



The CD1920/60MK-B7 is a High Isolation, High Power (200W CW) and Low PIM PCS Full Band **Diplexer/Combiner**. This is the most economic approach to combine PCS Uplink and Downlink in to one common port while providing VERY High Isolation between Repeaters with very Low Insertion Loss. Unit available with SMA/7/16" DIN connectors. Please call for additional options/versions available.



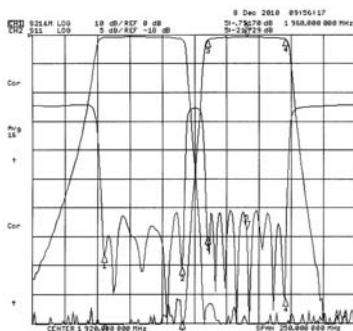
Model: CD1920/60MK-B7

1. Electrical Characteristics	
Item	Value
Uplink 1dB Pass Band Frequency Range [MHz]	1850 ~ 1910
Downlink 1dB Pass Band Frequency Range	1930 ~ 1990
Pass Band Insertion Loss @ Fo [dB]	< 1.0, 0.4 (Typ.)
Pass Band Ripple [dB]	< 0.4 P-T-P
Uplink Rejection @ 1920 MHz [dBc]	45 (Min.)
Uplink Rejection @ 1930 to 1990 MHz [dBc]	90 (Min.), 100 (Typ.)
Downlink Rejection @ 1920 MHz [dBc]	45 (Min.)
Downlink Rejection @ 1850 to 1910 MHz [dBc]	90 (Min.), 100 (Typ.)
Isolation between Filters MHz [dBc]	90 (Min.), 100 (Typ.)
IM Products, IM3 @ 2 x 33 dBm [dBc]	-143 (Min.)
IM Products, IM3 @ 2 x 43 dBm [dBc]	-133 (Typ.)
VSWR Both Pass Bands	< 1.28:1
Input/Output	DC Potential
Input / Output Impedance	50 Ω
RF power Capability each path CW	200 Watts
RF power Capability each path PEAK	2400 Watts

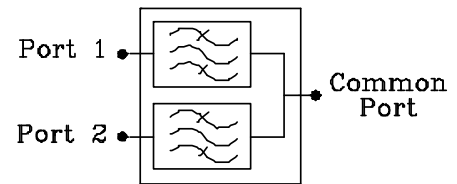
2. Mechanical Characteristics	
Final Finish (OPTIONAL)	Epoxy Gray
Dimensions (Excluding Mounting Hardware, and Connectors)	7.4" x 5.0" x 1.8"
Weight [lb / kg]	3.0 / 1.25
Connectors	N-Type Female (LOW PIM)

3. Environment Characteristics	
Operating Temperature	-30°C ~ +75°C

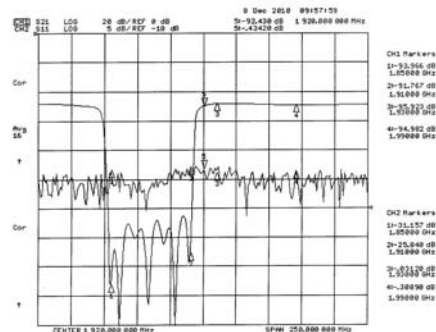
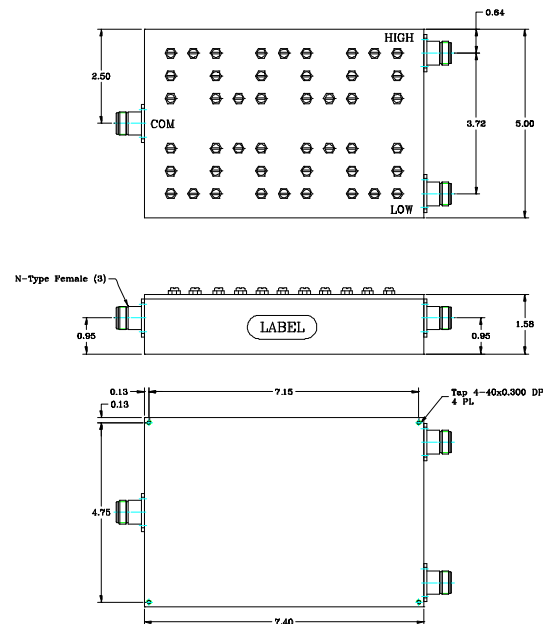
4. Plots



