

UNCLASSIFIED	
SECURITY SUMMARY & SPECIAL HANDLING REQUIREMENTS	
<p>The System Name is : MASTR V VHF/UHF Base Station</p> <p>The overall classification of this application is : UNCLASSIFIED</p>	
<p>Refer to your Security Manual for further guidance.</p>	
<p>The Application Level Special Handling is : A</p> <p>Approved for public release; distribution is unlimited (DoD Directive 5230.24)</p>	
DOWNGRADING INSTRUCTIONS	J/F 12/9628/2
	CLASSIFICATION UNCLASSIFIED
Special Handling Instruction : A	

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<b>FULL RECORD PRINT FOR MASTR V VHF/UHF BASE STATION</b>			
<b>SELECTED FREQUENCIES</b>			
(U) 150.0500 MHz - 150.8000 MHz (U) 162.0375 MHz - 173.2000 MHz (U) 173.4000 MHz - 174.0000 MHz		(U) 350.0000 MHz - 399.9000 MHz (U) 406.1000 MHz - 420.0000 MHz	
<b>System Name (Nomenclature)</b> (U)MASTR V VHF/UHF Base Station		<b>Stage</b> (U) 4 - Operational	
<b>Coord. ID/Coord. Num.</b> J/F 12/9628/2		<b>NTIA Certified</b> (U) No	
<b>Agency</b> (U)AF - Department of the Air Force		<b>Date Of Import</b> 8/29/2016 5:33:35 PM (GMT)	
<b>Overall Security</b> Unclassified		<b>Date/Time Last Mod.</b> 8/29/2016 5:42:04 PM (GMT)	
<b>GEOGRAPHIC AREAS FOR STAGE 4</b>			
(U) , (U) US&P Location Type : (U) Polygon			
<b>Control Numbers:</b> SPS- 21945/1		<b>Predefined Trunking?</b> (U) No	
<b>SYSTEM INFORMATION</b>			
<b>System Description:</b> (U) Provides secure and non-secure voice and data communications for a large number of users			
<b>System Relationship and Essentiality:</b> (U) P25 Trunking capability spectrum efficient communications and interoperability			
<b>TARGET DATES</b>			
<b>System Termination:</b>		<b>System Activation:</b> (U) 7/1/2010 <b>System Approval:</b> (U) 5/1/2010	
<b>NSEP Use:</b> (U) No		<b>ITU Waiver:</b> (U) No	
<b>Number Of Units:</b>			
<b>Estimated Cost of the System</b> (U) \$ 18000000			
Replacement Information: (U)NA			
<b>CLASSIFICATION</b> <b>UNCLASSIFIED</b>			

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FULL RECORD PRINT FOR MASTR V VHF/UHF BASE STATION					
STATIONS					
Station Name : (U) Land Mobile - Generic					
Station Name : (U) Fixed Base station <u>Transmitters</u> Nomenclature : (U) Base station (UHF) Nomenclature : (U) Fixed Base Station (VHF) Nomenclature : (U) Master V-H00M1 M150.8-M174 Nomenclature : (U) MASTR V, UHF Model SV-RTXMV <u>Receivers</u> Nomenclature : (U) Base Station RX Nomenclature : (U) Base Station (VHF) Nomenclature : (U) MASV-H00M1 M150.8-M174 Nomenclature : (U) MASTR V, UHF Model SV-RTXMV <u>Antennas</u> Nomenclature : (U) MASTR V TX antenna Nomenclature : (U) MASTR V RX antenna Nomenclature : (U) Fixed Base Station (VHF) Nomenclature : (U) ANDREW DB616E-BC Nomenclature : (U) DS4A00F36U-N Nomenclature : (U) SC331-ST2LDF(D01-G10)					
Station Name : (U) Fixed - Generic					
STATION INFORMATION					
Transmitting Station:			Receiving Station:		
(U)Fixed Base station - Generic			(U)Fixed - Generic		
Station Class: FX			Radio Service: Fixed		
LINK INFORMATION					
Transmitter:			Transmitter Antenna:		
(U) Base station (UHF)			(U) MASTR V RX antenna		
Receiver:			Receiver Antenna:		
(U) Generic			(U) Generic		
SELECTED MODES					
Frequency		Emission Designator		Power	
(U) 380.0000 MHz - 399.9000 MHz		(U) 8K40F1D		(U) 100 W Mean	
(U) 380.0000 MHz - 399.9000 MHz		(U) 9K70F1D		(U) 100 W Mean	
				Notes	
				PRI	
				PRI	
CLASSIFICATION		UNCLASSIFIED			

CLASSIFICATION <b>UNCLASSIFIED</b>		PAGE 4	
FULL RECORD PRINT FOR MASTR V VHF/UHF BASE STATION			
(U) 380.0000 MHz - 399.9000 MHz (U) 380.0000 MHz - 399.9000 MHz	(U) 9K80F1D (U) 8K00F1D	(U) 100 W Mean (U) 100 W Mean	PRI PRI
LINK INFORMATION			
Transmitter: (U) Base station (UHF)		Transmitter Antenna: (U) MASTR V TX antenna	
Receiver: (U) Generic		Receiver Antenna: (U) Generic	
SELECTED MODES			
Frequency (U) 350.0000 MHz - 399.9000 MHz (U) 350.0000 MHz - 399.9000 MHz (U) 350.0000 MHz - 399.9000 MHz (U) 350.0000 MHz - 399.9000 MHz (U) 406.1000 MHz - 420.0000 MHz (U) 406.1000 MHz - 420.0000 MHz (U) 406.1000 MHz - 420.0000 MHz (U) 406.1000 MHz - 420.0000 MHz	Emission Designator (U) 9K70F1D (U) 8K40F1D (U) 9K80F1D (U) 8K00F1D (U) 9K70F1D (U) 8K40F1D (U) 9K80F1D (U) 8K00F1D	Power (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean	Notes PRI PRI PRI PRI PRI PRI PRI PRI
LINK INFORMATION			
Transmitter: (U) Base station (UHF)		Transmitter Antenna: (U) SC331-ST2LDF(D01-G10)	
Receiver: (U) Generic		Receiver Antenna: (U) Generic	
SELECTED MODES			
Frequency (U) 380.0000 MHz - 399.9000 MHz (U) 380.0000 MHz - 399.9000 MHz (U) 380.0000 MHz - 399.9000 MHz (U) 380.0000 MHz - 399.9000 MHz (U) 406.1000 MHz - 420.0000 MHz (U) 406.1000 MHz - 420.0000 MHz (U) 406.1000 MHz - 420.0000 MHz (U) 406.1000 MHz - 420.0000 MHz	Emission Designator (U) 9K70F1D (U) 8K40F1D (U) 9K80F1D (U) 8K00F1D (U) 8K40F1D (U) 8K00F1D (U) 9K70F1D (U) 9K80F1D	Power (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean	Notes PRI PRI PRI PRI PRI PRI PRI PRI
CLASSIFICATION <b>UNCLASSIFIED</b>			

<b>CLASSIFICATION</b> <b>UNCLASSIFIED</b>		<b>PAGE 5</b>	
<b>FULL RECORD PRINT FOR MASTR V VHF/UHF BASE STATION</b>			
<b>LINK INFORMATION</b>			
<b>Transmitter:</b> (U) Fixed Base Station (VHF)		<b>Transmitter Antenna:</b> (U) Fixed Base Station (VHF)	
<b>Receiver:</b> (U) Generic		<b>Receiver Antenna:</b> (U) Generic	
<b>SELECTED MODES</b>			
<b>Frequency</b> (U) 150.0500 MHz - 150.8000 MHz (U) 150.0500 MHz - 150.8000 MHz (U) 150.0500 MHz - 150.8000 MHz (U) 162.0375 MHz - 173.2000 MHz (U) 162.0375 MHz - 173.2000 MHz (U) 162.0375 MHz - 173.2000 MHz (U) 173.4000 MHz - 174.0000 MHz (U) 173.4000 MHz - 174.0000 MHz (U) 173.4000 MHz - 174.0000 MHz	<b>Emission Designator</b> (U) 9K64G1W (U) 7K69F1E (U) 9K35G1W (U) 7K69F1E (U) 9K64G1W (U) 9K35G1W (U) 9K35G1W (U) 7K69F1E (U) 9K64G1W	<b>Power</b> (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean	<b>Notes</b> PRI PRI PRI PRI PRI PRI PRI PRI PRI
<b>LINK INFORMATION</b>			
<b>Transmitter:</b> (U) Master V-H00M1 M150.8-M174		<b>Transmitter Antenna:</b> (U) ANDREW DB616E-BC	
<b>Receiver:</b> (U) Generic		<b>Receiver Antenna:</b> (U) Generic	
<b>SELECTED MODES</b>			
<b>Frequency</b> (U) 162.0375 MHz - 173.2000 MHz (U) 162.0375 MHz - 173.2000 MHz (U) 162.0375 MHz - 173.2000 MHz (U) 162.0375 MHz - 173.2000 MHz (U) 162.0375 MHz - 173.2000 MHz (U) 173.4000 MHz - 174.0000 MHz (U) 173.4000 MHz - 174.0000 MHz (U) 173.4000 MHz - 174.0000 MHz (U) 173.4000 MHz - 174.0000 MHz	<b>Emission Designator</b> (U) 9K70D1W (U) 8K10F1E (U) 9K80F1D (U) 9K80D7W (U) 8K00F1D (U) 8K00F1D (U) 8K10F1E (U) 9K70D1W (U) 9K80D7W (U) 9K80F1D	<b>Power</b> (U) 110 W Mean (U) 110 W Mean (U) 110 W Mean (U) 110 W Mean (U) 110 W Mean (U) 110 W Mean (U) 110 W Mean (U) 110 W Mean (U) 110 W Mean (U) 110 W Mean	<b>Notes</b> PRI PRI PRI PRI PRI PRI PRI PRI PRI PRI
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<b>CLASSIFICATION</b> <b>UNCLASSIFIED</b>			

