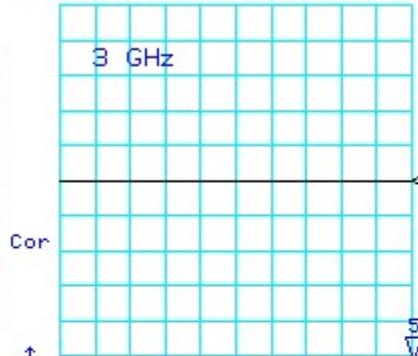
30 Mar 2005 17:18:22

CH1 LOG 5 dB/ REF -12.74 dB  
 S11 5:-1.4970 dB 3.000 000 000 GHz

CH2 LOG 1 dB/ REF -1.4 dB  
 S21 5:-80.375 dB 3.000 000 000 GHz



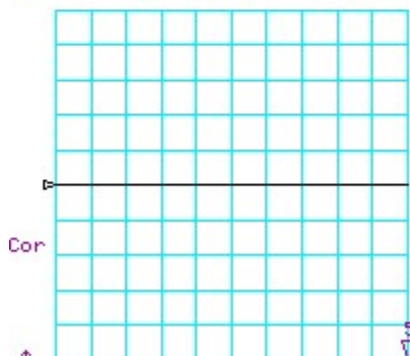
CH1 Markers  
 1:-2.1150 dB  
 2.10000 GHz  
 2:-1.9750 dB  
 2.35000 GHz  
 3:-1.8050 dB  
 2.55000 GHz  
 4:-1.7110 dB  
 2.72000 GHz



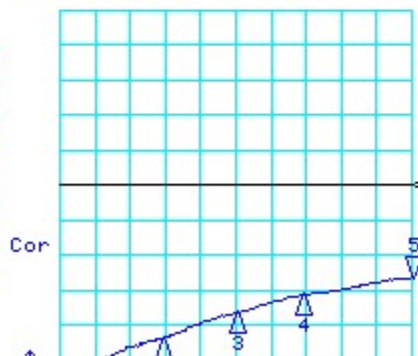
CH2 Markers  
 1:-81.334 dB  
 2.10000 GHz  
 2:-80.837 dB  
 2.35000 GHz  
 3:-80.077 dB  
 2.55000 GHz  
 4:-78.935 dB  
 2.72000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH3 LOG 1 dB/ REF -1.4 dB  
 S12 5:-80.653 dB 3.000 000 000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH4 LOG 5 dB/ REF -12.74 dB  
 S22 5:-25.980 dB 3.000 000 000 GHz



CH3 Markers  
 1:-69.222 dB  
 2.10000 GHz  
 2:-80.820 dB  
 2.35000 GHz  
 3:-84.895 dB  
 2.55000 GHz  
 4:-84.396 dB  
 2.72000 GHz



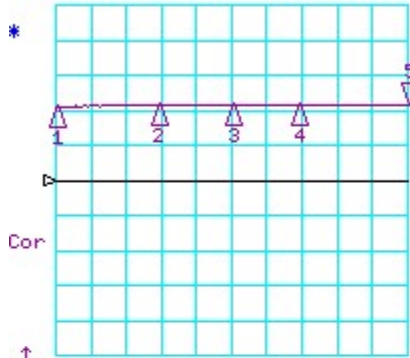
CH4 Markers  
 1:-40.204 dB  
 2.10000 GHz  
 2:-34.531 dB  
 2.35000 GHz  
 3:-30.864 dB  
 2.55000 GHz  
 4:-28.406 dB  
 2.72000 GHz