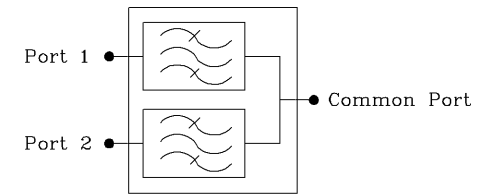
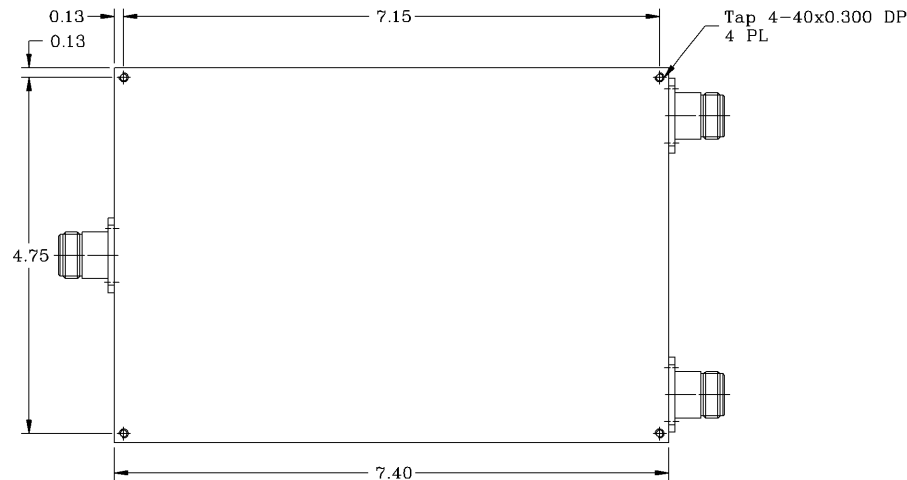
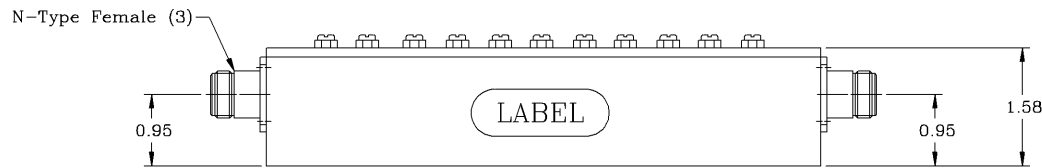
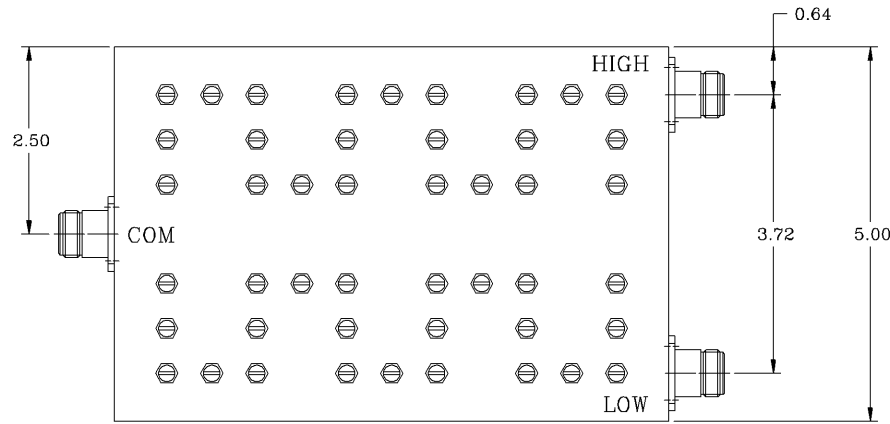
5. Block Diagram