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<b>FULL RECORD PRINT FOR MASTR V VHF/UHF BASE STATION</b>			
<b>LINK INFORMATION</b>			
<b>Transmitter:</b> (U) MASTR V, UHF Model SV-RTXMV		<b>Transmitter Antenna:</b> (U) DS4A00F36U-N	
<b>Receiver:</b> (U) Generic		<b>Receiver Antenna:</b> (U) Generic	
<b>SELECTED MODES</b>			
<b>Frequency</b> (U) 406.1000 MHz - 420.0000 MHz (U) 406.1000 MHz - 420.0000 MHz (U) 406.1000 MHz - 420.0000 MHz (U) 406.1000 MHz - 420.0000 MHz	<b>Emission Designator</b> (U) 8K00F1E (U) 9K80D7W (U) 9K70D1W (U) 8K00F1D	<b>Power</b> (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean	<b>Notes</b> PRI PRI PRI PRI
<b>STATION INFORMATION</b>			
<b>Transmitting Station:</b> (U)Fixed Base station - Generic		<b>Receiving Station:</b> (U)Land Mobile - Generic	
<b>Station Class:</b> FB		<b>Radio Service:</b> Land Mobile	
<b>LINK INFORMATION</b>			
<b>Transmitter:</b> (U) Base station (UHF)		<b>Transmitter Antenna:</b> (U) MASTR V RX antenna	
<b>Receiver:</b> (U) Generic		<b>Receiver Antenna:</b> (U) Generic	
<b>SELECTED MODES</b>			
<b>Frequency</b> (U) 350.0000 MHz - 399.9000 MHz (U) 350.0000 MHz - 399.9000 MHz (U) 350.0000 MHz - 399.9000 MHz (U) 350.0000 MHz - 399.9000 MHz (U) 406.1000 MHz - 420.0000 MHz (U) 406.1000 MHz - 420.0000 MHz (U) 406.1000 MHz - 420.0000 MHz (U) 406.1000 MHz - 420.0000 MHz	<b>Emission Designator</b> (U) 8K00F1D (U) 9K80F1D (U) 9K70F1D (U) 8K40F1D (U) 8K00F1D (U) 9K80F1D (U) 8K40F1D (U) 9K70F1D	<b>Power</b> (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean	<b>Notes</b> PRI PRI PRI PRI PRI PRI PRI
<b>CLASSIFICATION</b> <b>UNCLASSIFIED</b>			

# FULL RECORD PRINT FOR MASTR V VHF/UHF BASE STATION

## LINK INFORMATION

Transmitter:  
(U) Base station (UHF)

Transmitter Antenna:  
(U) MASTR V TX antenna

Receiver:  
(U) GenericReceiver Antenna:  
(U) Generic

## SELECTED MODES

Frequency  
(U) 380.0000 MHz - 399.9000 MHz  
(U) 380.0000 MHz - 399.9000 MHz  
(U) 380.0000 MHz - 399.9000 MHz  
(U) 380.0000 MHz - 399.9000 MHz

Emission Designator  
(U) 8K00F1D  
(U) 9K80F1D  
(U) 9K70F1D  
(U) 8K40F1D

Power  
(U) 100 W Mean  
(U) 100 W Mean  
(U) 100 W Mean  
(U) 100 W Mean

Notes  
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PRI  
PRI

## LINK INFORMATION

Transmitter:  
(U) Base station (UHF)

Transmitter Antenna:  
(U) SC331-ST2LDF(D01-G10)

Receiver:  
(U) GenericReceiver Antenna:  
(U) Generic

## SELECTED MODES

Frequency  
(U) 380.0000 MHz - 399.9000 MHz  
(U) 380.0000 MHz - 399.9000 MHz  
(U) 380.0000 MHz - 399.9000 MHz  
(U) 380.0000 MHz - 399.9000 MHz  
(U) 406.1000 MHz - 420.0000 MHz  
(U) 406.1000 MHz - 420.0000 MHz  
(U) 406.1000 MHz - 420.0000 MHz  
(U) 406.1000 MHz - 420.0000 MHz

Emission Designator  
(U) 8K00F1D  
(U) 9K80F1D  
(U) 8K40F1D  
(U) 9K70F1D  
(U) 9K70F1D  
(U) 8K40F1D  
(U) 8K00F1D  
(U) 9K80F1D

[illegible]

Notes  
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PRI  
PRI

## LINK INFORMATION

Transmitter:  
(U) Fixed Base Station (VHF)

Transmitter Antenna:  
(U) Fixed Base Station (VHF)

Receiver:  
(U) GenericReceiver Antenna:  
(U) Generic

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FULL RECORD PRINT FOR MASTR V VHF/UHF BASE STATION			
SELECTED MODES			
Frequency (U) 150.0500 MHz - 150.8000 MHz (U) 150.0500 MHz - 150.8000 MHz (U) 150.0500 MHz - 150.8000 MHz (U) 162.0375 MHz - 173.2000 MHz (U) 162.0375 MHz - 173.2000 MHz (U) 162.0375 MHz - 173.2000 MHz (U) 173.4000 MHz - 174.0000 MHz (U) 173.4000 MHz - 174.0000 MHz (U) 173.4000 MHz - 174.0000 MHz	Emission Designator (U) 9K64G1W (U) 7K69F1E (U) 9K35G1W (U) 7K69F1E (U) 9K64G1W (U) 9K35G1W (U) 7K69F1E (U) 9K35G1W (U) 9K64G1W	Power (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean	Notes PRI PRI PRI PRI PRI PRI PRI PRI PRI
LINK INFORMATION			
Transmitter: (U) Master V-H00M1 M150.8-M174		Transmitter Antenna: (U) ANDREW DB616E-BC	
Receiver: (U) Generic		Receiver Antenna: (U) Generic	
SELECTED MODES			
Frequency (U) 162.0375 MHz - 173.2000 MHz (U) 162.0375 MHz - 173.2000 MHz (U) 173.4000 MHz - 174.0000 MHz (U) 173.4000 MHz - 174.0000 MHz	Emission Designator (U) 8K00F1D (U) 9K80F1D (U) 9K80F1D (U) 8K00F1D	Power (U) 110 W Mean (U) 110 W Mean (U) 110 W Mean (U) 110 W Mean	Notes PRI PRI PRI PRI
LINK INFORMATION			
Transmitter: (U) MASTR V, UHF Model SV-RTXMV		Transmitter Antenna: (U) DS4A00F36U-N	
Receiver: (U) Generic		Receiver Antenna: (U) Generic	
SELECTED MODES			
Frequency (U) 406.1000 MHz - 420.0000 MHz (U) 406.1000 MHz - 420.0000 MHz (U) 406.1000 MHz - 420.0000 MHz (U) 406.1000 MHz - 420.0000 MHz	Emission Designator (U) 8K00F1D (U) 8K00F1E (U) 9K70D1W (U) 9K80D7W	Power (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean (U) 100 W Mean	Notes PRI PRI PRI PRI
CLASSIFICATION <b>UNCLASSIFIED</b>			



**FULL RECORD PRINT FOR MASTR V VHF/UHF BASE STATION**

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<b>TRANSMITTER EQUIPMENT CHARACTERISTICS</b>		
<b>Nomenclature:</b> (U) MASTR V, UHF Model SV-RTXMV		<b>Manufacturer:</b> (U)HARRIS CORP
<b>NTIA Approval Status:</b> (U) Approved		<b>Coordination ID:</b> J/F 12
<b>Date of Import:</b> 8/29/2016 5:33:35 PM (GMT)		<b>Date/Time Last Mod.:</b> 7/29/2016 6:48:27 PM (GMT)
<b>Fcc Acc. Number:</b>		<b>Radar/Comm:</b> (U) Communications
<b>Model Name:</b> (U)MASTR V, UHF Model SV-RTXMV		<b>Output Device:</b> (U)Transistor
<b>Tuning Method:</b> (U) Synthesizer		<b>Supp. of Harmonics:</b> (U) No
<b>Freq. Stability:</b> (U) 0.1ppm		
<b>POWER</b>		
<b>Power Type:</b> Mean		
<b>Power:</b> (U) 100 W		
<b>2ND HARMONIC CURVE</b>		
(UNCLASSIFIED)		
<b>Atten.</b> -70.0 dB	<b>Offset (Fo)</b> 0.00000 kHz	
<b>3RD HARMONIC CURVE</b>		
(UNCLASSIFIED)		
<b>Atten.</b> -70.0 dB	<b>Offset (Fo)</b> 0.00000 kHz	
CLASSIFICATION <b>UNCLASSIFIED</b>		

## TRANSMITTER EQUIPMENT CHARACTERISTICS

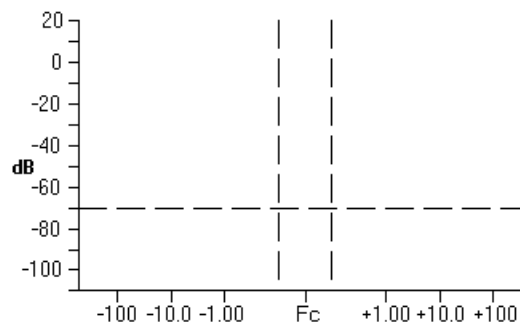
## SPURIOUS EMISSION CURVE

(UNCLASSIFIED)

Maximum Spurious Emission

Atten.