## J3 OFF-ARM TERMINATION PLOTS (S22) MEASURED FROM 2.1 – 3.0 GHz

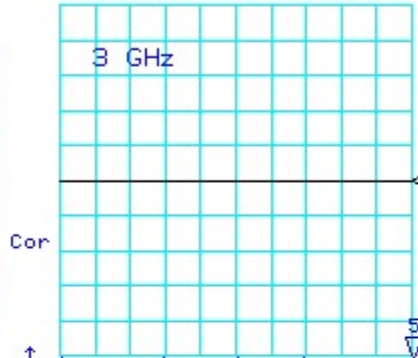
30 Mar 2005 17:21:09

CH1 LOG 5 dB/ REF -12.74 dB  
 S11 5:-1.8250 dB 3.000 000 000 GHz

CH2 LOG 1 dB/ REF -1.4 dB  
 S21 5:-74.521 dB 3.000 000 000 GHz



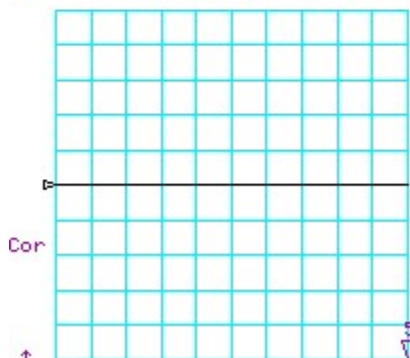
CH1 Markers  
 1:-2.1580 dB  
 2.10000 GHz  
 2:-2.0680 dB  
 2.36000 GHz  
 3:-1.9970 dB  
 2.55000 GHz  
 4:-1.9570 dB  
 2.72000 GHz



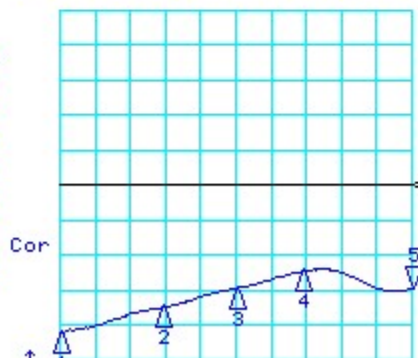
CH2 Markers  
 1:-69.122 dB  
 2.10000 GHz  
 2:-78.149 dB  
 2.36000 GHz  
 3:-79.260 dB  
 2.55000 GHz  
 4:-78.539 dB  
 2.72000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH3 LOG 1 dB/ REF -1.4 dB  
 S12 5:-76.791 dB 3.000 000 000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH4 LOG 5 dB/ REF -12.74 dB  
 S22 5:-27.504 dB 3.000 000 000 GHz



CH3 Markers  
 1:-78.042 dB  
 2.10000 GHz  
 2:-76.781 dB  
 2.36000 GHz  
 3:-74.787 dB  
 2.55000 GHz  
 4:-86.816 dB  
 2.72000 GHz



CH4 Markers  
 1:-33.838 dB  
 2.10000 GHz  
 2:-30.217 dB  
 2.36000 GHz  
 3:-27.435 dB  
 2.55000 GHz  
 4:-25.032 dB  
 2.72000 GHz

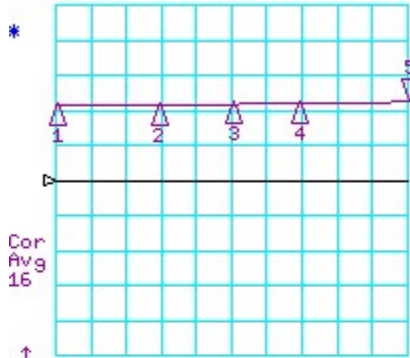
## J1 – J2 ISOLATION PLOTS

### MEASURED FROM 2.1 – 3.0 GHz

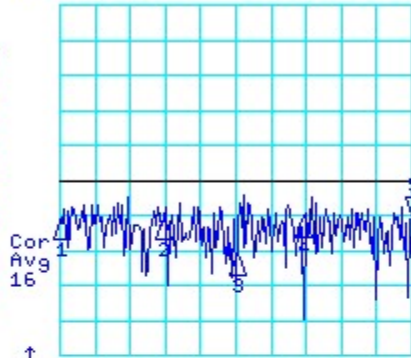
30 Mar 2005 17:19:27

CH1 LOG 5 dB/ REF -12.74 dB  
 S11 5:-1.5020 dB 3.000 000 000 GHz

CH2 LOG 10 dB/ REF -80 dB  
 S21 5:-91.263 dB 3.000 000 000 GHz



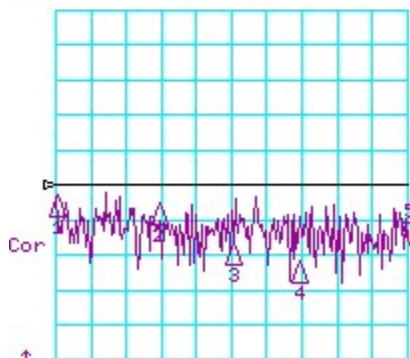
CH1 Markers  
 1:-2.1190 dB  
 2.10000 GHz  
 2:-1.9770 dB  
 2.36000 GHz  
 3:-1.8150 dB  
 2.55000 GHz  
 4:-1.7220 dB  
 2.72000 GHz



