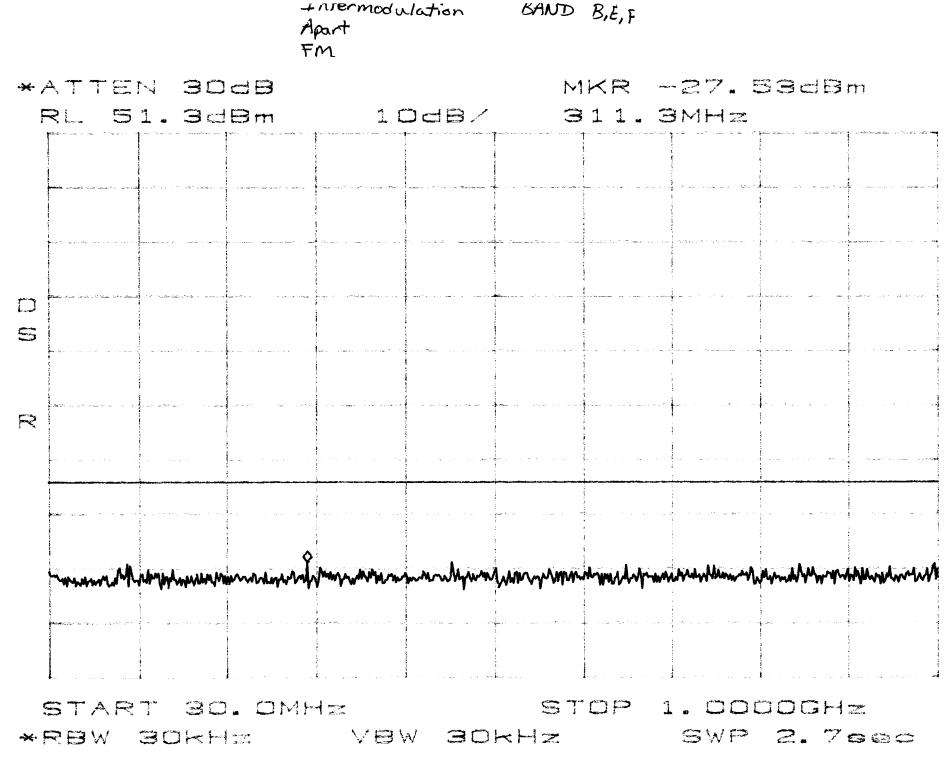
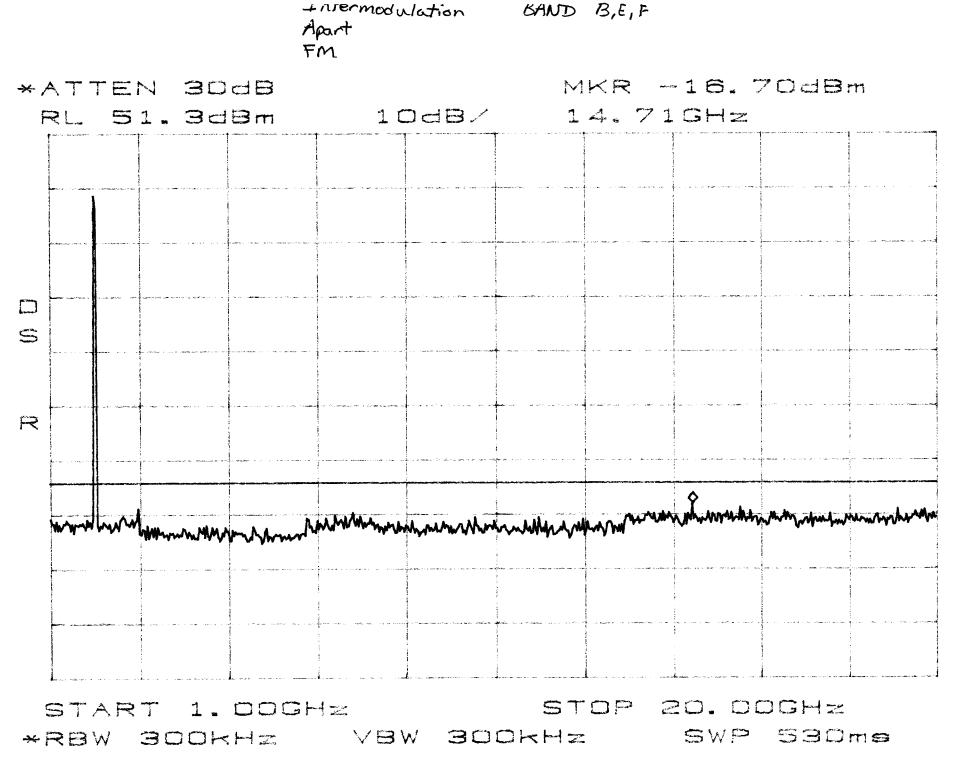
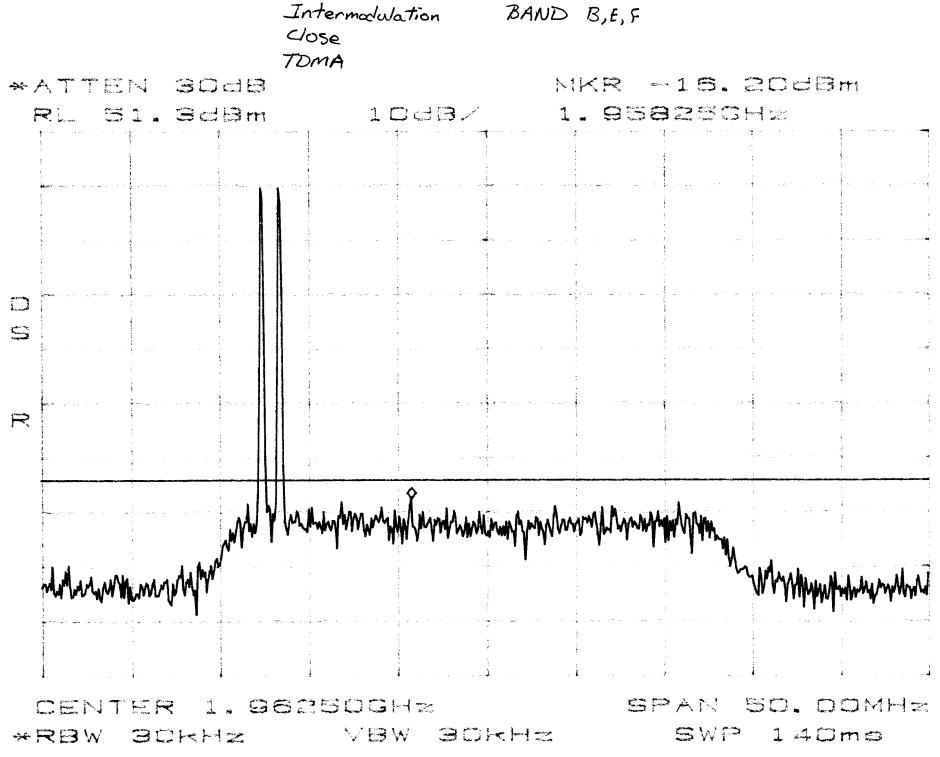