-70.0 dB



## FREQUENCIES

Tuning Range: (U) 406.0000 MHz - 420.0000 MHz

Tuning Method: (U) Synthesizer

Tuning Increment: (U) 6.2500 kHz

Freq Stability: (U) 0.1ppm

Number of Frequencies Required: (U) 10

Min. Separation: (U) 0.3000000 MHz

Supp. of Harmonics: (U) No

## GPS EMISSION LEVELS

Wideband 1164-1240 MHz: (U) -133 dBw/MHz

Wideband 1559-1610 MHz: (U) -132 dBw/MHz

Narrowband 1164-1240 MHz: (U) -166 dBw

Narrowband 1559-1610 MHz: (U) -166 dBw

## EMISSION DESIGNATORS

Em. Designator: (U) 8K00F1D

Necessary BW: (U) 8.0000 kHz

Measured/Calculated: (U) Measured

Occupied Bandwidth: (U) 8.0000 kHz

Modulation Type: (U) Digital Modulation

Spread Spectrum: No

Max. Modulation Frequency: (U) 2.5000 kHz

Dig. Modulation Type:  
(U) OTH - Other

Digital Bit Rate: (U) 12000 bps

Digital Peak Deviation: (U) 1.5625 kHz

Deviation Ratio: (U) 0.625

## TRANSMITTER EQUIPMENT CHARACTERISTICS

## FUNDAMENTAL CURVE

(UNCLASSIFIED)

Meas/Calc: Measured

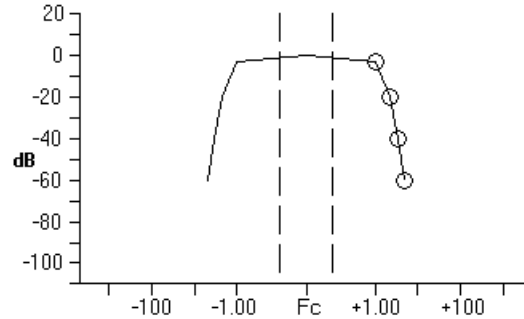
**Level**      **Offset (Fo)**

-3.00 dB      1.0000 kHz

-20.0 dB      2.1500 kHz

-40.0 dB      3.5000 kHz

-60.0 dB      4.7500 kHz



## EMISSION DESIGNATORS

Em. Designator: (U) 8K00F1E

Necessary BW: (U) 8.0000 kHz

Measured/Calculated: (U) Measured

Occupied Bandwidth: (U) 8.0000 kHz

Modulation Type: (U) Digital Modulation

Spread Spectrum: No

Max. Modulation Frequency: (U) 2.5000 kHz

Dig. Modulation Type:  
(U) OTH - Other

Digital Bit Rate: (U) 12000 bps

Digital Peak Deviation: (U) 1.5625 kHz

Deviation Ratio: (U) 0.625

## FUNDAMENTAL CURVE

(UNCLASSIFIED)

Meas/Calc: Measured

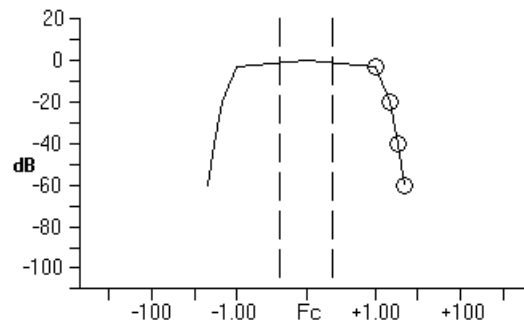
**Level**      **Offset (Fo)**

-3.00 dB      1.0000 kHz

-20.0 dB      2.1500 kHz

-40.0 dB      3.5000 kHz

-60.0 dB      4.7500 kHz



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<b>TRANSMITTER EQUIPMENT CHARACTERISTICS</b>											
<b>EMISSION DESIGNATORS</b>											
<b>Em. Designator:</b> (U) 9K70D1W	<b>Necessary BW:</b> (U) 9.7000 kHz										
<b>Measured/Calculated:</b> (U) Measured	<b>Occupied Bandwidth:</b> (U) 9.8000 kHz										
<b>Modulation Type:</b> (U) Digital Modulation	<b>Spread Spectrum:</b> No										
<b>Max. Modulation Frequency:</b> (U) 2.5000 kHz											
<b>Dig. Modulation Type:</b> (U) OTH - Other	<b>Digital Bit Rate:</b> (U) 12000 bps										
<b>Digital Peak Deviation:</b> (U) 1.5625 kHz	<b>Deviation Ratio:</b> (U) 0.625										
<b>FUNDAMENTAL CURVE</b>											
<p>(UNCLASSIFIED)</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;"> <p><b>Meas/Calc:</b> Measured</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Level</th> <th style="text-align: left;">Offset (Fo)</th> </tr> </thead> <tbody> <tr> <td>-3.00 dB</td> <td>1.2500 kHz</td> </tr> <tr> <td>-20.0 dB</td> <td>2.7500 kHz</td> </tr> <tr> <td>-40.0 dB</td> <td>3.3500 kHz</td> </tr> <tr> <td>-60.0 dB</td> <td>3.6000 kHz</td> </tr> </tbody> </table> </div> <div style="width: 50%;"> </div> </div>		Level	Offset (Fo)	-3.00 dB	1.2500 kHz	-20.0 dB	2.7500 kHz	-40.0 dB	3.3500 kHz	-60.0 dB	3.6000 kHz
Level	Offset (Fo)										
-3.00 dB	1.2500 kHz										
-20.0 dB	2.7500 kHz										
-40.0 dB	3.3500 kHz										
-60.0 dB	3.6000 kHz										
<b>EMISSION DESIGNATORS</b>											
<b>Em. Designator:</b> (U) 9K80D7W	<b>Necessary BW:</b> (U) 9.8000 kHz										
<b>Measured/Calculated:</b> (U) Measured	<b>Occupied Bandwidth:</b> (U) 9.8000 kHz										
<b>Modulation Type:</b> (U) Digital Modulation	<b>Spread Spectrum:</b> No										
<b>Max. Modulation Frequency:</b> (U) 2.5000 kHz											
<b>Dig. Modulation Type:</b> (U) OTH - Other	<b>Digital Bit Rate:</b> (U) 12000 bps										
<b>Deviation Ratio:</b> (U) 0.625											
CLASSIFICATION <b>UNCLASSIFIED</b>											

## TRANSMITTER EQUIPMENT CHARACTERISTICS

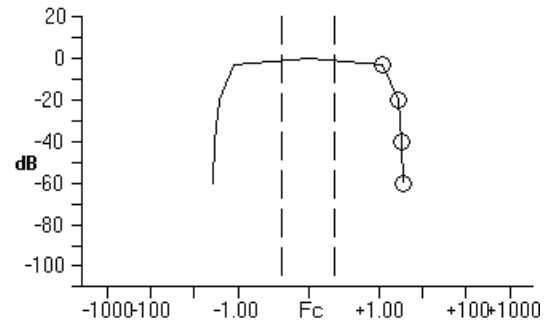
Digital Peak Deviation: (U) 1.5625 kHz

## FUNDAMENTAL CURVE

(UNCLASSIFIED)

Meas/Calc: Measured

Level	Offset (Fo)
-3.00 dB	1.2500 kHz
-20.0 dB	2.7500 kHz
-40.0 dB	3.3500 kHz
-60.0 dB	3.6000 kHz



## TRANSMITTER EQUIPMENT CHARACTERISTICS

Nomenclature: (U) Fixed Base Station (VHF)

Manufacturer: (U) HARRIS CORP

NTIA Approval Status: (U) Approved

Coordination ID: J/F 12

Date of Import: 8/29/2016 5:33:35 PM (GMT)