6. Outline Drawing



REVISIONS			
REV		DATE	APPROVED



Electrical Specifications

- *Low Pass Band Range [MHz] : 1850 to 1910
- *High Pass Band Range [MHz] : 1930 to 1990
- *Pass Band Insertion Loss [dB] : <1.5, 1.4 (Typ.)
- *Pass Band Ripple [dB] : < 0.5 P-T-P
- *Low Band Rejection @ 1930 to 1990 MHz [dB] : 90 (Min.)
- *High Band Rejection @ 1930 to 1990 MHz [dB] : 90 (Min.)
- *Isolation between Filters [dB] : 90 (Min.)
- *Pass Band Return Loss [dB] : -18 (Max.), <1.28:1
- *Input/Output Impedance : 50 ohm
- *IM Products, IM3 @ 2 x +33 dBm [dBc] : -143 (Min.)
- *IM Products, IM3 @ 2 x +43 dBm [dBc] : -133 (Typ.)
- *RF Power Capability CW DL Port : 200 Watts
- PEAK DL Port : 2200 Watts
- *Input/Output @ DC Ground Potential

OPERATING TEMPERATURE RANGE: -30°C TO +75°C

PROPRIETARY DOCUMENT:
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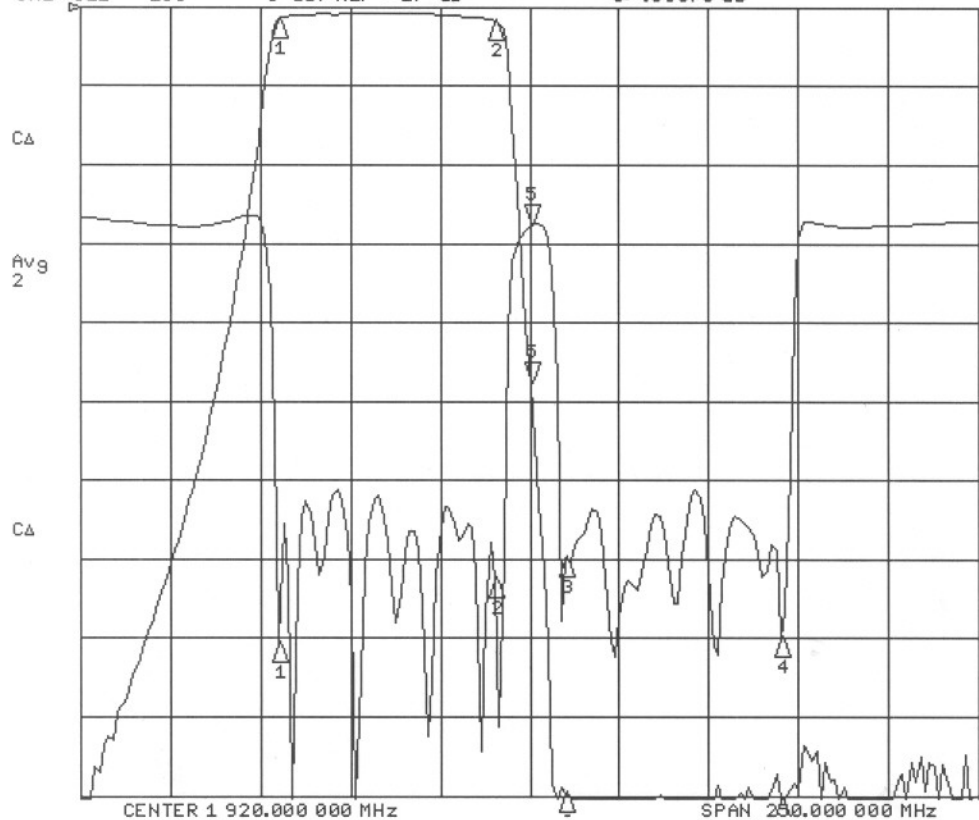
- NOTES:
1. BREAK ALL CORNERS & EDGES.005/.010.
 2. FINAL FINISH:
EPOXY GRAY - OPTIONAL

DIMENSIONS ARE IN INCHES TOLERANCES ARE DECIMALS		CONTRACT NO:		G-Way Microwave					
± 1"	.X ± .05 .XX ± .01 .XXX ± .003	APPROVALS	DATE					TITLE Full Band PCS Diplexer	
TREATMENT	ENG. CHECKED	DRAWN Segal	12/10	CD1920/60HK-B7		SIZE	CAGE CODE	DWG NO:	REV.
FINISH 63/	DESIGN ACTIVITY			A	3K1H4	CD1920/60HK-B7-1	0		
MATERIAL					SCALE None			SHEET 1 OF 1	