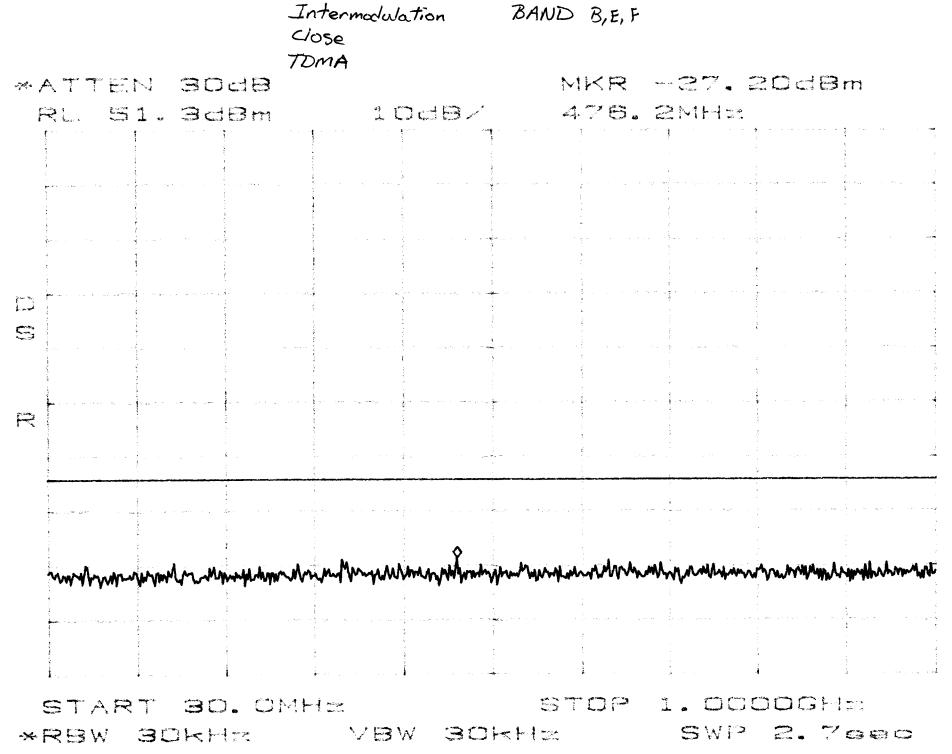
+ nrermodulation

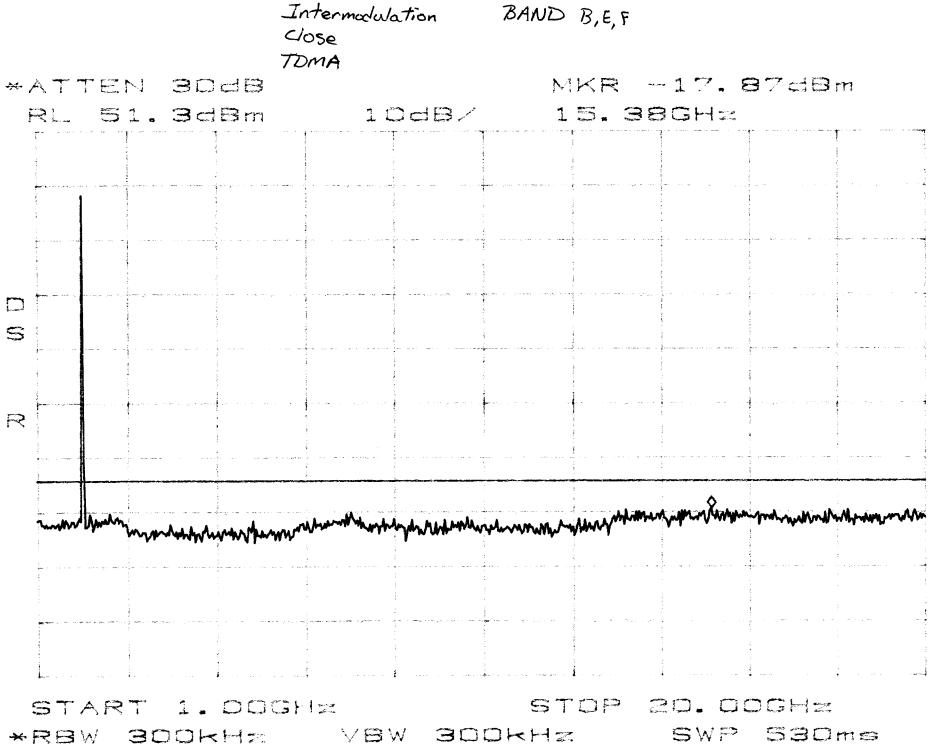


+nrermodulation





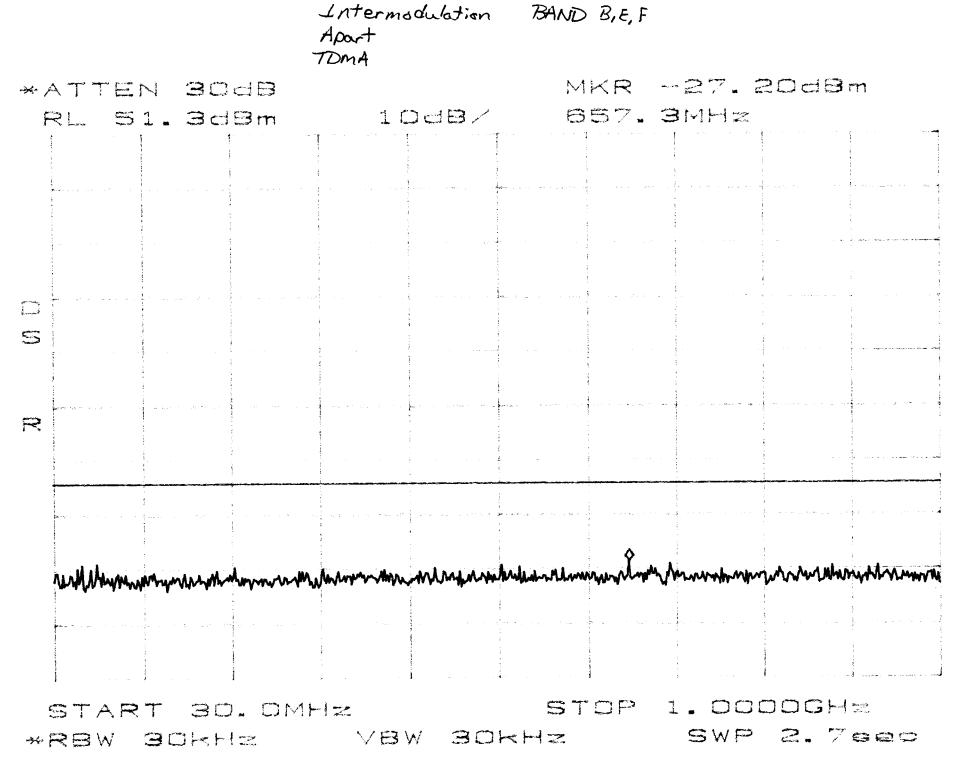


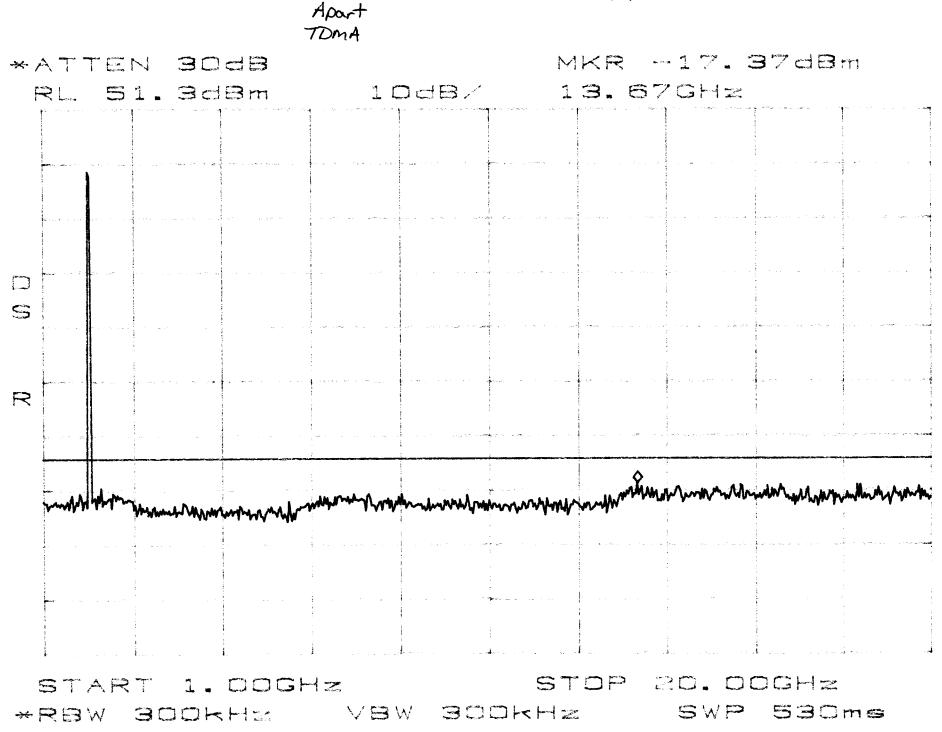


Apart TOMA -17. 03dBm 30dB \*ATTEN 1,95250GHz 10d8/ 3d8m RL 5 R 50. DOMHE SPAM 96250GHz 140ms SWP VBW BOKHZ \*RBW BOKHZ.

Intermodulation

BAND B,E,F





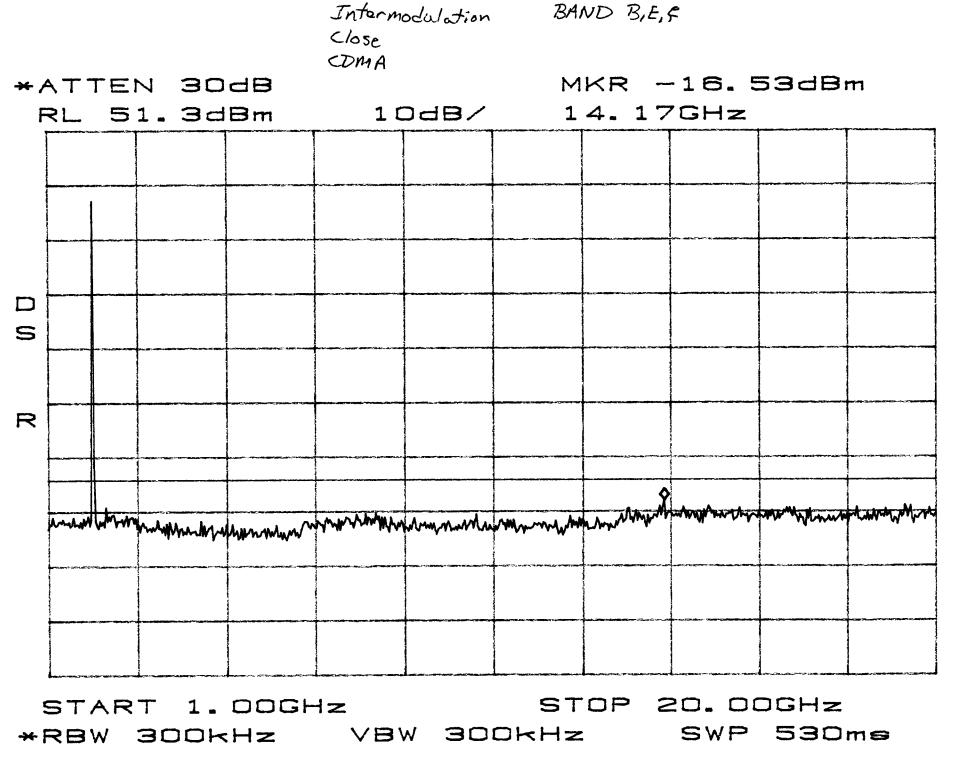
Intermodulation BAND B, E, F

Intermodulation BAND B,E,F Close CDMA MKR -14. 20dBm \*ATTEN 30dB 1.95658GHz 10dB/ RL 51.3dBm S R My Municipal Manual Man