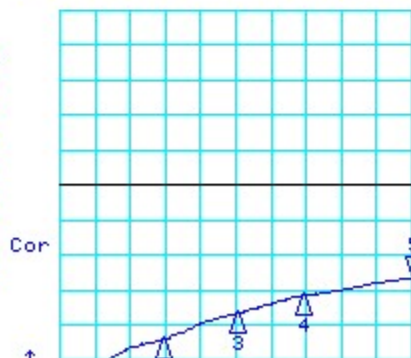
CH2 Markers  
 1:-90.928 dB  
 2.10000 GHz  
 2:-90.982 dB  
 2.36000 GHz  
 3:-101.36 dB  
 2.55000 GHz  
 4:-90.347 dB  
 2.72000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH3 LOG 10 dB/ REF -80 dB  
 S12 5:-97.249 dB 3.000 000 000 GHz

START 2100.000 MHz STOP 3000.000 MHz  
 CH4 LOG 5 dB/ REF -12.74 dB  
 S22 5:-26.027 dB 3.000 000 000 GHz



CH3 Markers  
 1:-83.191 dB  
 2.10000 GHz  
 2:-85.674 dB  
 2.36000 GHz  
 3:-96.963 dB  
 2.55000 GHz  
 4:-101.92 dB  
 2.72000 GHz



CH4 Markers  
 1:-40.595 dB  
 2.10000 GHz  
 2:-34.730 dB  
 2.36000 GHz  
 3:-31.032 dB  
 2.55000 GHz  
 4:-28.507 dB  
 2.72000 GHz

START 2100.000 MHz STOP 3000.000 MHz

START 2100.000 MHz STOP 3000.000 MHz

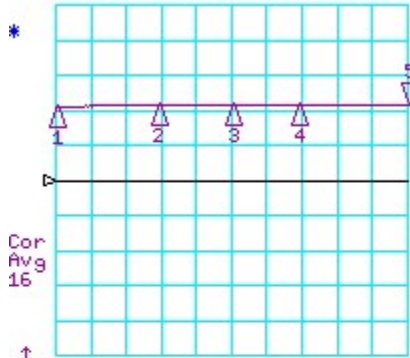
## J1 – J3 ISOLATION PLOTS

### MEASURED FROM 2.1 – 3.0 GHz

30 Mar 2005 17:22:06

CH1 LOG 5 dB/ REF -12.74 dB  
 S11 5:-1.8280 dB 3.000 000 000 GHz

CH2 LOG 10 dB/ REF -80 dB  
 S21 5:-91.355 dB 3.000 000 000 GHz

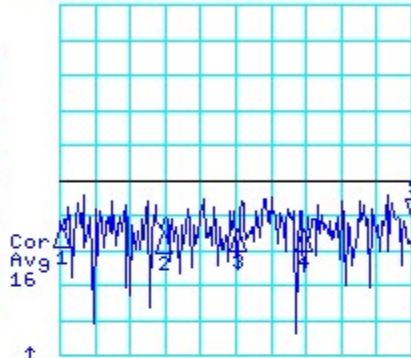


CH1 Markers

- 1:-2.1670 dB  
2.10000 GHz
- 2:-2.0630 dB  
2.36000 GHz
- 3:-1.9870 dB  
2.55000 GHz
- 4:-1.9530 dB  
2.72000 GHz