CD 1920/60 HK - B7

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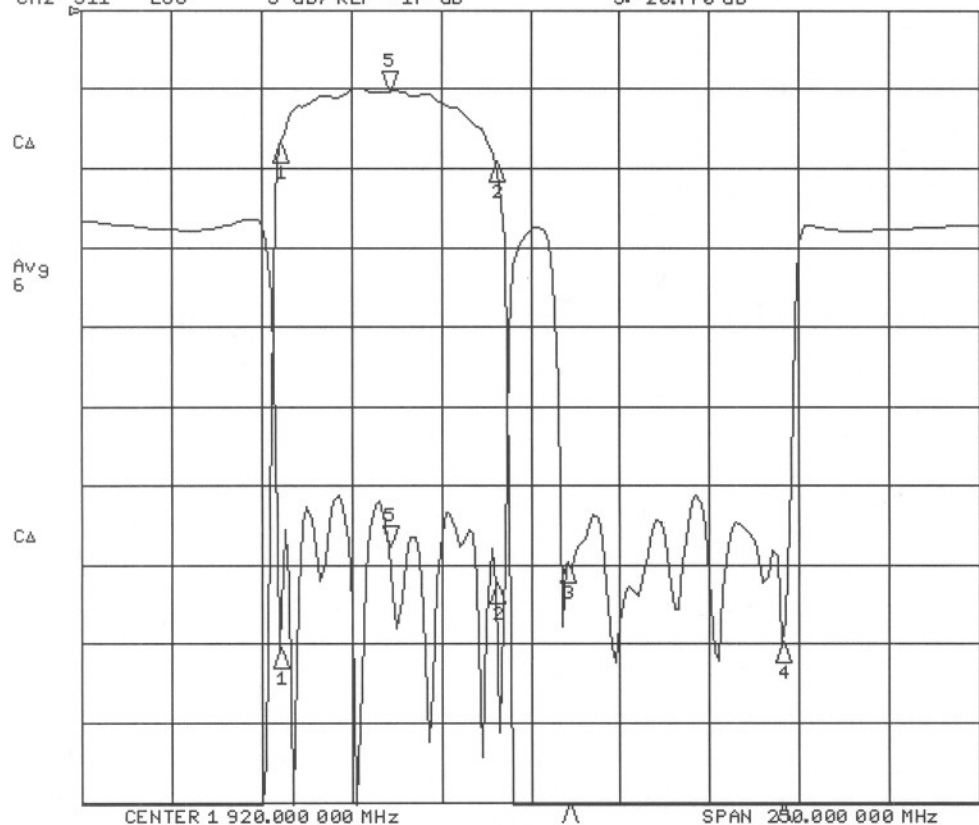
CH1 S21 LOG 10 dB/REF 0 dB 5:-47.651 dB 1 920.000 000 MHz
 CH2 S11 LOG 5 dB/REF -17 dB 5:-.89670 dB