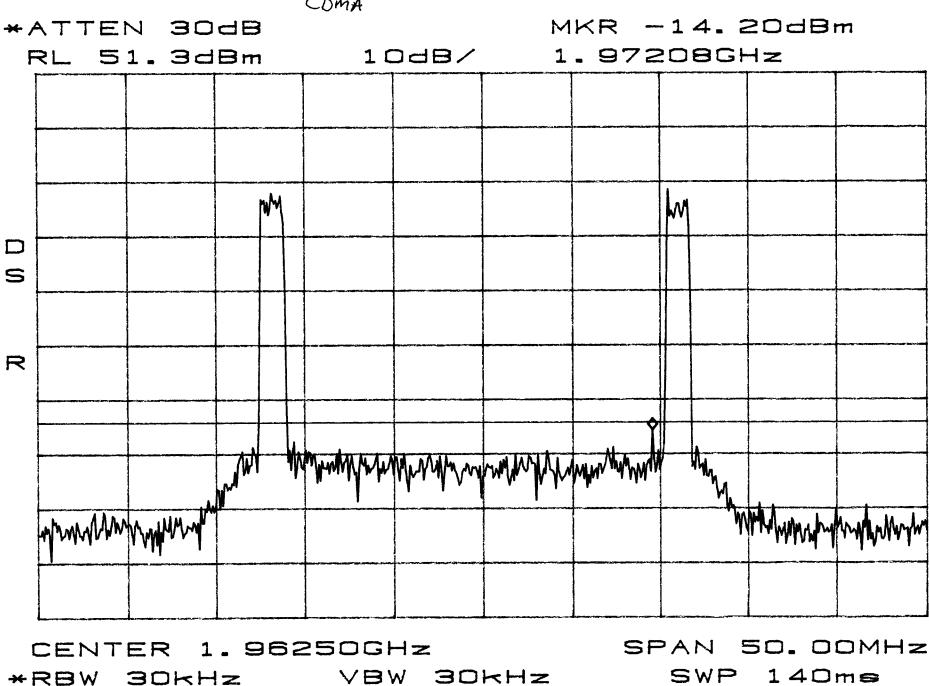
CENTER 1.96250GHz \*RBW 30kHz VBW 30kHz SPAN 50.00MHz SWP 140me

BAND B, E, F Intermodulation Close CDMA MKR -26.53dBm \*ATTEN 30dB 461.7MHz 10dB/ RL 51.3dBm S R may may be a superior of the s

START 30.0MHz STOP 1.0000GHz \*RBW 30kHz VBW 30kHz SWP 2.7sec



Intermodulation BAND B, E, F Apart CDMA



Intermodulation BAND B,E, F Apart CDMA

				COMA							
	ATTE						KR -		JEGE	77	
F	RL 5	1.3d	Bm	10		6	86.4	MHZ			
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						and and and	<b>♦</b>				
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	STAR						OP 1				
*	*RBW 30kHz VBW 30kHz SWP 2.7sec										

Intermodulation BAND B, E, F Apart CDMA
MKR

MKR - 17.20dBm\*ATTEN 30dB RL 51.3dBm 10dB/ 13.92GHz 5 R much may my man white man Land house from the same of th STOP 20. DOGHZ START 1. DOGHZ

VBW 300kHz

\*RBW 300kHz

SWP 530ms

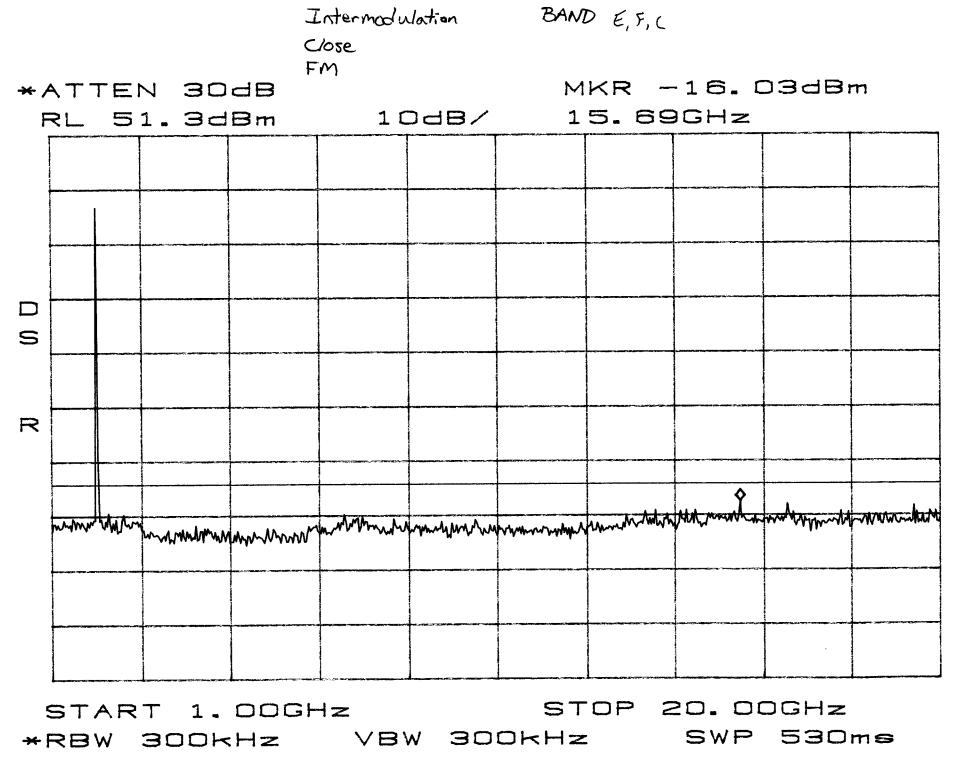
C/05e FM MKR -15.53dBm \*ATTEN 30dB 1.98792GHz RL 51.3dBm 10dB/ S R In a popular manufacture of the second of th mm-may make SPAN 50. DOMHZ CENTER 1.97750GHz 140ms \*RBW 30kHz VBW 30kHz SWP

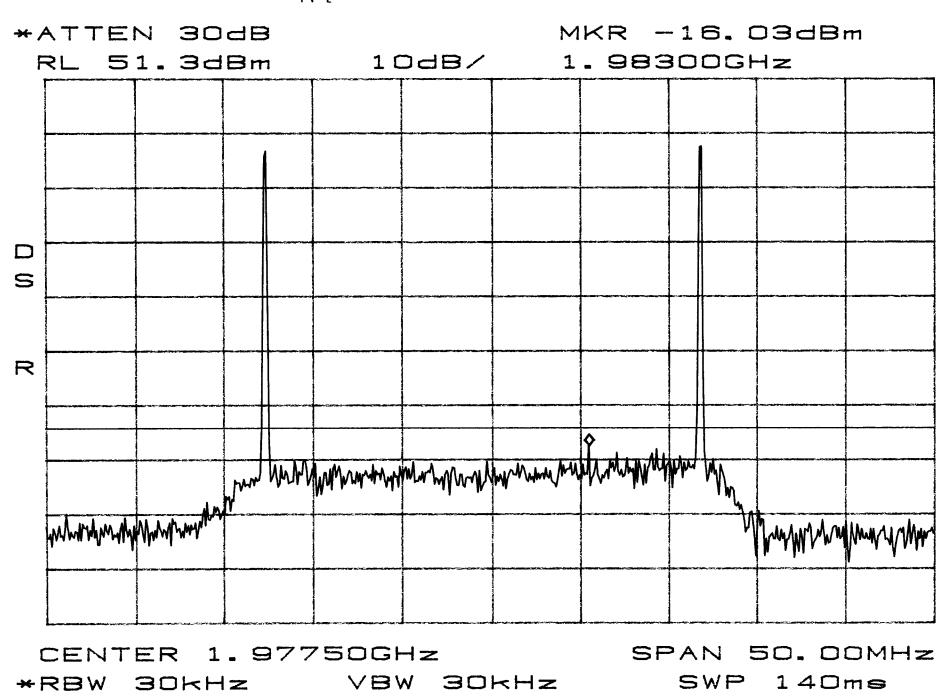
Intermodulation

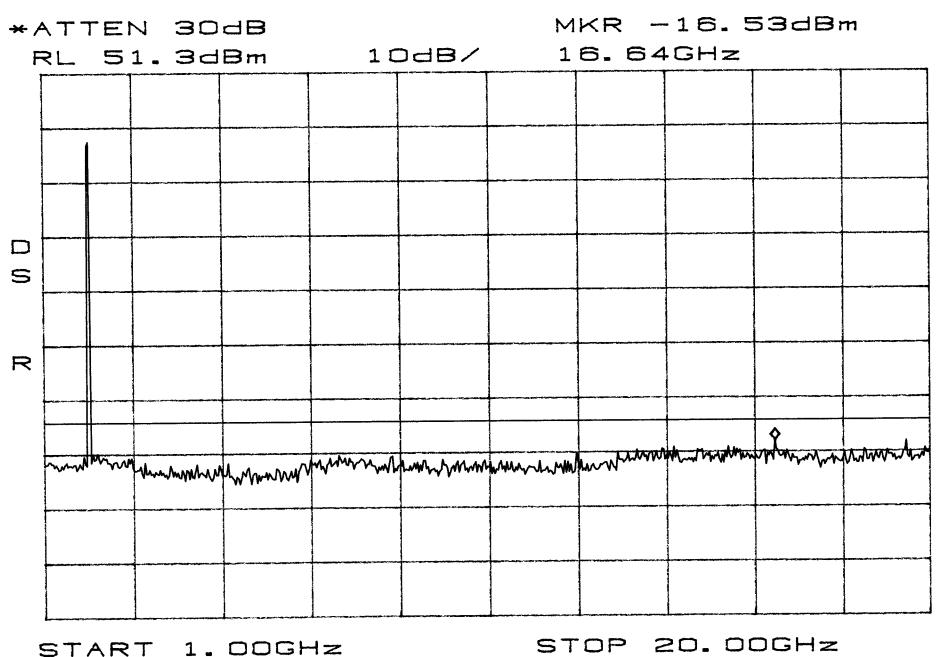
BAND E,F,C

C/05e FM MKR -27.37dBm \*ATTEN 30dB 10dB/ 374.4MHz RL 51.3dBm S R STOP 1.0000GHz START 30. OMHz \*RBW 30kHz VBW 30kHz SWP 2.7sec