START 2100.000 MHz STOP 3000.000 MHz

CH3 LOG 10 dB/ REF -80 dB  
 S12 5:-98.675 dB 3.000 000 000 GHz

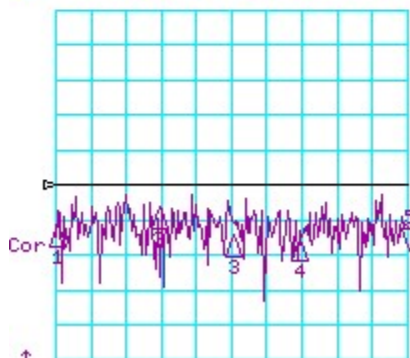


CH2 Markers

- 1:-93.593 dB  
2.10000 GHz
- 2:-95.219 dB  
2.36000 GHz
- 3:-94.535 dB  
2.55000 GHz
- 4:-94.627 dB  
2.72000 GHz

START 2100.000 MHz STOP 3000.000 MHz

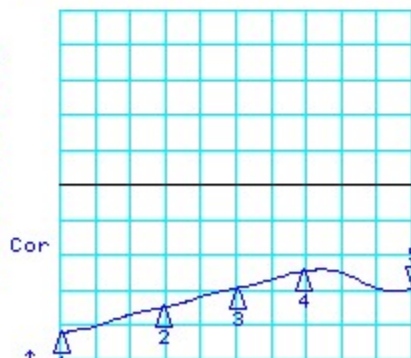
CH4 LOG 5 dB/ REF -12.74 dB  
 S22 5:-27.502 dB 3.000 000 000 GHz



CH3 Markers

- 1:-91.943 dB  
2.10000 GHz
- 2:-86.806 dB  
2.36000 GHz
- 3:-94.464 dB  
2.55000 GHz
- 4:-96.104 dB  
2.72000 GHz

START 2100.000 MHz STOP 3000.000 MHz



CH4 Markers

- 1:-33.831 dB  
2.10000 GHz
- 2:-30.214 dB  
2.36000 GHz
- 3:-27.463 dB  
2.55000 GHz
- 4:-25.026 dB  
2.72000 GHz

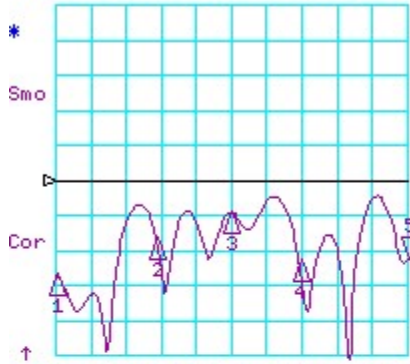
START 2100.000 MHz STOP 3000.000 MHz

## J1 – J2 INSERTION LOSS AND INPUT/OUTPUT RETURN LOSS PLOTS

**MEASURED FROM 0.5 – 18 GHz**

30 Mar 2005 17:23:00

CH1 LOG 5 dB/ REF -9.54 dB  
 S11 5:-20.641 dB 18.000 000 000 GHz



CH1 Markers  
 1:-23.052 dB  
 500.000 MHz  
 2:-17.910 dB  
 5.50000 GHz  
 3:-14.090 dB  
 9.20000 GHz  
 4:-20.991 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz

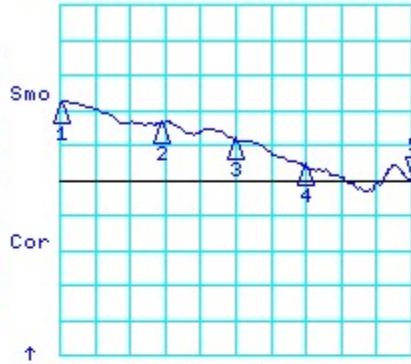
CH3 LOG 1 dB/ REF -3 dB  
 S12 5:-2.9410 dB 18.000 000 000 GHz



CH3 Markers  
 1:-.78400 dB  
 500.000 MHz  
 2:-1.3540 dB  
 5.50000 GHz  
 3:-1.8290 dB  
 9.20000 GHz  
 4:-2.6690 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz

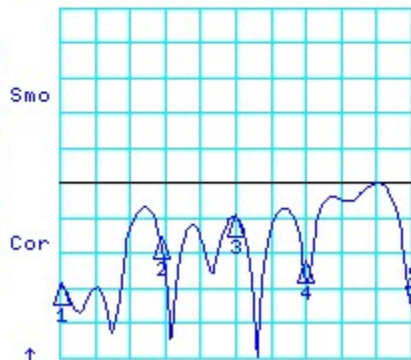
CH2 LOG 1 dB/ REF -3 dB  
 S21 5:-2.9810 dB 18.000 000 000 GHz