Date/Time Last Mod.: 7/29/2016 6:48:28 PM

Fcc Acc. Number: (U) OWDTR-0065-E

(GMT)  
Radar/Comm: (U) Communications

Model Name: (U) Master V

Output Device: (U) Transistor

Tuning Method: (U) Synthesizer

Supp. of Harmonics: (U) Yes

Freq. Stability: (U) 0.1ppm

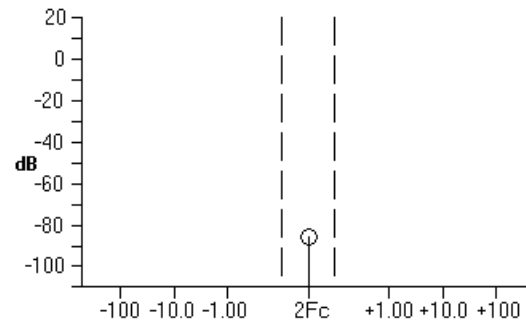
## POWER

Power Type: Mean

Power: (U) 100 W

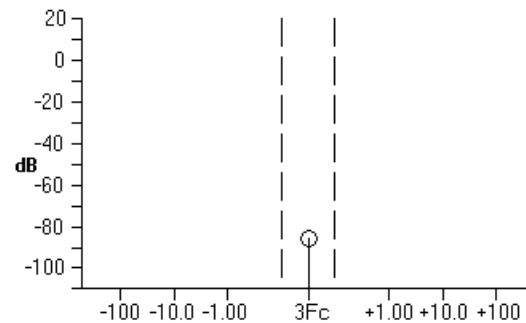
## 2ND HARMONIC CURVE

(UNCLASSIFIED)

Atten.  
-86.0 dBOffset (Fo)  
0.00000 kHz

## 3RD HARMONIC CURVE

(UNCLASSIFIED)

Atten.  
-86.0 dBOffset (Fo)  
0.00000 kHz

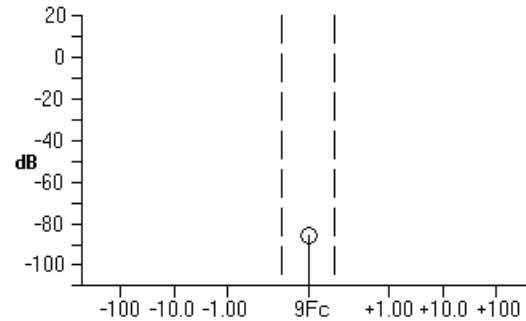
## TRANSMITTER EQUIPMENT CHARACTERISTICS

## OTHER HARMONIC CURVE

(UNCLASSIFIED)

**Atten.**  
-86.0 dB

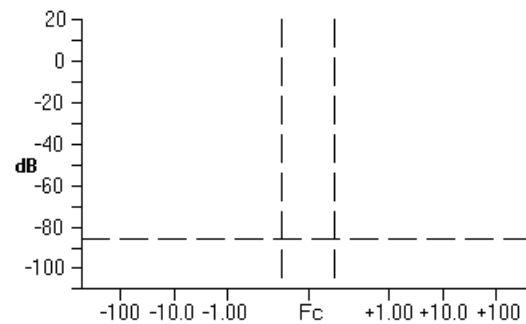
**Offset (Fo)**  
0.00000 kHz



## SPURIOUS EMISSION CURVE

(UNCLASSIFIED)

**Maximum Spurious Emission**  
**Atten.**  
-86.0 dB



## FREQUENCIES

**Tuning Range:** (U) 150.0000 MHz - 174.0000 MHz

**Tuning Method:** (U) Synthesizer

**Tuning Increment:** (U) 1.2500 kHz

**Freq Stability:** (U) 0.1ppm

**Number of Frequencies Required:** (U) 1

**Min. Separation:** (U) 0.6000000 MHz

**Supp. of Harmonics:** (U) Yes

## EMISSION DESIGNATORS

**Em. Designator:** (U) 7K69F1E

**Necessary BW:** (U) 7.6900 kHz

**Measured/Calculated:** (U) Measured

**Occupied Bandwidth:** (U) 7.6900 kHz

**Modulation Type:** (U) Digital Modulation

**Spread Spectrum:** No



## TRANSMITTER EQUIPMENT CHARACTERISTICS

Max. Modulation Frequency: (U) 2.5000 kHz

**Dig. Modulation Type:**  
(U) Multi-h CPM - Multi-index Continuous  
Phase Modulation

Digital Bit Rate: (U) 9800 bps

Number of Digital States: (U) 4

Deviation Ratio: (U) 0.625

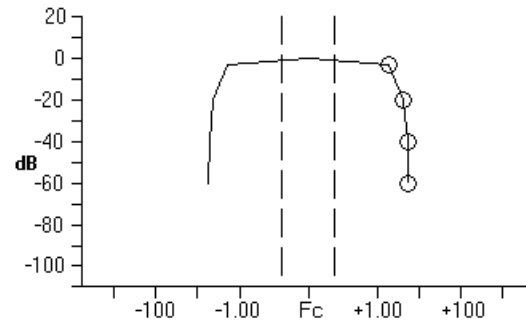
Digital Peak Deviation: (U) 1.5625 kHz

## FUNDAMENTAL CURVE

(UNCLASSIFIED)

Meas/Calc: Measured

Level	Offset (Fo)
-3.00 dB	2.0000 kHz
-20.0 dB	4.3000 kHz
-40.0 dB	5.3000 kHz
-60.0 dB	5.4000 kHz



## EMISSION DESIGNATORS

Em. Designator: (U) 9K64G1W

Necessary BW: (U) 9.6400 kHz

Measured/Calculated: (U) Measured

Occupied Bandwidth: (U) 9.6400 kHz

Modulation Type: (U) Digital Modulation

Spread Spectrum: No

Max. Modulation Frequency: (U) 4.0000 kHz

**Dig. Modulation Type:**  
(U) DQPSK - Differential Quadrature Phase  
Shift Keying

Digital Bit Rate: (U) 12000 bps

Number of Digital States: (U) 4

Deviation Ratio: (U) 0.625

Digital Peak Deviation: (U) 2.5000 kHz

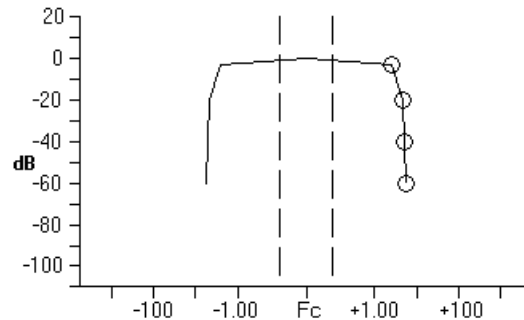
## TRANSMITTER EQUIPMENT CHARACTERISTICS

## FUNDAMENTAL CURVE

(UNCLASSIFIED)

Meas/Calc: Measured

Level	Offset (Fo)
-3.00 dB	2.5000 kHz
-20.0 dB	4.6700 kHz
-40.0 dB	5.2500 kHz
-60.0 dB	5.4500 kHz



## EMISSION DESIGNATORS

Em. Designator: (U) 9K35G1W

Necessary BW: (U) 9.3500 kHz

Measured/Calculated: (U) Measured

Occupied Bandwidth: (U) 9.3500 kHz

Modulation Type: (U) Digital Modulation

Spread Spectrum: No

Max. Modulation Frequency: (U) 4.0000 kHz

Dig. Modulation Type:  
(U) CQPSK - Coherent Quadrature Phase  
Shift Keying

Digital Bit Rate: (U) 12000 bps

Number of Digital States: (U) 4

Deviation Ratio: (U) 0.625

Digital Peak Deviation: (U) 2.5000 kHz

## TRANSMITTER EQUIPMENT CHARACTERISTICS

## FUNDAMENTAL CURVE

(UNCLASSIFIED)

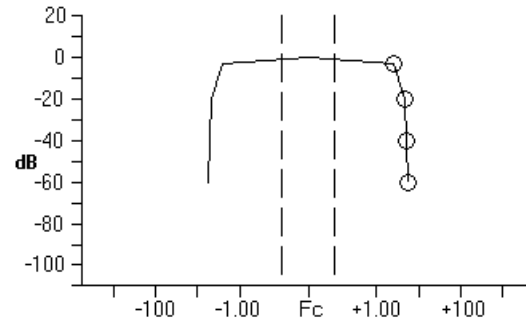
**Meas/Calc:** Measured**Level**      **Offset (Fo)**

-3.00 dB      2.5000 kHz

-20.0 dB      4.6700 kHz

-40.0 dB      5.2500 kHz

-60.0 dB      5.4500 kHz



CLASSIFICATION <b>UNCLASSIFIED</b>		PAGE 20	
<b>TRANSMITTER EQUIPMENT CHARACTERISTICS</b>			
<b>Nomenclature:</b> (U) Base station (UHF)		<b>Manufacturer:</b> (U)HARRIS CORP	
<b>NTIA Approval Status:</b> (U) Approved		<b>Coordination ID:</b> J/F 12	
<b>Date of Import:</b> 8/29/2016 5:33:35 PM (GMT)		<b>Date/Time Last Mod.:</b> 7/29/2016 6:48:29 PM (GMT)	
<b>Fcc Acc. Number:</b> (U) NA		<b>Radar/Comm:</b> (U) Communications	
<b>Model Name:</b> (U)M/A COM Model: MASV-N00M1 & MASV-R004		<b>Output Device:</b> (U)Transistor	
<b>Tuning Method:</b> (U) Synthesizer		<b>Supp. of Harmonics:</b> (U) No	
<b>Freq. Stability:</b> (U) 0.1ppm			
<b>POWER</b>			
<b>Power Type:</b> Mean			
<b>Power:</b> (U) 100 W			
<b>2ND HARMONIC CURVE</b>			
(UNCLASSIFIED)			
<b>Atten.</b> -70.0 dB	<b>Offset (Fo)</b> 0.00000 kHz	<p>The graph shows the 2nd harmonic curve. The y-axis is labeled 'dB' and ranges from -100 to 20. The x-axis ranges from -100 to +100. A single peak is shown at 2Fc, reaching a value of approximately -70 dB. The peak is marked with a circle and a vertical line extending to the x-axis.</p>	
<b>3RD HARMONIC CURVE</b>			
(UNCLASSIFIED)			
<b>Atten.</b> -70.0 dB	<b>Offset (Fo)</b> 0.00000 kHz	<p>The graph shows the 3rd harmonic curve. The y-axis is labeled 'dB' and ranges from -100 to 20. The x-axis ranges from -100 to +100. A single peak is shown at 3Fc, reaching a value of approximately -70 dB. The peak is marked with a circle and a vertical line extending to the x-axis.</p>	
CLASSIFICATION <b>UNCLASSIFIED</b>			