Intermodulation BAND E, F, C

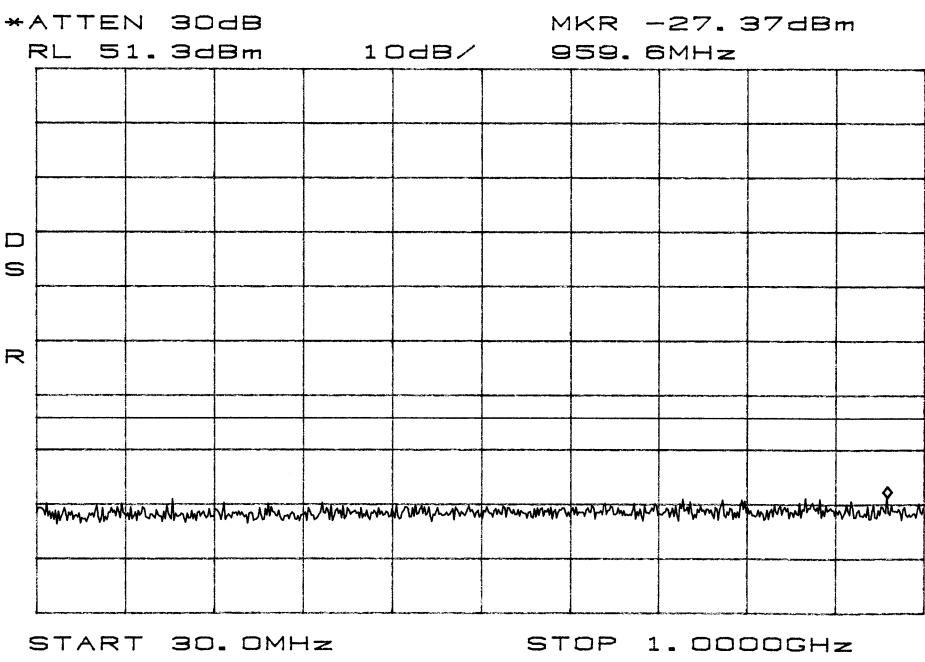






\*RBW 300kHz VBW 300kHz

SWP 530ms



\*RBW 30kHz VBW 30kHz SWP 2.7sec

Intermodulation BAND E, F, C Close TDMA

MKR -16.20dBm \*ATTEN 30dB 1.98750GHz RL 51.3dBm 10dB/ S R Johnshammy Maller . Jahr Marra Janahar

CENTER 1.97750GHz \*RBW 30kHz VBW 30kHz SPAN 50.00MHz SWP 140ms Intermodulation BAND E.F.C Close TOMA

\*ATTEN 30dB MKR -27, 20dBm RL 51.3dBm 10dB/ 424.5MHz S R to any the second of the secon

START 30. DMHz

STOP 1.0000GHz

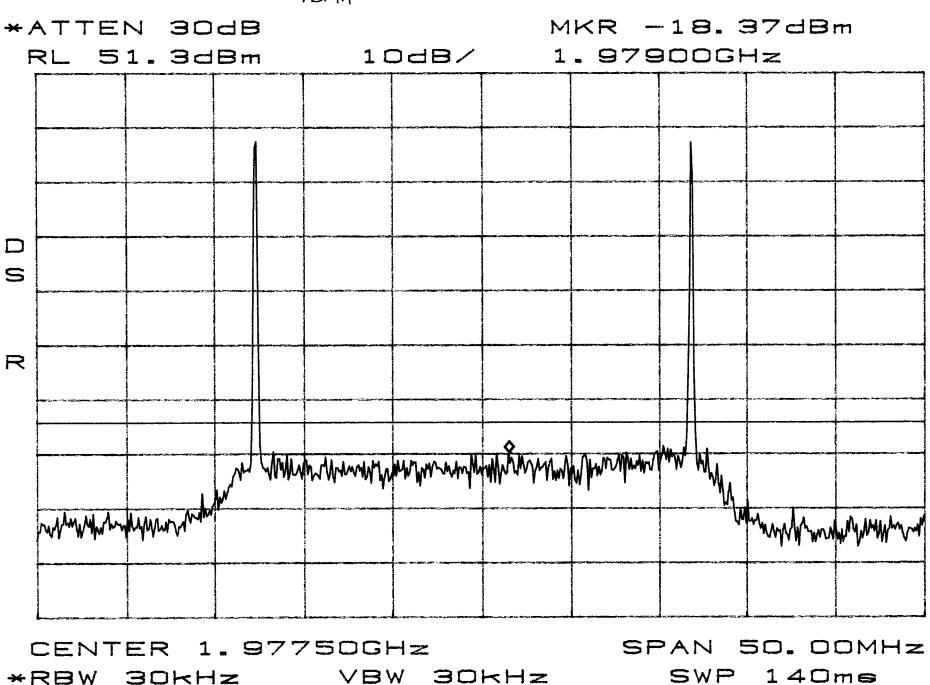
\*RBW 30kHz VBW 30kHz

SWP 2.7sec

Intermodulation BAND E, F, C Close TOMA

MKR -16.87dBm \*ATTEN 30dB 14.08GHz RL 51.3dBm 10dB/ S R the state of the s STOP 20. OOGHz START 1. DOGHZ

\*RBW 300kHz VBW 300kHz SWP 530ms Intermodulation BAND E, F, C Apart TDMA



Intermodulation BAND E, F, C Apart TDMA

		N 30		1.0	DdB/		KR -		70dB:	77
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	-V. M. Marion	m. M. Mana a A. A. A.	A. H. H. H. H. A.		AT ILA A L IL			Marie Carrier and		A A A A A A
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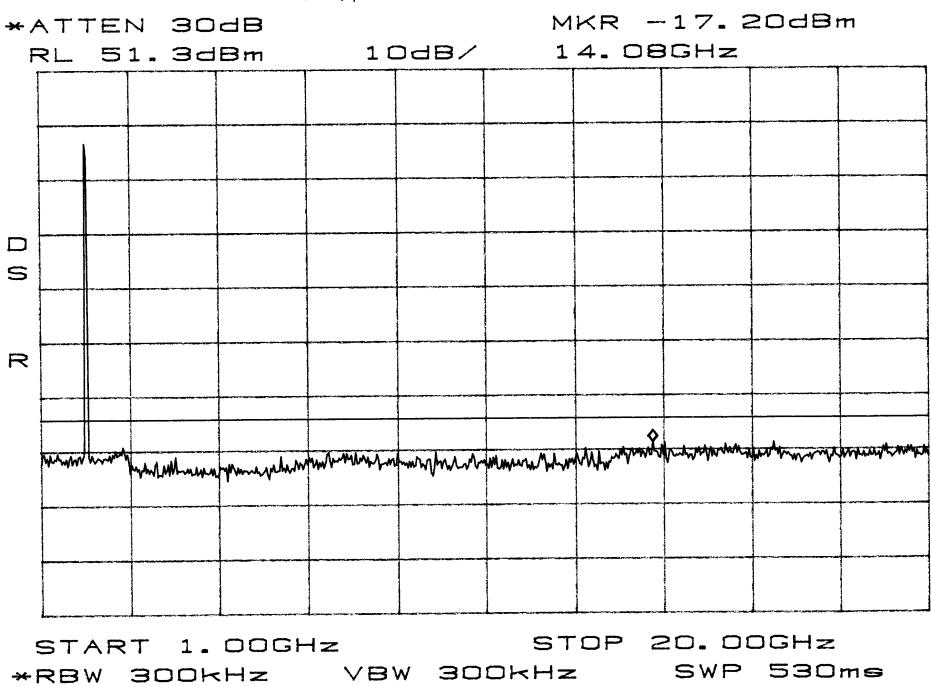
VBW 30kHz

\*RBW 30KHz

File No. NC303065, Page 208 of 232

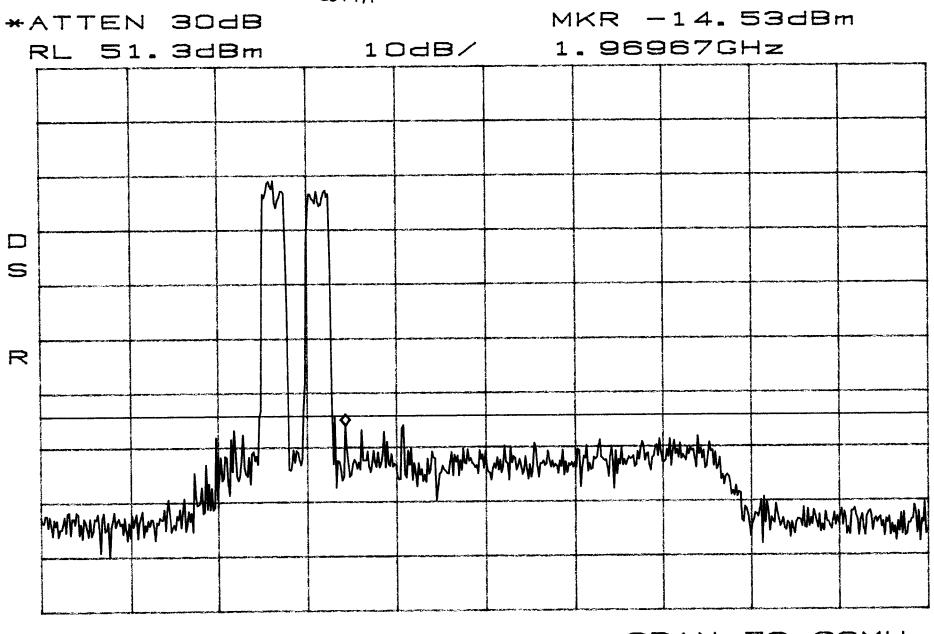
SWP 2.7sec

Intermodulation BAND E,F,C Apart TDMA



File No. NC303065, Page 209 of 232

Intermodulation BAND E, F, C Close CDMA



CENTER 1.97750GHz \*RBW 30kHz VBW 30kHz SPAN 50. DOMHZ SWP 140ms

Close CDMA MKR -27.37dBm \*ATTEN 30dB 403.5MHz 10dB/ RL 51.3dBm S R maken de marchen francisco de la companya della companya de la companya della com STOP 1.0000GHz START 30. OMHZ