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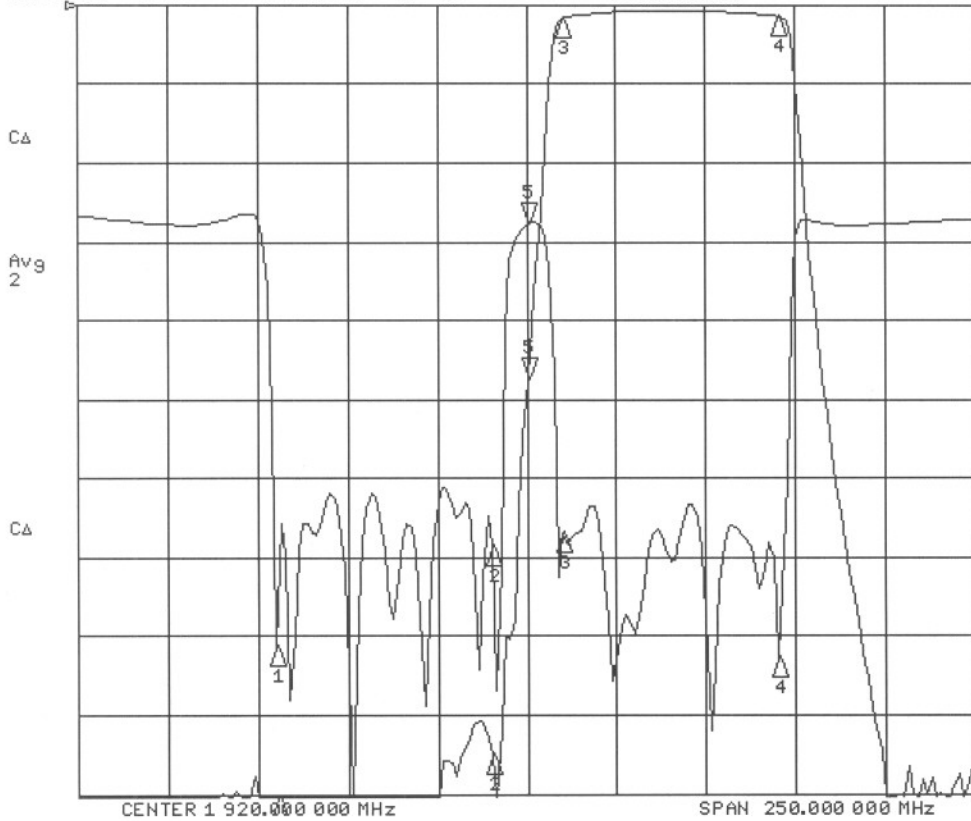
CH1 S21 LOG 1 dB/REF .216 dB 5:-.81190 dB 1 880.000 000 MHz
 CH2 S11 LOG 5 dB/REF -17 dB 5:-20.770 dB

Rx



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CH1 S21 LOG 10 dB/REF 0 dB 5:-47.468 dB 1 920.000 000 MHz
CH2 S11 LOG 5 dB/REF -17 dB 5:-.89860 dB



CH1 Markers

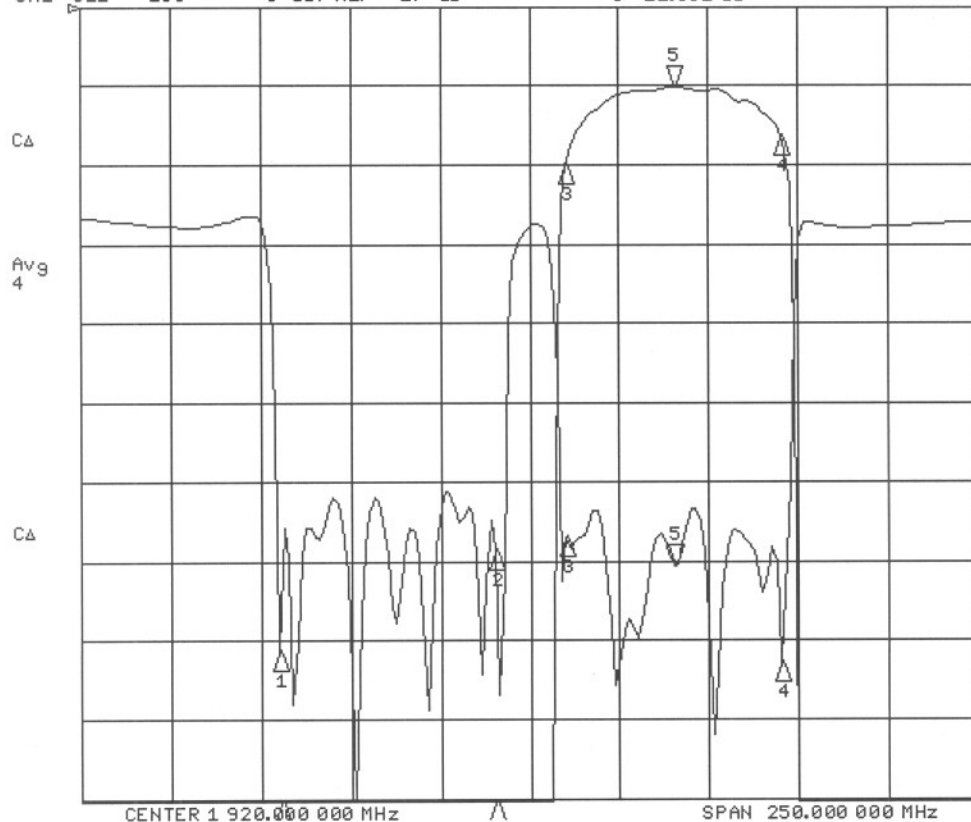
- 1:-109.32 dB
1.85000 GHz
- 2:-95.815 dB
1.91000 GHz
- 3:-1.7616 dB
1.93000 GHz
- 4:-1.3949 dB
1.99000 GHz