CH2 Markers  
 1:-.77900 dB  
 500.000 MHz  
 2:-1.3410 dB  
 5.50000 GHz  
 3:-1.8240 dB  
 9.20000 GHz  
 4:-2.5380 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz

CH4 LOG 5 dB/ REF -9.54 dB  
 S22 5:-27.487 dB 18.000 000 000 GHz



CH4 Markers  
 1:-24.001 dB  
 500.000 MHz  
 2:-17.589 dB  
 5.50000 GHz  
 3:-14.323 dB  
 9.20000 GHz  
 4:-20.829 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz

## J1 – J3 INSERTION LOSS AND INPUT/OUTPUT RETURN LOSS PLOTS

**MEASURED FROM 0.5 – 18 GHz**

30 Mar 2005 17:25:26

CH1 LOG 5 dB/ REF -9.54 dB  
 S11 5:-13.285 dB 18.000 000 000 GHz



CH1 Markers  
 1:-23.612 dB  
 500.000 MHz  
 2:-16.550 dB  
 5.50000 GHz  
 3:-14.413 dB  
 9.20000 GHz  
 4:-20.471 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz

CH3 LOG 1 dB/ REF -3 dB  
 S12 5:-2.7210 dB 18.000 000 000 GHz



CH3 Markers  
 1:-.62000 dB  
 500.000 MHz  
 2:-1.3270 dB  
 5.50000 GHz  
 3:-1.7500 dB  
 9.20000 GHz  
 4:-2.4800 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz

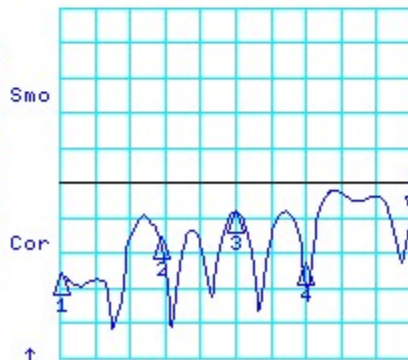
CH2 LOG 1 dB/ REF -3 dB  
 S21 5:-2.8060 dB 18.000 000 000 GHz



CH2 Markers  
 1:-.62400 dB  
 500.000 MHz  
 2:-1.3090 dB  
 5.50000 GHz  
 3:-1.7650 dB  
 9.20000 GHz  
 4:-2.3530 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz

CH4 LOG 5 dB/ REF -9.54 dB  
 S22 5:-14.722 dB 18.000 000 000 GHz



CH4 Markers  
 1:-22.574 dB  
 500.000 MHz  
 2:-17.483 dB  
 5.50000 GHz  
 3:-13.615 dB  
 9.20000 GHz  
 4:-21.141 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz

## J2 OFF-ARM TERMINATION PLOTS (S22) MEASURED FROM 0.5 – 18 GHz

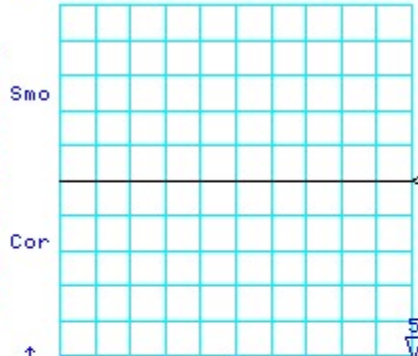
30 Mar 2005 17:23:24

CH1 LOG 5 dB/ REF -9.54 dB  
 S11 5:-5.6900 dB 18.000 000 000 GHz

CH2 LOG 1 dB/ REF -3 dB  
 S21 5:-69.794 dB 18.000 000 000 GHz



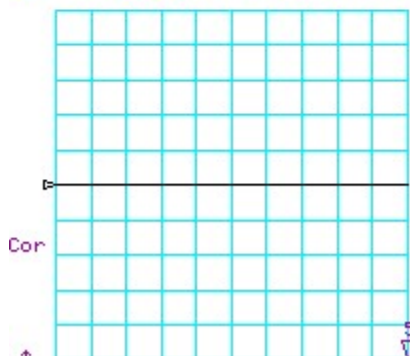
CH1 Markers  
 1:-4.9800 dB  
 500.000 MHz  
 2:-2.1220 dB  
 5.50000 GHz  
 3:-2.6230 dB  
 9.20000 GHz  
 4:-4.9760 dB  
 12.6000 GHz