\*RBW 30kHz VBW 30kHz

Intermodulation BAND E, F, C

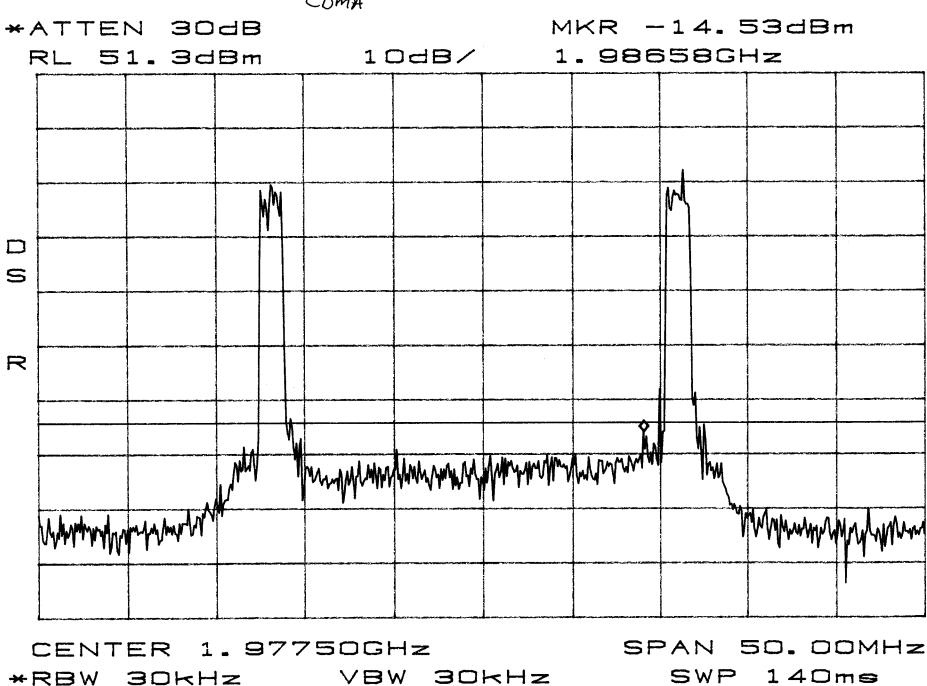
SWP 2.7sec

Intermodulation BAND E, F, C Close CDMA MKR -16, 70dBm \*ATTEN 30dB 15.16GHz 10dB/ RL 51.3dBm when the warming with the warming warming

S

R

STOP 20. DOGHZ START 1. DOGHZ \*RBW 300kHz VBW 300kHz SWP 530ms Intermodifican BAND E, F, C Apart CDMA



Intermodulation BAND E, F, C Apart CDMA

+AT	TEN	1 30	dB			М	KR -	-27.	53dB	m
RL	. 51	l. 3d	Bm	10	DdB/	8	70.7	MHZ		
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<b>-</b>										
₹										
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				mminayfu	A Arch III and a		740. k . k		<b>\$</b>	1. A A A A A
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VBW 30KHz

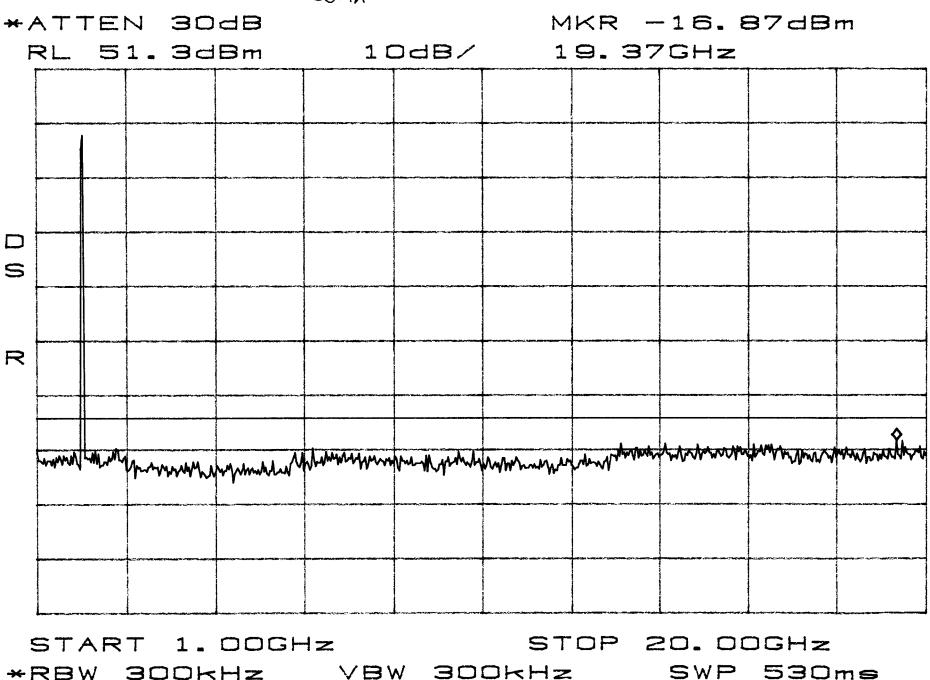
\*RBW 30kHz

File No. NC303065, Page 214 of 232

2.7sec

SWP

Intermodifican BAND E, F, C Apart CDMA

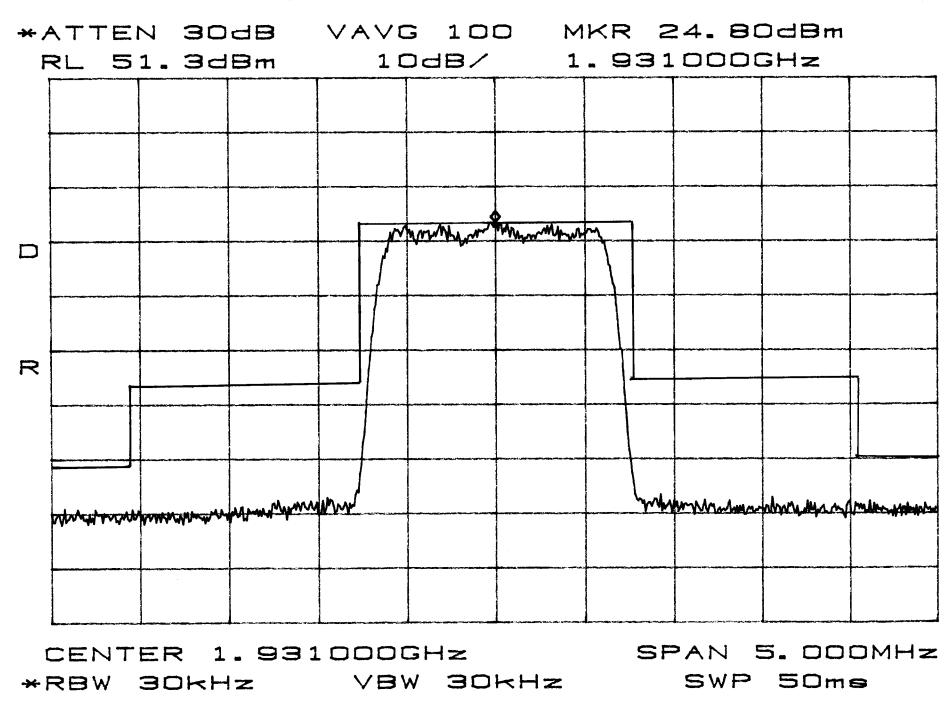


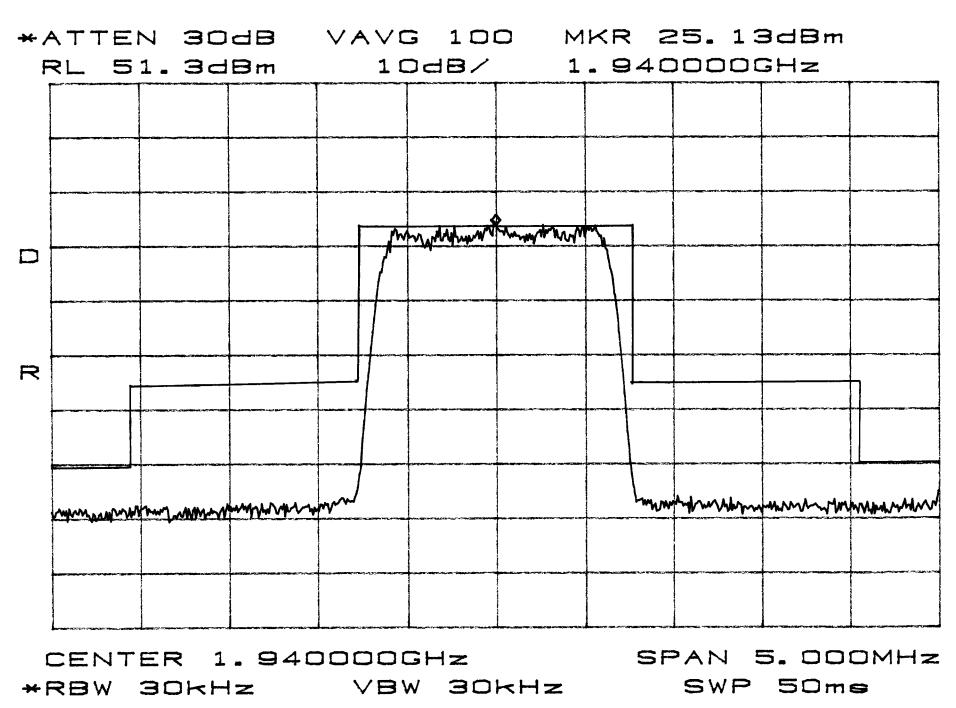
# CDMA Mask Test for ADC Inc. Digivance 1900 MHz 20 Watt System Model Numbers DGVL-436100SYS, DGVL-446100SYS, DGVL-456100SYS and DGVL-466100SYS.

For the CDMA modulation type emission mask test, the average value of the center frequency will be 16.23dB down from the CW peak power. On any frequency removed from the center carrier frequency by up to 750 kHz the emissions are at or below 16.23dB below the peak power. On any frequency between 750 kHz and 1.98 MHz the emissions are below 45dB below the peak power. On any frequency removed from the carrier frequency by more than 1.98 MHz the emissions are below 60dB below the peak power. The test was performed at the low, mid, and high parts of the respective A, B, C, D, E, and F PCS bands.