CH2 Markers

- 1:-27.667 dB
1.85000 GHz
- 2:-21.268 dB
1.91000 GHz
- 3:-20.500 dB
1.93000 GHz
- 4:-28.377 dB
1.99000 GHz

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CH1 S21 LOG 1 dB/REF .236 dB 5:-.77970 dB 1 960.000 000 MHz
CH2 S11 LOG 5 dB/REF -17 dB 5:-22.301 dB



CH1 Markers

- 1:-117.16 dB
1.85000 GHz
- 2:-94.017 dB
1.91000 GHz
- 3:-1.7622 dB
1.93000 GHz
- 4:-1.3973 dB
1.99000 GHz

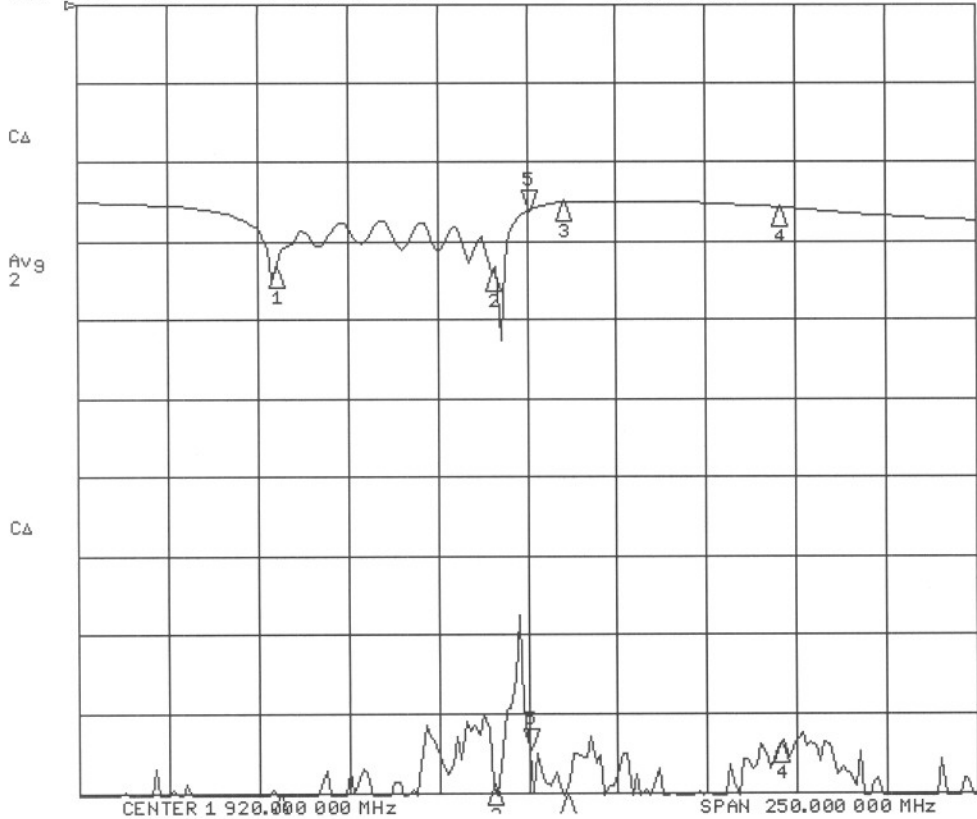
CH2 Markers

- 1:-27.672 dB
1.85000 GHz
- 2:-21.263 dB
1.91000 GHz
- 3:-20.503 dB
1.93000 GHz
- 4:-28.372 dB
1.99000 GHz