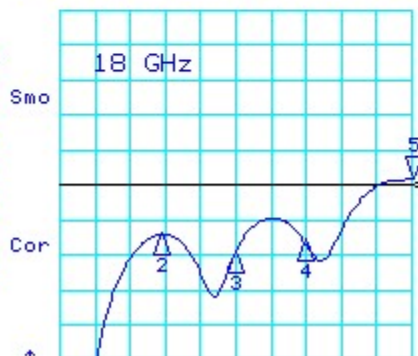
CH2 Markers  
 1:-74.088 dB  
 500.000 MHz  
 2:-78.774 dB  
 5.50000 GHz  
 3:-75.891 dB  
 9.20000 GHz  
 4:-74.028 dB  
 12.6000 GHz

START 500.000 MHz STOP 18000.000 MHz  
 CH3 LOG 1 dB/ REF -3 dB  
 S12 5:-70.229 dB 18.000 000 000 GHz

START 500.000 MHz STOP 18000.000 MHz  
 CH4 LOG 5 dB/ REF -9.54 dB  
 S22 5:-8.4770 dB 18.000 000 000 GHz



CH3 Markers  
 1:-84.720 dB  
 500.000 MHz  
 2:-81.288 dB  
 5.50000 GHz  
 3:-77.586 dB  
 9.20000 GHz  
 4:-73.035 dB  
 12.6000 GHz



CH4 Markers  
 1:-38.826 dB  
 500.000 MHz  
 2:-16.507 dB  
 5.50000 GHz  
 3:-19.092 dB  
 9.20000 GHz  
 4:-17.447 dB  
 12.6000 GHz



## J3 OFF-ARM TERMINATION PLOTS (S22) MEASURED FROM 0.5 – 18 GHz

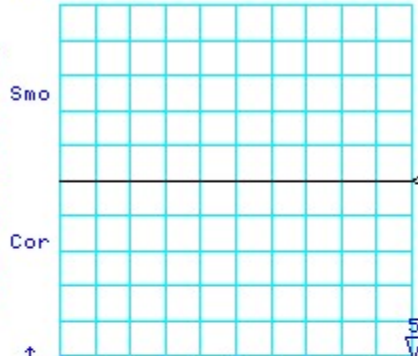
30 Mar 2005 17:25:47

CH1 LOG 5 dB/ REF -9.54 dB  
 S11 5:-7.4190 dB 18.000 000 000 GHz

CH2 LOG 1 dB/ REF -3 dB  
 S21 5:-73.960 dB 18.000 000 000 GHz



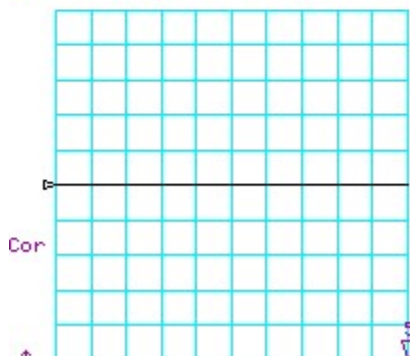
CH1 Markers  
 1:-9.98700 dB  
 500.000 MHz  
 2:-2.2760 dB  
 5.50000 GHz  
 3:-2.8310 dB  
 9.20000 GHz  
 4:-5.6110 dB  
 12.6000 GHz



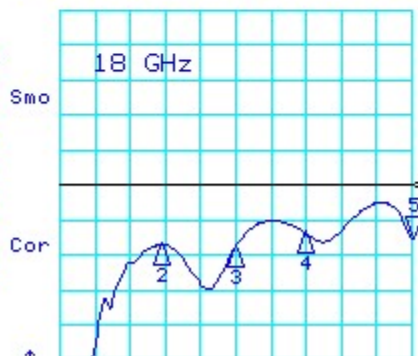
CH2 Markers  
 1:-79.076 dB  
 500.000 MHz  
 2:-78.749 dB  
 5.50000 GHz  
 3:-77.397 dB  
 9.20000 GHz  
 4:-77.742 dB  
 12.6000 GHz