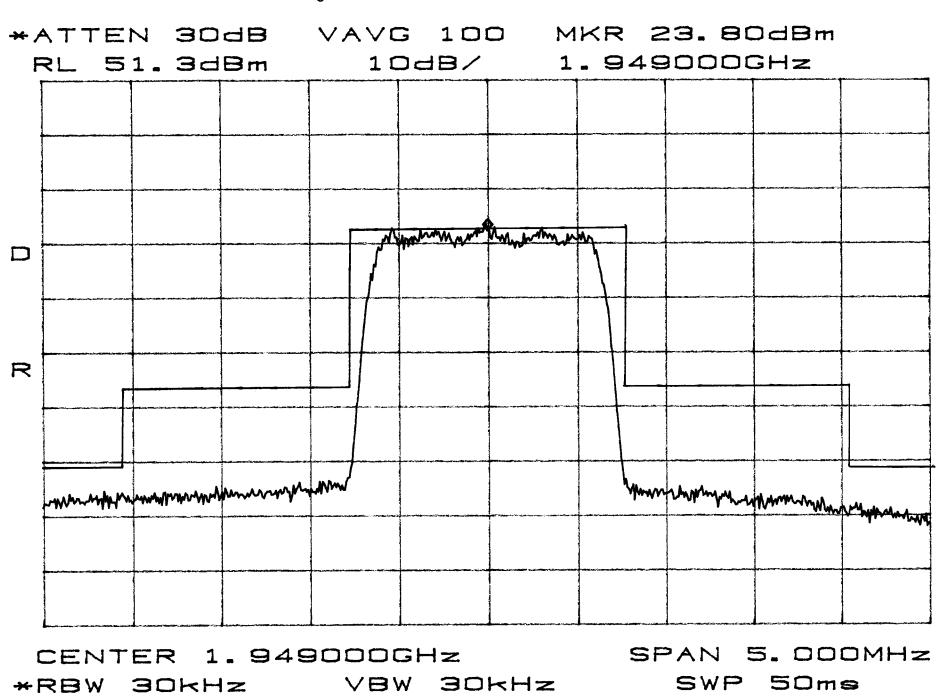
#### **Results:**

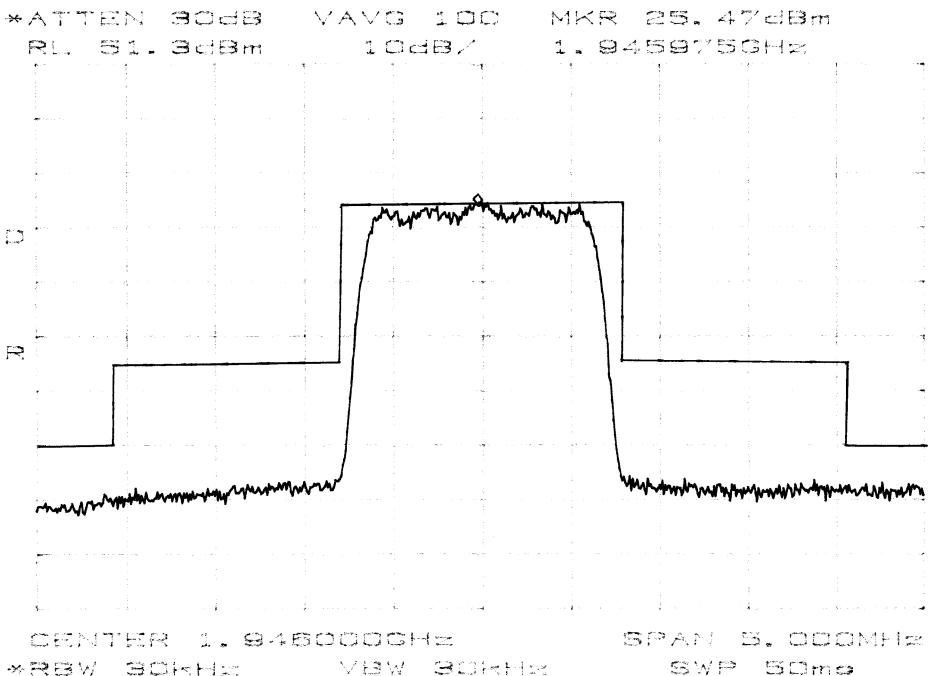
Pass (see plots)