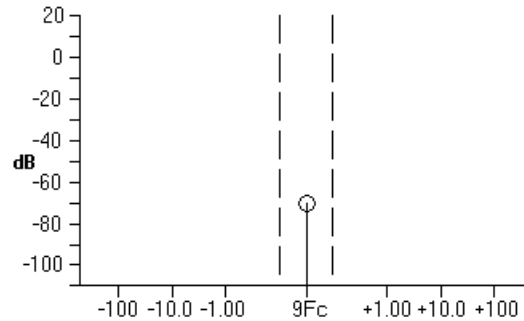
## TRANSMITTER EQUIPMENT CHARACTERISTICS

## OTHER HARMONIC CURVE

(UNCLASSIFIED)

**Atten.**  
-70.0 dB

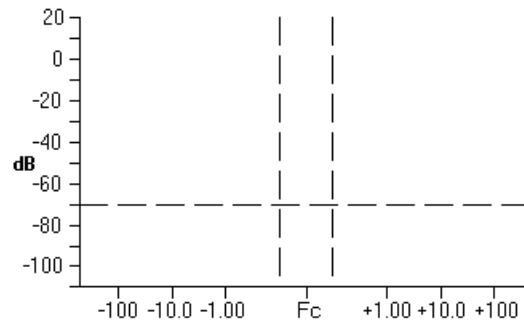
**Offset (Fo)**  
0.00000 kHz



## SPURIOUS EMISSION CURVE

(UNCLASSIFIED)

**Maximum Spurious Emission**  
**Atten.**  
-70.0 dB



## FREQUENCIES

**Tuning Range:** (U) 350.0000 MHz - 520.0000 MHz

**Tuning Method:** (U) Synthesizer

**Tuning Increment:** (U) 12.500 kHz

**Freq Stability:** (U) 0.1ppm

**Number of Frequencies Required:** (U) 1600

**Min. Separation:** (U) 0.000001000000 MHz

**Supp. of Harmonics:** (U) No

## GPS EMISSION LEVELS

**Wideband 1164-1240 MHz:** (U) 0.000 dBw/MHz

**Wideband 1559-1610 MHz:** (U) 0.000 dBw/MHz

**Narrowband 1164-1240 MHz:** (U) -80.2 dBw

**Narrowband 1559-1610 MHz:** (U) -81.0 dBw

## TRANSMITTER EQUIPMENT CHARACTERISTICS

## EMISSION DESIGNATORS

Em. Designator: (U) 8K00F1D

Necessary BW: (U) 8.0000 kHz

Measured/Calculated: (U) Calculated

Occupied Bandwidth: (U) 8.0000 kHz

Modulation Type: (U) Digital Modulation

Spread Spectrum: No

Max. Modulation Frequency: (U) 2.5000 kHz

Dig. Modulation Type:  
(U) OTH - Other

Digital Bit Rate: (U) 12000 bps

Number of Digital States: (U) 4

Deviation Ratio: (U) 0.625

Digital Peak Deviation: (U) 1.5625 kHz

## FUNDAMENTAL CURVE

(UNCLASSIFIED)

Meas/Calc: Measured

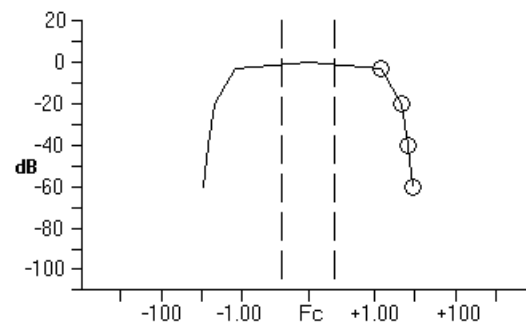
Level Offset (Fo)

-3.00 dB 1.4500 kHz

-20.0 dB 4.5000 kHz

-40.0 dB 6.8500 kHz

-60.0 dB 9.0500 kHz



## EMISSION DESIGNATORS

Em. Designator: (U) 9K80F1D

Necessary BW: (U) 9.8000 kHz

Measured/Calculated: (U) Calculated

Occupied Bandwidth: (U) 9.8000 kHz

Modulation Type: (U) Digital Modulation

Spread Spectrum: No

Max. Modulation Frequency: (U) 2.5000 kHz

Dig. Modulation Type:

CLASSIFICATION <b>UNCLASSIFIED</b>		PAGE 23										
<b>TRANSMITTER EQUIPMENT CHARACTERISTICS</b>												
(U) OTH - Other												
<b>Digital Peak Deviation:</b> (U) 1.5625 kHz	<b>Deviation Ratio:</b> (U) 0.625											
<b>FUNDAMENTAL CURVE</b>												
(UNCLASSIFIED)												
<b>Meas/Calc:</b> Measured <table border="1"> <thead> <tr> <th>Level</th> <th>Offset (Fo)</th> </tr> </thead> <tbody> <tr> <td>-3.00 dB</td> <td>2.5000 kHz</td> </tr> <tr> <td>-20.0 dB</td> <td>5.7000 kHz</td> </tr> <tr> <td>-40.0 dB</td> <td>6.9000 kHz</td> </tr> <tr> <td>-60.0 dB</td> <td>7.1000 kHz</td> </tr> </tbody> </table>		Level	Offset (Fo)	-3.00 dB	2.5000 kHz	-20.0 dB	5.7000 kHz	-40.0 dB	6.9000 kHz	-60.0 dB	7.1000 kHz	
Level	Offset (Fo)											
-3.00 dB	2.5000 kHz											
-20.0 dB	5.7000 kHz											
-40.0 dB	6.9000 kHz											
-60.0 dB	7.1000 kHz											
<b>EMISSION DESIGNATORS</b>												
<b>Em. Designator:</b> (U) 9K70F1D	<b>Necessary BW:</b> (U) 9.7000 kHz											
<b>Measured/Calculated:</b> (U) Calculated	<b>Occupied Bandwidth:</b> (U) 9.7000 kHz											
<b>Modulation Type:</b> (U) Digital Modulation	<b>Spread Spectrum:</b> No											
<b>Max. Modulation Frequency:</b> (U) 2.5000 kHz												
<b>Dig. Modulation Type:</b> (U) OTH - Other	<b>Digital Bit Rate:</b> (U) 12000 bps											
<b>Digital Peak Deviation:</b> (U) 1.5625 kHz	<b>Deviation Ratio:</b> (U) 0.625											
		<b>Digital Bit Rate:</b> (U) 12000 bps										
CLASSIFICATION <b>UNCLASSIFIED</b>												

## TRANSMITTER EQUIPMENT CHARACTERISTICS

## FUNDAMENTAL CURVE

(UNCLASSIFIED)

Meas/Calc: Measured

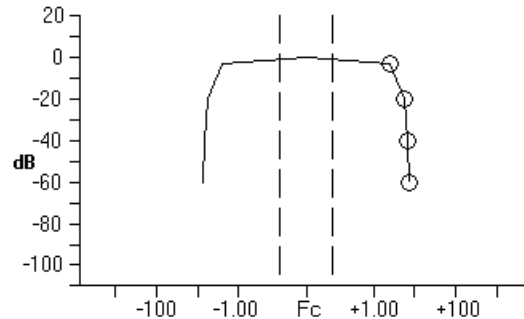
**Level**      **Offset (Fo)**

-3.00 dB      2.5000 kHz

-20.0 dB      5.4500 kHz

-40.0 dB      6.8500 kHz

-60.0 dB      7.3000 kHz



## EMISSION DESIGNATORS

Em. Designator: (U) 8K40F1D

Necessary BW: (U) 8.4000 kHz

Measured/Calculated: (U) Calculated

Occupied Bandwidth: (U) 8.4000 kHz

Modulation Type: (U) Digital Modulation

Spread Spectrum: No

Max. Modulation Frequency: (U) 2.5000 kHz

Dig. Modulation Type:  
(U) OTH - Other

Digital Bit Rate: (U) 1200 bps

Number of Digital States: (U) 4

Deviation Ratio: (U) 0.625

Digital Peak Deviation: (U) 1.5625 kHz



TRANSMITTER EQUIPMENT CHARACTERISTICS

FUNDAMENTAL CURVE

(UNCLASSIFIED)