START 500.000 MHz STOP 18000.000 MHz  
 CH3 LOG 1 dB/ REF -3 dB  
 S12 5:-74.459 dB 18.000 000 000 GHz

START 500.000 MHz STOP 18000.000 MHz  
 CH4 LOG 5 dB/ REF -9.54 dB  
 S22 5:-17.065 dB 18.000 000 000 GHz



CH3 Markers  
 1:-71.055 dB  
 500.000 MHz  
 2:-72.139 dB  
 5.50000 GHz  
 3:-77.772 dB  
 9.20000 GHz  
 4:-76.981 dB  
 12.6000 GHz



CH4 Markers  
 1:-34.919 dB  
 500.000 MHz  
 2:-18.085 dB  
 5.50000 GHz  
 3:-18.365 dB  
 9.20000 GHz  
 4:-16.216 dB  
 12.6000 GHz

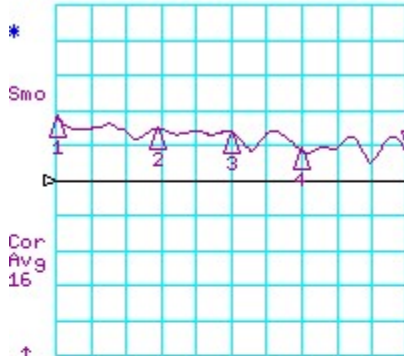
## J1 – J2 ISOLATION PLOTS

### MEASURED FROM 0.5 – 18 GHz

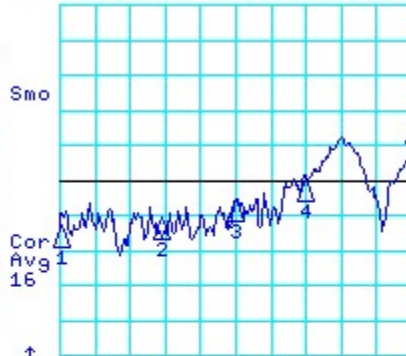
30 Mar 2005 17:24:34

CH1 LOG 5 dB/ REF -9.54 dB  
 S11 5:-5.6820 dB 18.000 000 000 GHz

CH2 LOG 10 dB/ REF -80 dB  
 S21 5:-75.074 dB 18.000 000 000 GHz



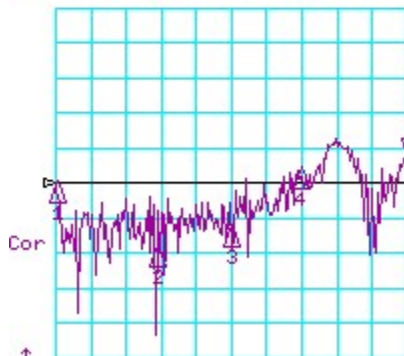
CH1 Markers  
 1:-4.9800 dB  
 500.000 MHz  
 2:-2.1290 dB  
 5.50000 GHz  
 3:-2.6170 dB  
 9.20000 GHz  
 4:-4.9580 dB  
 12.6000 GHz



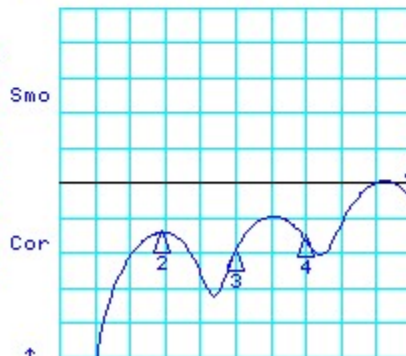
CH2 Markers  
 1:-93.362 dB  
 500.000 MHz  
 2:-91.145 dB  
 5.50000 GHz  
 3:-86.001 dB  
 9.20000 GHz  
 4:-80.151 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz  
 CH3 LOG 10 dB/ REF -80 dB  
 S12 5:-73.393 dB 18.000 000 000 GHz

START 500.000 MHz STOP18000.000 MHz  
 CH4 LOG 5 dB/ REF -9.54 dB  
 S22 5:-11.439 dB 18.000 000 000 GHz



CH3 Markers  
 1:-79.831 dB  
 500.000 MHz  
 2:-97.946 dB  
 5.50000 GHz  
 3:-92.349 dB  
 9.20000 GHz  
 4:-75.993 dB  
 12.6000 GHz