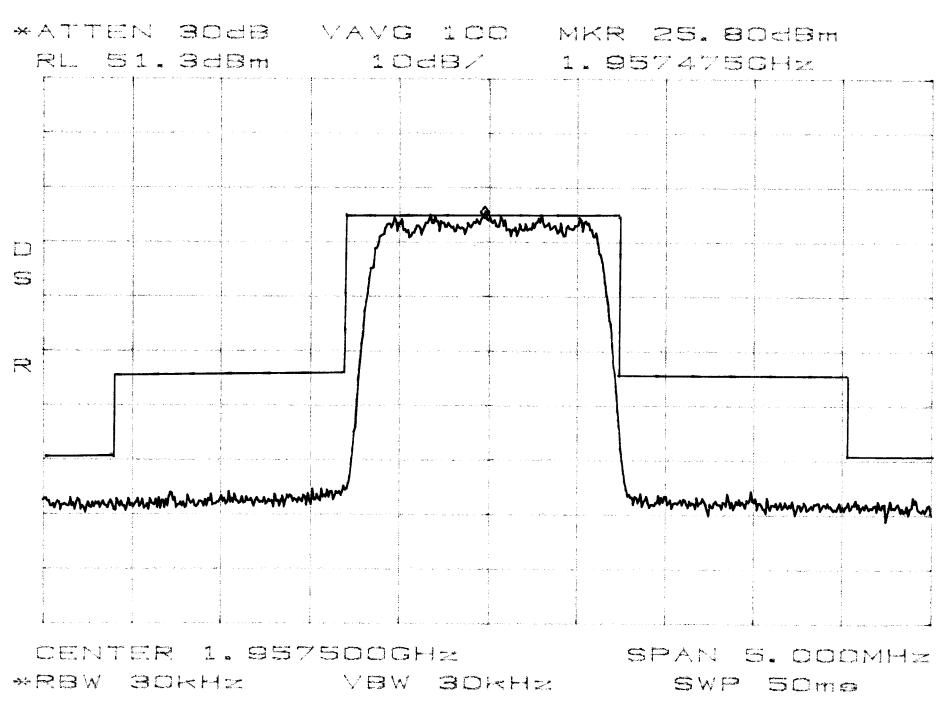


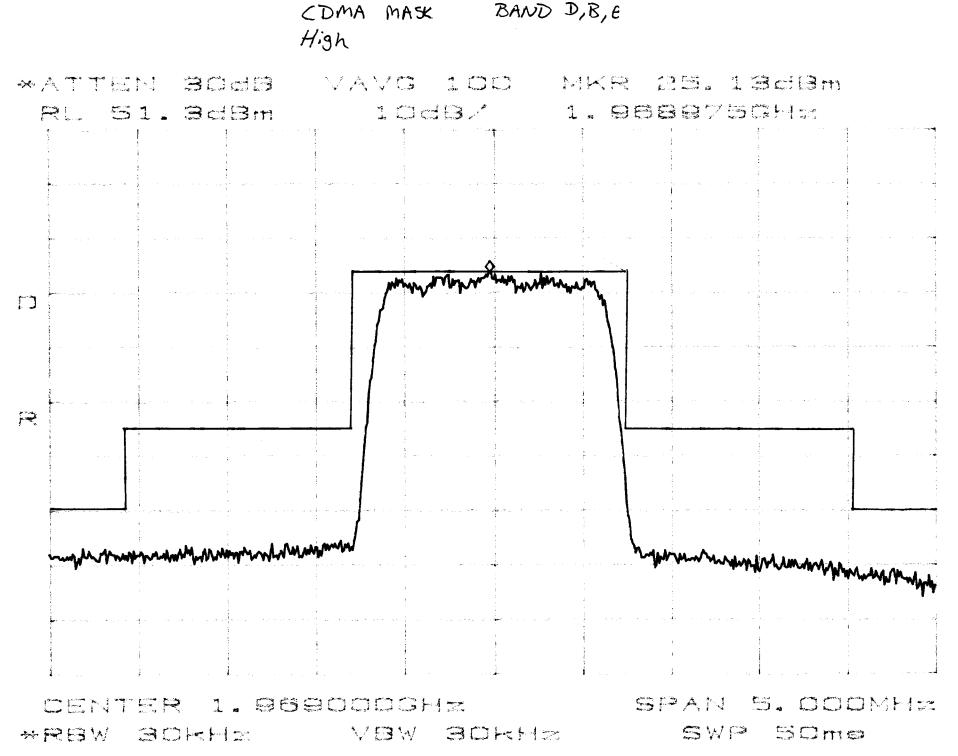


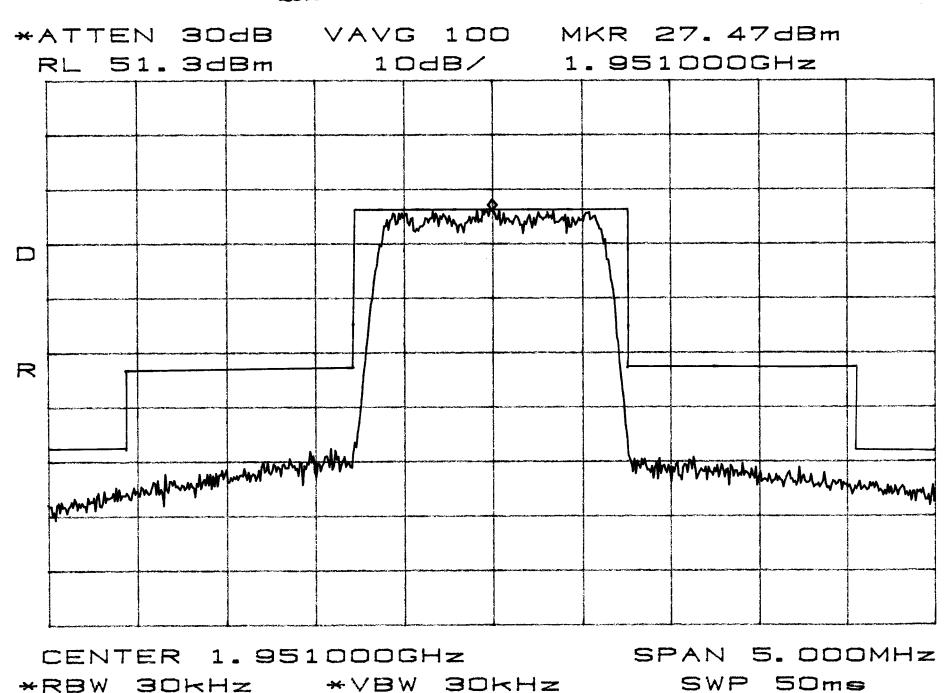
CDMA MASK BAND A,D High



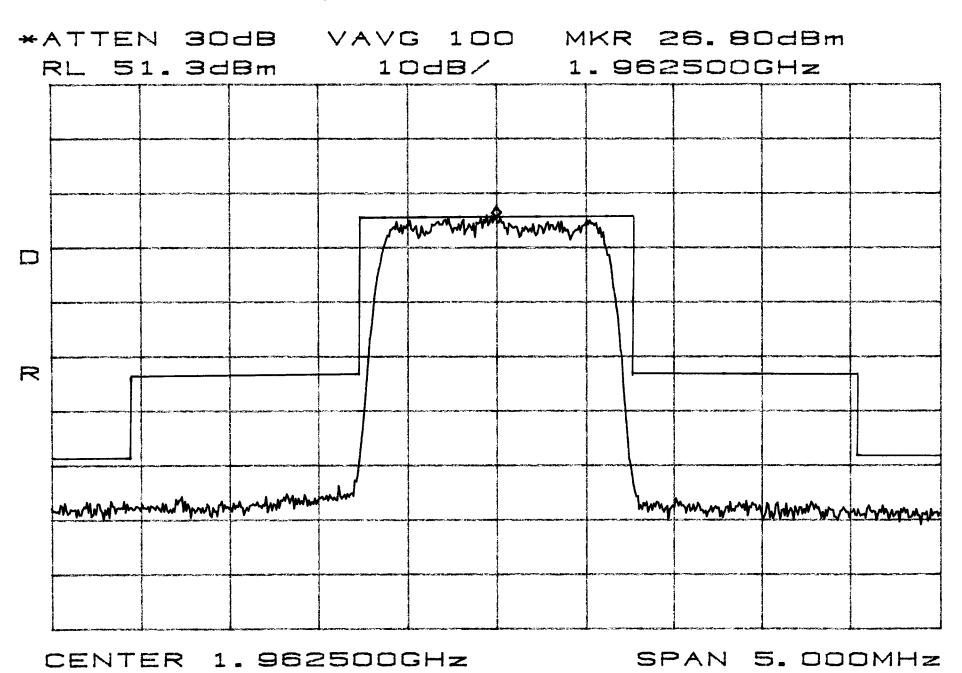








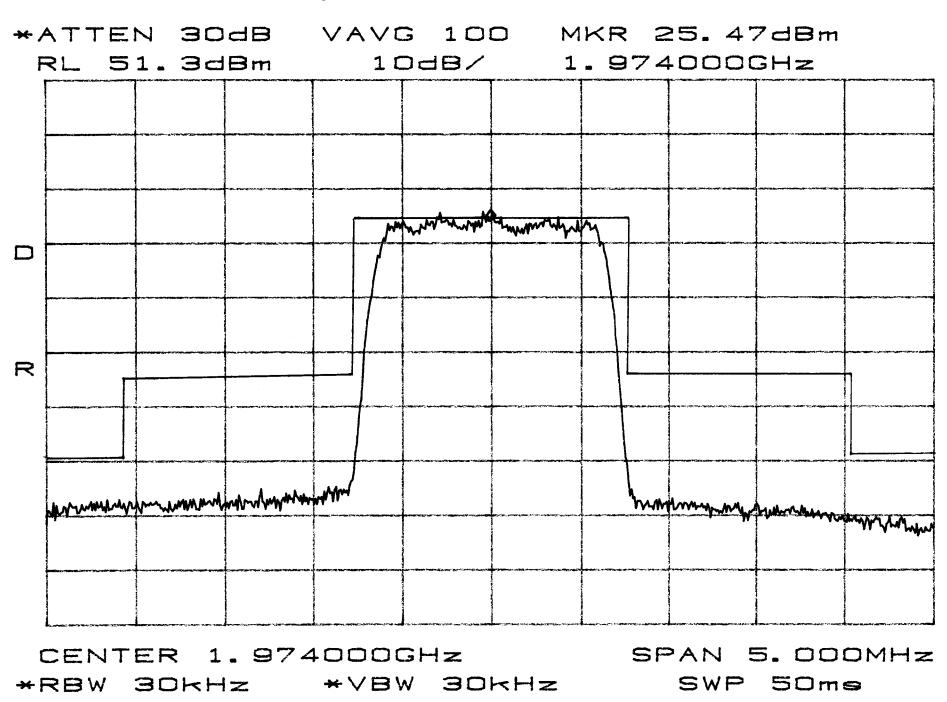
File No. NC303065, Page 223 of 232

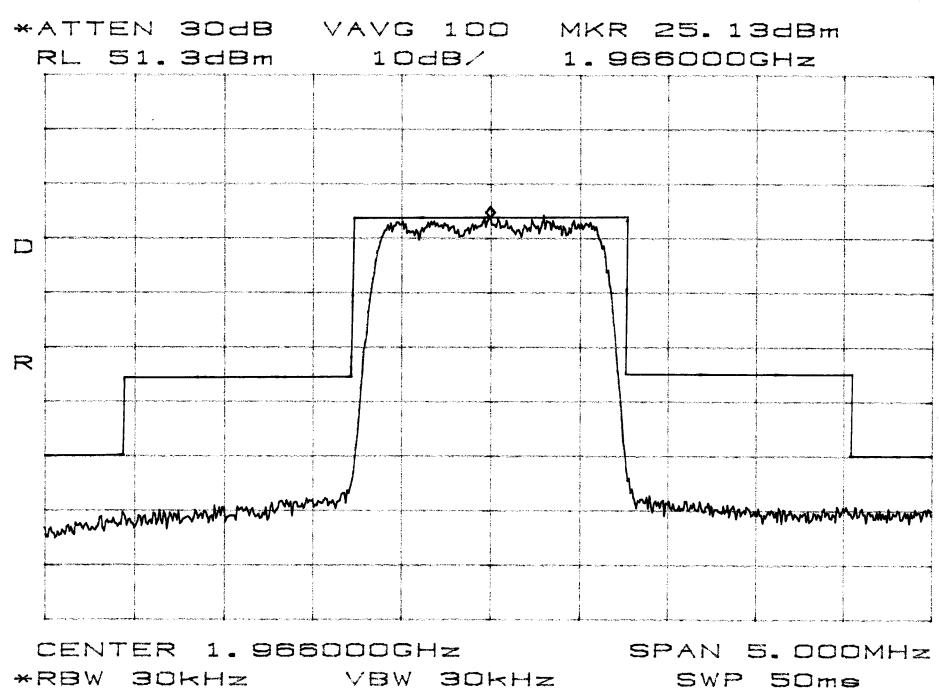


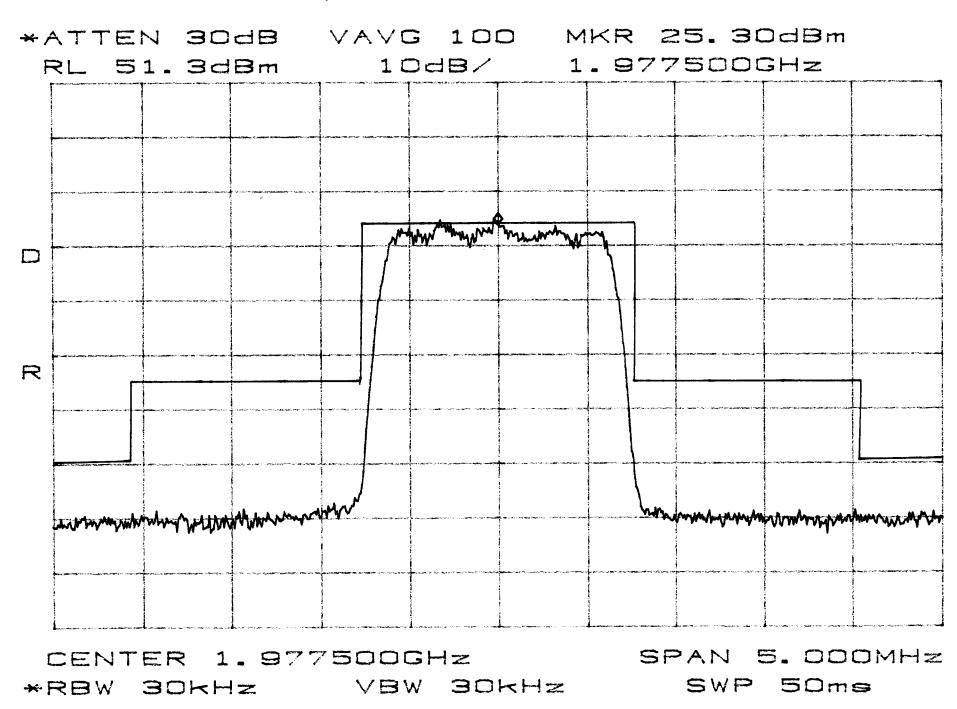
\*RBW 30kHz \*VBW 30kHz

SWP 50ms

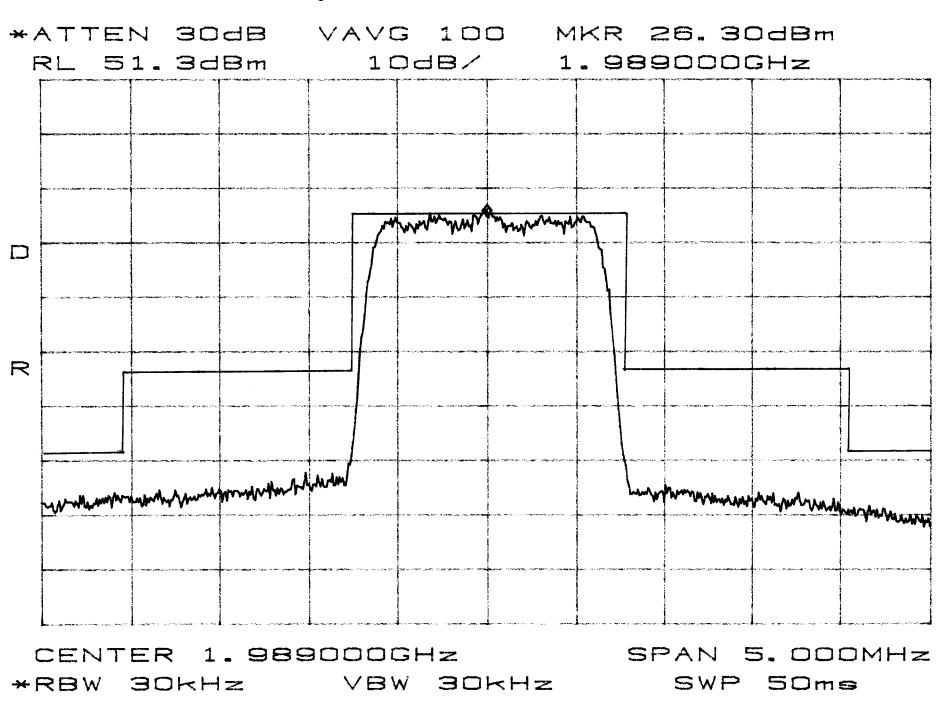
CDMA MASK BAND B, E, F High







CDMA MASK BAND E, F, C High





# **Equipment Under Test (EUT) Test Operation Mode - Emission tests:** The device under test was operated under the following conditions during emissions testing: ☐ - Standby □ - Test program (H - Pattern) □ - Test program (color bar) □ - Test program (customer specific) □ - Practice operation ■ - Normal Operating Mode Configuration of the device under test: The following peripheral devices and interface cables were connected during the measurement: Type: Type: Type : \_\_\_\_\_ Type : \_\_\_\_ Type: Type: O-Type: Type : \_\_\_\_\_ unshielded power cable ■ - unshielded cables MPS.No.: ■ - shielded cables □ - customer specific cables O-\_\_\_\_ □ -



DEVIATIONS FROM STANDARD:			
None			
GENERAL REMARKS:			
SUMMARY:			
The requirements according to the tech	nical regulations are	<b>;</b>	
■ - met			
□ - <b>not</b> met.			
The device under test does			
■ - fulfill the general approval requirem	ents mentioned on p	page 3.	
☐ - <b>not</b> fulfill the general approval requ	rements mentioned	on page 3.	
Testing Start Date:	01 July 2003		
Testing End Date:	05 July 2003		
- TÜV PRODUCT SERVICE INC -			
Thomas K. Swanon	- Lander of the Control of the Contr		
Reviewed By: T. K. Swanson	 	Гested By: <. Т. Н. Rose	



#### **TEST SETUP FOR EMISSIONS TESTING**

See Test Setup Exhibit





Radiated emission (case radiation) test setup photos

See Test Setup Exhibit





#### Appendix A

Constructional Data Form

And/or

**Product Information Form** 



-			
PLEASE COMPLETE TH	IIS DOCUMENT IN FULL, ENTERING N/A	IF THE FIELD IS I	NOT APPLICABLE.
	nis information will be input into your tes ime to get HELP for the current field selo		n below.
Company:	ADC Inc.		
Address:	P.O. Box 1101		
	Minneapolis, MN 55440-1101		
Contact:	Mark F. Miska	Position:	Compliance Engineer
Phone:	952-917-0326	Fax:	952-917-0181
E-mail Address:	mark_miska@adc.com	<u> </u>	
General Equipment	Description NOTE: This information	on will be input in	to your test report as shown below.
EUT Description	Transports RF between a remote	antenna and a	customer provided base station.
EUT Name	Digivance 1900 MHz 20 Watt Sys	tem (A, B, C, D	), E, and F Band)
Model No.:	DGVL-436100SYS, DGVL- 446100SYS, DGVL-456100SYS, and DGVL-466100SYS	Serial No.:	None
Product Options:	None		
Configurations to be t	tested: 1900 MHz 20 Watt A,	B, C, D, E, and	F Band
Took Objective			
Test Objective	(226/FFC /FMC)	-CC: Cla	
☐ EMC Directive 89/ Std:	` , —	FCC: Cla /CCI: Cla	= = —
		BCIQ: Cla	
Std:		Canada: Cla	ss 🗌 A 🗍 B
	` / =	Australia: Cla	ss 🗌 A 🗌 B
Std:  Vehicle Directive 7		Other:	
Std:			
Notification Sub	uidance for Premarket missions (EMC)		
TÜV Product Servic	e Certification Requested		
Attestation of Con		International F	MC Mark (IEM)
☐ Certificate of Conf		Compliance Do	` ,
Protection Class	_	Class I	☐ Class II ☐ Class III
(Press <b>F1</b> when field is	s selected to show additional inform	ation on Protec	ction Class.)

Form





Attendance
Test will be: ☐ Attended by the customer ☐ Unattended by the customer
Failure - Complete this section if testing will not be attended by the customer.
If a failure occurs, TUV Product Service should:  Call contact listed above, if not available then stop testing. (After hrs phone):  Continue testing to complete test series.  Continue testing to define corrective action.  Stop testing.
EUT Specifications and Requirements
Length: _19"         Width: _26"         Height: _23"         Weight: _47 LB
Power Requirements