Meas/Calc: Calculated

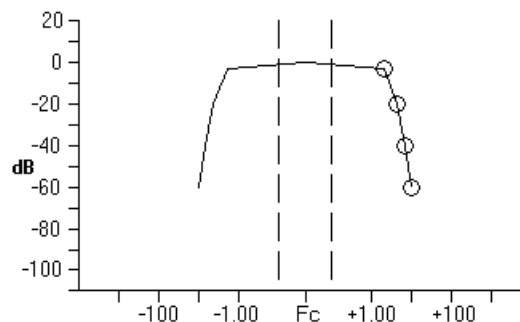
Level      Offset (Fo)

-3.00 dB      1.9500 kHz

-20.0 dB      4.2500 kHz

-40.0 dB      6.9000 kHz

-60.0 dB      9.4000 kHz



## TRANSMITTER EQUIPMENT CHARACTERISTICS

Nomenclature: (U) Master V-H00M1 M150.8-M174

Manufacturer: (U) HARRIS CORP

NTIA Approval Status: (U) Approved

Coordination ID: J/F 12

Date of Import: 8/29/2016 5:33:35 PM (GMT)

Date/Time Last Mod.: 7/29/2016 6:48:30 PM

Fcc Acc. Number: (U) OWDTR-0065-E

(GMT)  
Radar/Comm: (U) Communications

Model Name: (U) MASV-H001

Output Device: (U) Transistor

Tuning Method: (U) Synthesizer

Supp. of Harmonics: (U) No

Freq. Stability: (U) 0.1ppm

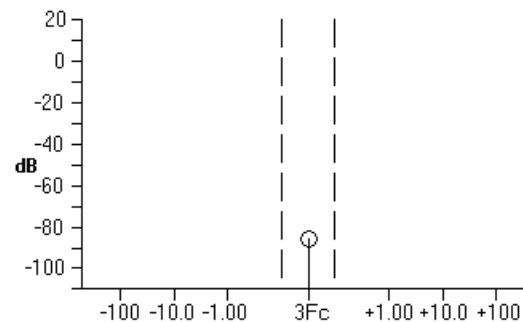
## POWER

Power Type: Mean

Power: (U) 110 W

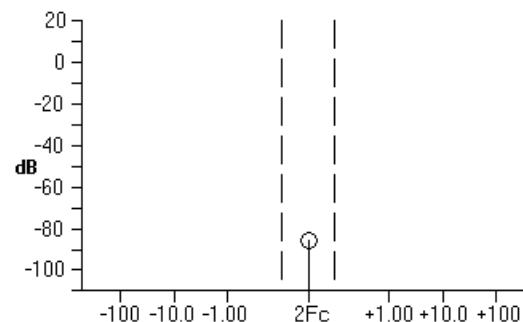
## 3RD HARMONIC CURVE

(UNCLASSIFIED)

Atten.  
-86.0 dBOffset (Fo)  
0.00000 kHz

## 2ND HARMONIC CURVE

(UNCLASSIFIED)

Atten.  
-86.0 dBOffset (Fo)  
0.00000 kHz

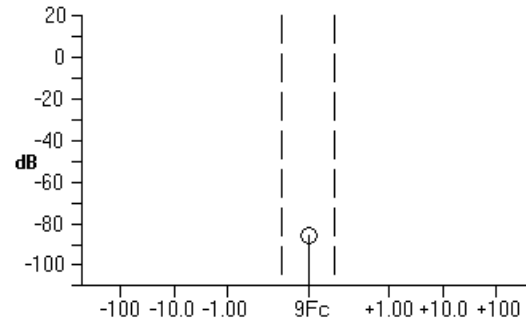
## TRANSMITTER EQUIPMENT CHARACTERISTICS

## OTHER HARMONIC CURVE

(UNCLASSIFIED)

**Atten.**  
-86.0 dB

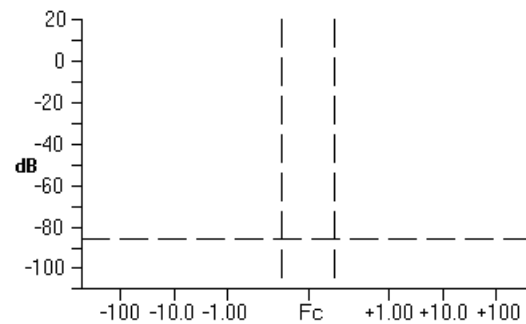
**Offset (Fo)**  
0.00000 kHz



## SPURIOUS EMISSION CURVE

(UNCLASSIFIED)

**Maximum Spurious Emission**  
**Atten.**  
-86.0 dB



## FREQUENCIES

**Tuning Range:** (U) 150.8000 MHz - 174.0000 MHz

**Tuning Method:** (U) Synthesizer

**Tuning Increment:** (U) 6.2500 kHz

**Freq Stability:** (U) 0.1ppm

**Number of Frequencies Required:**

**Min. Separation:**

**Supp. of Harmonics:** (U) No

## EMISSION DESIGNATORS

**Em. Designator:** (U) 8K00F1D

**Necessary BW:** (U) 8.0000 kHz

**Measured/Calculated:** (U) Measured

**Occupied Bandwidth:**

**Modulation Type:** (U) Digital Modulation

**Spread Spectrum:** No

## TRANSMITTER EQUIPMENT CHARACTERISTICS

**Dig. Modulation Type:**  
(U)OTH - Other

**Digital Bit Rate:** (U) 12000 bps

**Number of Digital States:** (U) 4

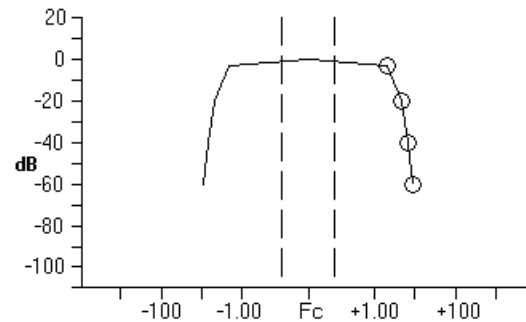
**Deviation Ratio:** (U) 0.625

**Digital Peak Deviation:** (U) 2.5000 kHz

## FUNDAMENTAL CURVE

(UNCLASSIFIED)

**Meas/Calc:** Measured  
**Level**      **Offset (Fo)**  
 -3.00 dB      2.0000 kHz  
 -20.0 dB      4.5000 kHz  
 -40.0 dB      6.8500 kHz  
 -60.0 dB      9.1000 kHz



## EMISSION DESIGNATORS

**Em. Designator:** (U) 9K80F1D

**Necessary BW:** (U) 9.8000 kHz

**Measured/Calculated:** (U) Measured

**Occupied Bandwidth:**

**Modulation Type:** (U) Digital Modulation

**Spread Spectrum:** No

**Dig. Modulation Type:**  
(U)OTH - Other

**Digital Bit Rate:** (U) 12000 bps

**Number of Digital States:** (U) 4

**Deviation Ratio:** (U) 0.625

**Digital Peak Deviation:** (U) 2.5000 kHz

## TRANSMITTER EQUIPMENT CHARACTERISTICS

## FUNDAMENTAL CURVE

(UNCLASSIFIED)

Meas/Calc: Measured

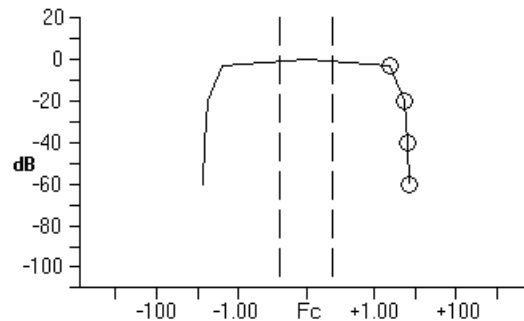
**Level**      **Offset (Fo)**

-3.00 dB      2.5000 kHz

-20.0 dB      5.7000 kHz

-40.0 dB      6.9000 kHz

-60.0 dB      7.1000 kHz



## EMISSION DESIGNATORS

Em. Designator: (U) 8K10F1E

Necessary BW: (U) 8.1000 kHz

Measured/Calculated: (U) Measured

Occupied Bandwidth: (U) 8.0000 kHz

Modulation Type: (U) Digital Modulation

Spread Spectrum: No

Max. Modulation Frequency: (U) 2.5000 kHz

Dig. Modulation Type:  
(U) OTH - Other

Digital Bit Rate: (U) 12000 bps

Digital Peak Deviation: (U) 1.5625 kHz

Deviation Ratio: (U) 0.625

## FUNDAMENTAL CURVE

(UNCLASSIFIED)