1x

10 Oct 2006 13:55:03

CH1 S21 LOG 10 dB/REF 0 dB 5:-94.464 dB 1 920.000 000 MHz
CH2 S11 LOG 5 dB/REF -17 dB 5:-.09230 dB



CH1 Markers

1:-116.31 dB
1.85000 GHz
2:-99.101 dB
1.91000 GHz
3:-108.44 dB
1.93000 GHz
4:-93.765 dB
1.99000 GHz

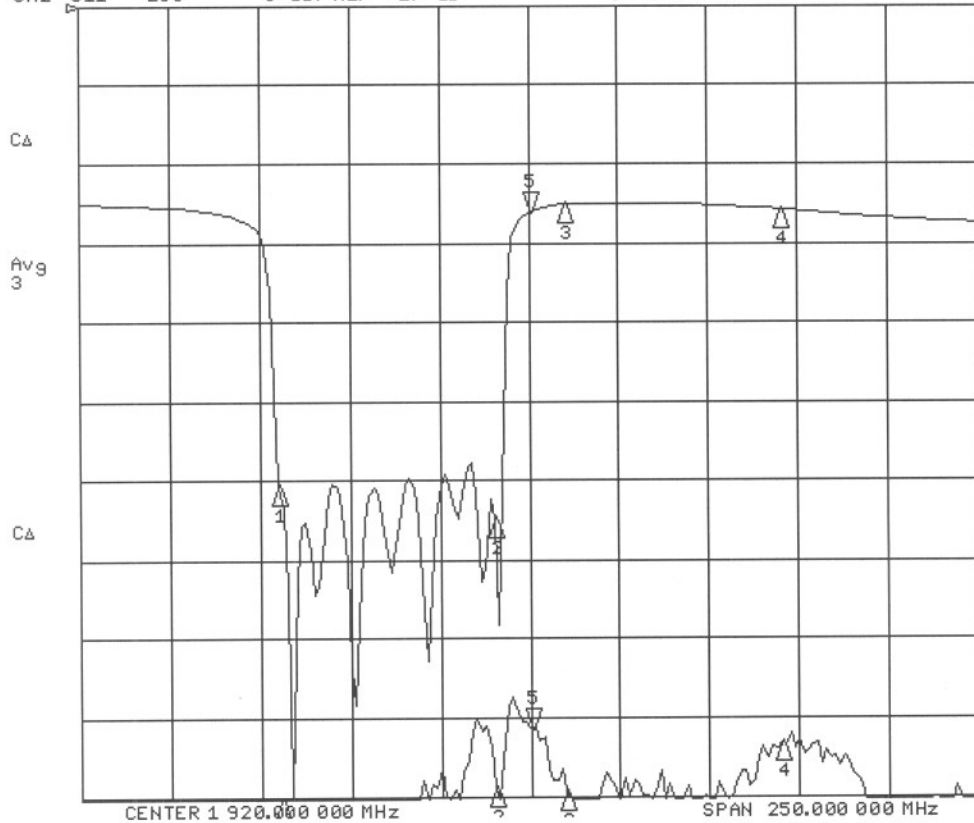
CH2 Markers

1:-3.7136 dB
1.85000 GHz
2:-4.0095 dB
1.91000 GHz
3:.43170 dB
1.93000 GHz
4:.12170 dB
1.99000 GHz

ISOLATION

10 Oct 2006 13:55:27

CH1 S21 LOG 10 dB/REF 0 dB 5:-91.511 dB 1 920.000 000 MHz
CH2 S11 LOG 5 dB/REF -17 dB 5:-.09110 dB



CH1 Markers

1:-106.56 dB
1.85000 GHz
2:-99.724 dB
1.91000 GHz
3:-97.835 dB
1.93000 GHz
4:-93.118 dB
1.99000 GHz

CH2 Markers

1:-17.345 dB
1.85000 GHz
2:-19.432 dB
1.91000 GHz
3:.43190 dB
1.93000 GHz
4:.12220 dB
1.99000 GHz