Regulations require testing to be performed at typical power ratings in the countries of intended use. (i.e., European power is typically 230 VAC 50 Hz or 400 VAC 50 Hz, single and three phase, respectively)
Voltage: 115 VAC (If battery powered, make sure battery life is sufficient to complete testing.)
# of Phases: 1
Current Current (Amps/phase(max)): 10.0 (Amps/phase(nominal)): 9.0
Other
Other Special Requirements
None
Typical Installation and/or Operating Environment
(ie. Hospital, Small Business, Industrial/Factory, etc.) Host indoor only with STM and LPA indoor or outdoor. System is typically employed as a Microcell.
EUT Power Cable
Permanent OR Removable Length (in meters): 1
Shielded OR Unshielded Not Applicable



EUT Interface	Ро	rts a	and (	Cab	les							
Interface				Shi	eldir	ng						
Туре	Analog	Digital	Qty	Yes	Š	Туре	Termination	Connector Type	Port Termination	Length (in meters)	Removable	Permanent
EXAMPLE: RS232		×	2	×		Foil over braid	Coaxial	Metallized 9- pin D-Sub	Characteristic Impedance	6	×	П
RF "N" type			3			Braid	Coaxial	N	50 Ohms	>3		
Alarm			1			Not Specified	N/A	6 Pin Standoff		>3		
Alarm			1			Not Specified	N/A	4 Pin Standoff		>3		
Fiber			2			N/A	N/A	SC	N/A	>3		
9 Pin Din			2	$\boxtimes$		Not Specified	AC Coupled	Din		>3	$\boxtimes$	
Net in			1			Not Specified	N/A	Cat 5		>3		
Net out			1			Not Specified	N/A	Cat 5		3		
DC power block			1			None		Terminal		>3		
AC power			1			None				<3		
STM to Amp Interconnect	$\boxtimes$		1			Varied	Chassis	Special		.3		
Battery Connection			1			N/A	N/A	2 Pin Standoff		<1		



**EUT Software**.

Revision Level: Version 0.00.00.12

Description: Digivance Element Management System (DEMS). System Management and

Interface Matching Software.

**EUT Operating Modes to be Tested --** list the operating modes to be used during test. It is recommended the equipment be tested while operating in a typical operation mode. FCC testing of personal computers and/or peripherals requires that a simple program generate a complete line of upper case H's. Provide a general description of all software, firmware, and PLD algorithms used in the equipment. List all code modules as described above, with the revision level used during testing. Consult with your TÜV Product Service Representative if additional assistance is required.

- 1. Max composite in and out
- 2.
- 3.

**EUT System Components --** List and describe all components which are part of the EUT. For FCC testing a minimum configuration is required. (ie. Mouse, Printer, Monitor, External Disk Drive, Motherboard, etc.)

Description	Model #	Serial #	FCC ID#
Host Unit	DGVL-401000HU	None	
STM AD Band	DGVL-431000STM	None	
STM DBE Band	DGVL-441000STM	None	
STM BEF Band	DGVL-451000STM	None	
STM EFC Band	DGVL-461000STM	None	
LPA	DGVL-406000LPA	None	
Digivance LRCS 1900 MHz 20 Watt System consist of the HU, STM, and LPA.			

FILE: EMCU\_F09.02E, REVISION 0, Effective: October 26, 1999



Support Equir	oment List and	describe all support equipme	nt which is not part	of the EUT. (i.e. peripherals, simulators, etc)
Description			Serial #	FCC ID #
Signal Generat	tor	HP E4436B	963739	
DC Power Sup	ply	HPD 60-5	MC27884	
Oscillator Fre				
Frequency	Derived Frequency	Component # / Location		Description of Use
	<u> </u>			
Power Supply	,			
Manufacturer	Model #	Serial #	Туре	
ADC			☐ Switched-	
			Linear	Other:
			☐ Switched-	
			Linear	Other:
Power Line Fi	Iters			
Manufacturer	Mod	lel #	Location in EUT	
None				



Critical EMI Com	ponents (Capacitors, feri	ites. etc.)		
Description	Manufacturer	Part # or Value	Qty	Component # / Location
None				
·				
EMC Critical Deta	ii Describe other EMC Design	n details used to reduce hig	h frequency	y noise.
None				
(PLEASE INSERT Authorization Sig	"ELECTRONIC SIGNATU	IRE" BELOW IF POS	SIBLE)	
,				
Wash 2.	Moh	4-16	٠۵٦	
	orization to perform tests			
according to thi	s test plan.			
Test Plan/CDF	Prepared By (please print)	Date		
Reviewed by TI	ÜV Product Service Assoc	ate Date		