Meas/Calc: Measured

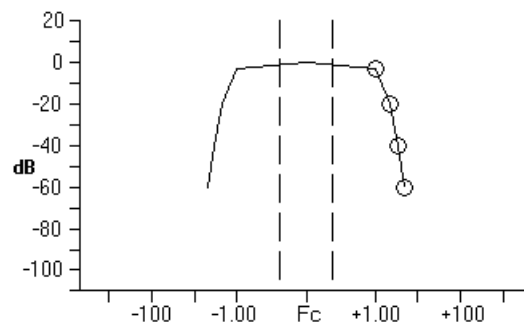
**Level**      **Offset (Fo)**

-3.00 dB      1.0000 kHz

-20.0 dB      2.1500 kHz

-40.0 dB      3.5000 kHz

-60.0 dB      4.7500 kHz



CLASSIFICATION <b>UNCLASSIFIED</b>		PAGE 30
TRANSMITTER EQUIPMENT CHARACTERISTICS		
EMISSION DESIGNATORS		
Em. Designator: (U) 9K70D1W	Necessary BW: (U) 9.7000 kHz	
Measured/Calculated: (U) Measured	Occupied Bandwidth: (U) 9.8000 kHz	
Modulation Type: (U) Digital Modulation	Spread Spectrum: No	
Max. Modulation Frequency: (U) 2.5000 kHz		
Dig. Modulation Type: (U) OTH - Other	Digital Bit Rate: (U) 12000 bps	
Digital Peak Deviation: (U) 1.5625 kHz	Deviation Ratio: (U) 0.625	
FUNDAMENTAL CURVE		
(UNCLASSIFIED)		
<b>Meas/Calc:</b> Measured <b>Level</b> <b>Offset (Fo)</b> -3.00 dB      1.2500 kHz -20.0 dB      2.7500 kHz -40.0 dB      3.3500 kHz -60.0 dB      3.6000 kHz		
EMISSION DESIGNATORS		
Em. Designator: (U) 9K80D7W	Necessary BW: (U) 9.8000 kHz	
Measured/Calculated: (U) Measured	Occupied Bandwidth: (U) 9.8000 kHz	
Modulation Type: (U) Digital Modulation	Spread Spectrum: No	
Max. Modulation Frequency: (U) 2.5000 kHz		
Dig. Modulation Type: (U) OTH - Other	Digital Bit Rate: (U) 12000 bps	
	Deviation Ratio: (U) 0.625	
CLASSIFICATION <b>UNCLASSIFIED</b>		

## TRANSMITTER EQUIPMENT CHARACTERISTICS

Digital Peak Deviation: (U) 1.5625 kHz

## FUNDAMENTAL CURVE

(UNCLASSIFIED)

Meas/Calc: Measured

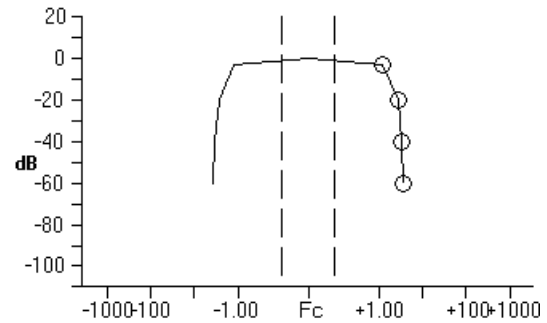
**Level**      **Offset (Fo)**

-3.00 dB      1.2500 kHz

-20.0 dB      2.7500 kHz

-40.0 dB      3.3500 kHz

-60.0 dB      3.6000 kHz



## RECEIVER EQUIPMENT CHARACTERISTICS

Nomenclature: (U) MASTR V, UHF Model SV-RTXMV

Manufacturer: (U) HARRIS CORP

NTIA Approval Status: (U) Approved

Coordination ID: J/F 12

Date of Import: 8/29/2016 5:33:35 PM (GMT)

Date/Time Last Mod.: 7/29/2016 6:48:31 PM (GMT)

Model Name: (U) MASTR V, UHF Model SV-RTXMV

Fcc Acc. Number:

Image Reject: (U) 100 dB

Oscillator Tuned: (U) Above

Cond. Undesired Em.:

Proxy: No

Homodyne: No

## FREQUENCIES

Tuning Range: (U) 406.0000 MHz - 420.0000 MHz

Tuning Method: (U) Synthesizer

Tuning Increment: (U) 6.2500 kHz

Freq. Stability: (U) 0.1ppm

## EMISSION DESIGNATORS

Em. Designator: (U) 8K00F1D

## Sensitivities

Sensitivity: (U) -116 dBm

Necessary BW: (U) 8.0000 kHz

Perf. Value: (U) 5

Noise Figure: (U) 9.00 dB

Noise Temp. (U) 2014 K

Spur. Reject (U) 90.0 dB

Intermod. Reject:

Adj. Channel Sel.:

Perf. Crit.: (U) BER - Bit Error Rate

## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated: Measured

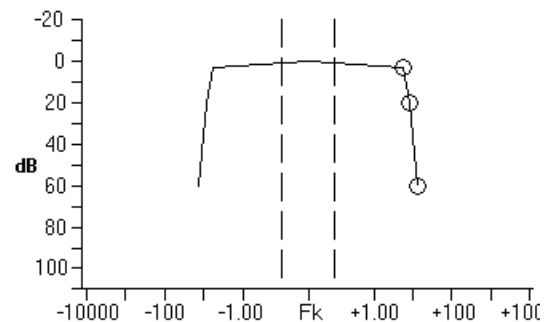
IF Freq. (Fk): 110.2000 MHz

Atten. Offset (Fo)

3.00 dB 5.5000 kHz

20.0 dB 8.3750 kHz

60.0 dB 12.875 kHz





## RECEIVER EQUIPMENT CHARACTERISTICS

## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated:Measured

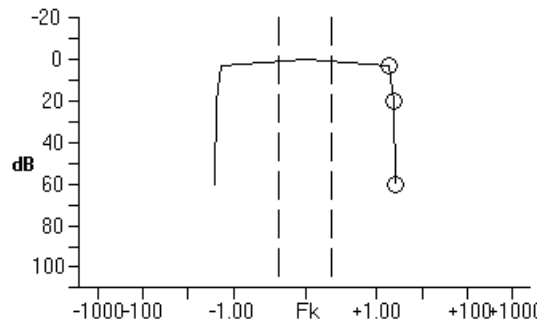
IF Freq. (Fk): 2.160000 MHz

Atten. Offset (Fo)

3.00 dB 1.9250 kHz

20.0 dB 2.3250 kHz

60.0 dB 2.5750 kHz



## EMISSION DESIGNATORS

Em. Designator: (U) 8K00F1E

## Sensitivities

Sensitivity: (U) -116 dBm

Necessary BW: (U) 8.0000 kHz

Perf. Value: (U) 5

Noise Figure: (U) 9.00 dB

Noise Temp. (U) 2014 K

Spur. Reject (U) 90.0 dB

Intermod. Reject:

Adj. Channel Sel.:

Perf. Crit.: (U) BER - Bit Error Rate

## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated:Measured

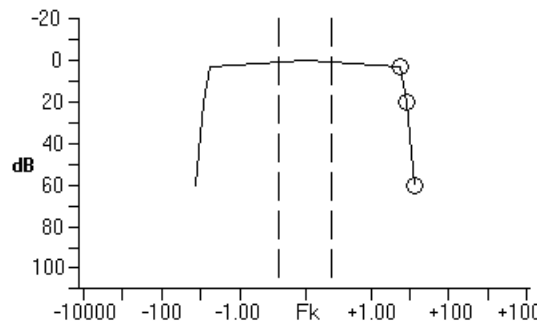
IF Freq. (Fk): 110.2000 MHz

Atten. Offset (Fo)

3.00 dB 5.5000 kHz

20.0 dB 8.3750 kHz

60.0 dB 12.875 kHz



## RECEIVER EQUIPMENT CHARACTERISTICS

## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated:Measured

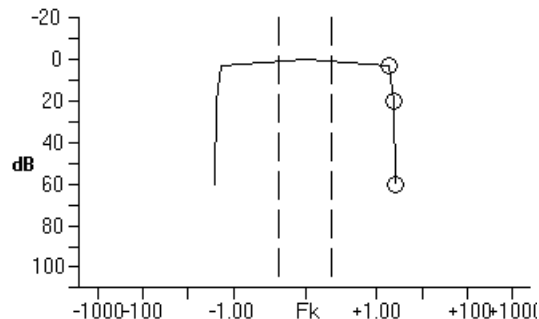
IF Freq. (Fk): 2.160000 MHz

Atten. Offset (Fo)

3.00 dB 1.9250 kHz

20.0 dB 2.3250 kHz

60.0 dB 2.5750 kHz



## EMISSION DESIGNATORS

Em. Designator: (U) 9K70D1W

## Sensitivities

Sensitivity: (U) -116 dBm

Necessary BW: (U) 9.7000 kHz

Perf. Value: (U) 5

Noise Figure: (U) 9.00 dB

Noise Temp. (U) 2014 K

Spur. Reject (U) 90.0 dB

Intermod. Reject:

Adj. Channel Sel.:

Perf. Crit.: (U) BER - Bit Error Rate

## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated:Measured

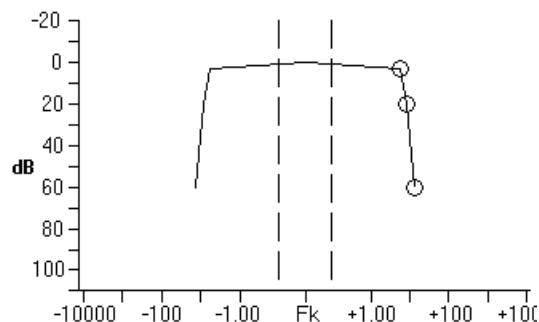
IF Freq. (Fk): 110.2000 MHz

Atten. Offset (Fo)