CH4 Markers  
 1:-38.870 dB  
 500.000 MHz  
 2:-16.547 dB  
 5.50000 GHz  
 3:-19.180 dB  
 9.20000 GHz  
 4:-17.159 dB  
 12.6000 GHz

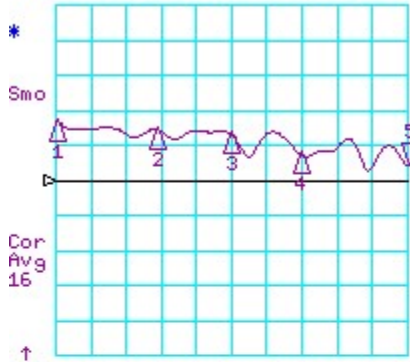
## J1 – J3 ISOLATION PLOTS

**MEASURED FROM 0.5 – 18 GHz**

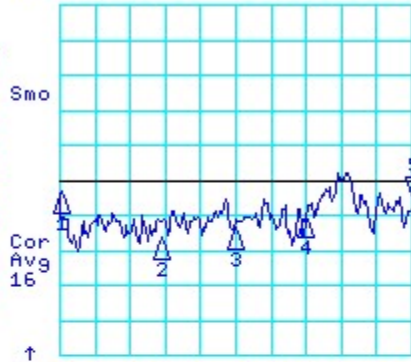
30 Mar 2005 17:28:37

CH1 LOG 5 dB/ REF -9.54 dB  
 S11 5:-7.4100 dB 18.000 000 000 GHz

CH2 LOG 10 dB/ REF -80 dB  
 S21 5:-85.506 dB 18.000 000 000 GHz



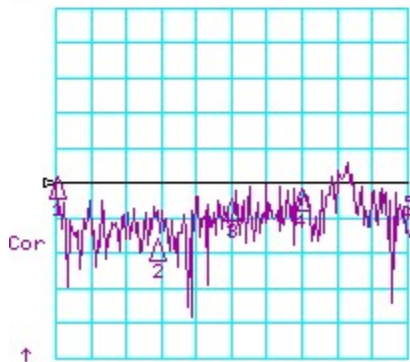
CH1 Markers  
 1:-7.4100 dB  
 500.000 MHz  
 2:-2.2750 dB  
 5.50000 GHz  
 3:-2.8390 dB  
 9.20000 GHz  
 4:-5.6080 dB  
 12.6000 GHz



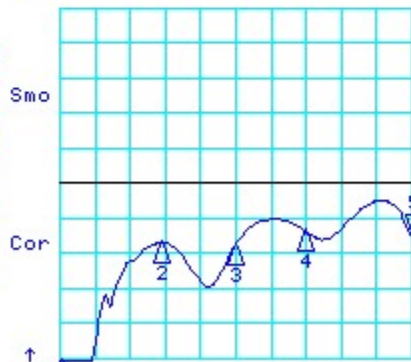
CH2 Markers  
 1:-83.301 dB  
 500.000 MHz  
 2:-96.794 dB  
 5.50000 GHz  
 3:-93.894 dB  
 9.20000 GHz  
 4:-90.583 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz  
 CH3 LOG 10 dB/ REF -80 dB  
 S12 5:-95.347 dB 18.000 000 000 GHz

START 500.000 MHz STOP18000.000 MHz  
 CH4 LOG 5 dB/ REF -9.54 dB  
 S22 5:-17.136 dB 18.000 000 000 GHz



CH3 Markers  
 1:-78.655 dB  
 500.000 MHz  
 2:-96.493 dB  
 5.50000 GHz  
 3:-84.636 dB  
 9.20000 GHz  
 4:-81.815 dB  
 12.6000 GHz



CH4 Markers  
 1:-34.989 dB  
 500.000 MHz  
 2:-18.090 dB  
 5.50000 GHz  
 3:-18.379 dB  
 9.20000 GHz  
 4:-16.185 dB  
 12.6000 GHz

START 500.000 MHz STOP18000.000 MHz

START 500.000 MHz STOP18000.000 MHz