3.00 dB 5.5000 kHz

20.0 dB 8.3750 kHz

60.0 dB 12.875 kHz



## RECEIVER EQUIPMENT CHARACTERISTICS

## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated:Measured

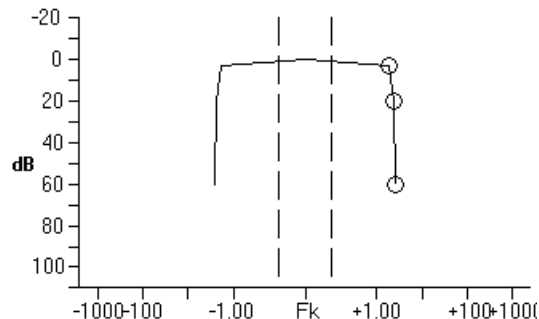
IF Freq. (Fk): 2.160000 MHz

Atten. Offset (Fo)

3.00 dB 1.9250 kHz

20.0 dB 2.3250 kHz

60.0 dB 2.5750 kHz



## EMISSION DESIGNATORS

Em. Designator: (U) 9K80D7W

## Sensitivities

Sensitivity: (U) -116 dBm

Necessary BW: (U) 9.8000 kHz

Perf. Value: (U) 5

Noise Figure: (U) 9.00 dB

Noise Temp. (U) 2014 K

Spur. Reject (U) 90.0 dB

Intermod. Reject:

Adj. Channel Sel.:

Perf. Crit.: (U) BER - Bit Error Rate

## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated:Measured

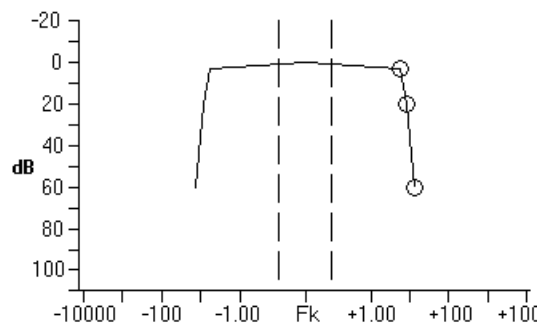
IF Freq. (Fk): 110.2000 MHz

Atten. Offset (Fo)

3.00 dB 5.5000 kHz

20.0 dB 8.3750 kHz

60.0 dB 12.875 kHz



## RECEIVER EQUIPMENT CHARACTERISTICS

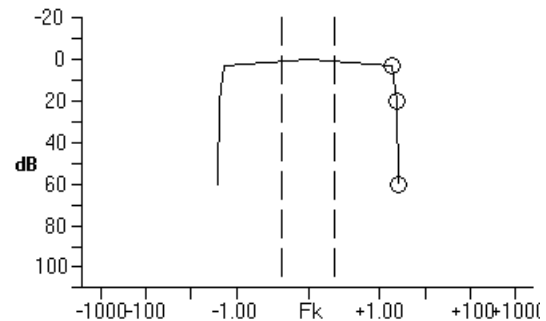
## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated: Measured

IF Freq. (Fk): 2.160000 MHz

Atten.	Offset (Fo)
3.00 dB	1.9250 kHz
20.0 dB	2.3250 kHz
60.0 dB	2.5750 kHz

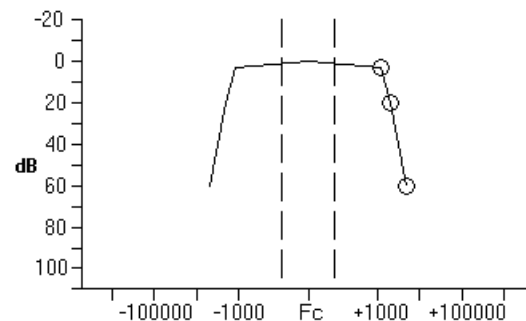


## RF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated: Measured

Atten.	Offset (Fo)
3.00 dB	1200.0 kHz
20.0 dB	2000.0 kHz
60.0 dB	5000.0 kHz



## FREQUENCIES

Tuning Range: (U) 406.0000 MHz - 420.0000 MHz

Tuning Method: (U) Synthesizer

Tuning Increment: (U) 12.500 kHz

Freq. Stability: (U) 0.1ppm

## RECEIVER EQUIPMENT CHARACTERISTICS

## EMISSION DESIGNATORS

Em. Designator: (U) 8K00F1D

## Sensitivities

Sensitivity: (U) -116 dBm

Necessary BW: (U) 8.0000 kHz

Perf. Value: (U) 5

Noise Figure: (U) 9.00 dB

Noise Temp. (U) 2014 K

Spur. Reject (U) 90.0 dB

Intermod. Reject:

Adj. Channel Sel.:

Perf. Crit.: (U) BER - Bit Error Rate

## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated:Measured

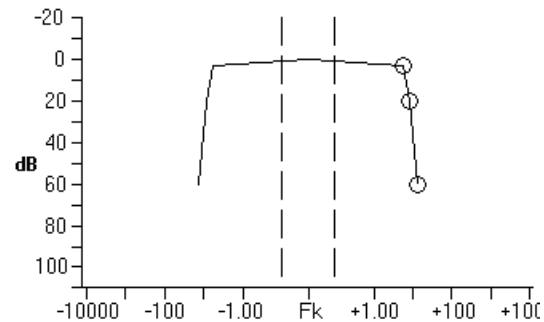
IF Freq. (Fk): 110.2000 MHz

Atten. Offset (Fo)

3.00 dB 5.5000 kHz

20.0 dB 8.3750 kHz

60.0 dB 12.875 kHz



## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated:Measured

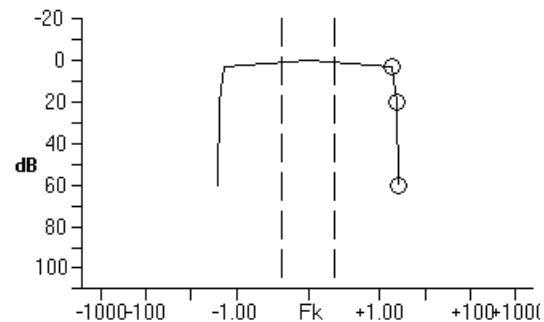
IF Freq. (Fk): 2.160000 MHz

Atten. Offset (Fo)

3.00 dB 1.9250 kHz

20.0 dB 2.3250 kHz

60.0 dB 2.5750 kHz



## RECEIVER EQUIPMENT CHARACTERISTICS

## EMISSION DESIGNATORS

Em. Designator: (U) 8K00F1E

## Sensitivities

Sensitivity: (U) -116 dBm

Necessary BW: (U) 8.0000 kHz

Perf. Value: (U) 5

Noise Figure: (U) 9.00 dB

Noise Temp. (U) 2014 K

Spur. Reject (U) 90.0 dB

Intermod. Reject:

Adj. Channel Sel.:

Perf. Crit.: (U) BER - Bit Error Rate

## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated:Measured

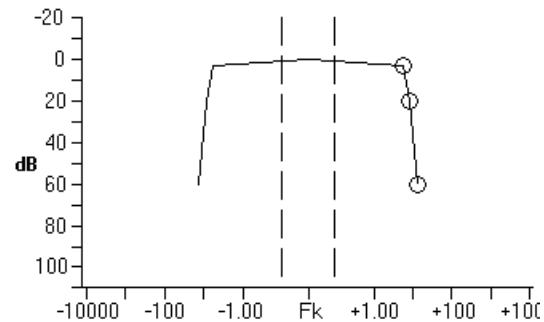
IF Freq. (Fk): 110.2000 MHz

Atten. Offset (Fo)

3.00 dB 5.5000 kHz

20.0 dB 8.3750 kHz

60.0 dB 12.875 kHz



## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated:Measured

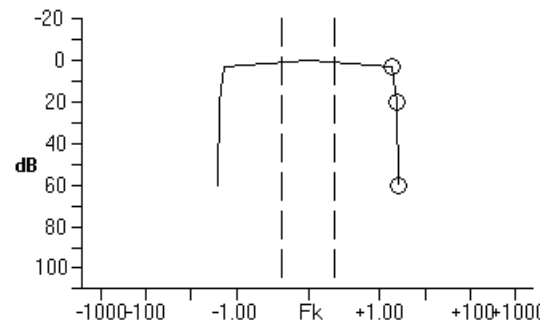
IF Freq. (Fk): 2.160000 MHz

Atten. Offset (Fo)

3.00 dB 1.9250 kHz

20.0 dB 2.3250 kHz

60.0 dB 2.5750 kHz



## RECEIVER EQUIPMENT CHARACTERISTICS

## EMISSION DESIGNATORS

Em. Designator: (U) 9K70D1W

## Sensitivities

Sensitivity: (U) -116 dBm

Necessary BW: (U) 9.7000 kHz

Perf. Value: (U) 5

Noise Figure: (U) 9.00 dB

Noise Temp. (U) 2014 K

Spur. Reject (U) 90.0 dB

Intermod. Reject:

Adj. Channel Sel.:

Perf. Crit.: (U) BER - Bit Error Rate

## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated: Measured

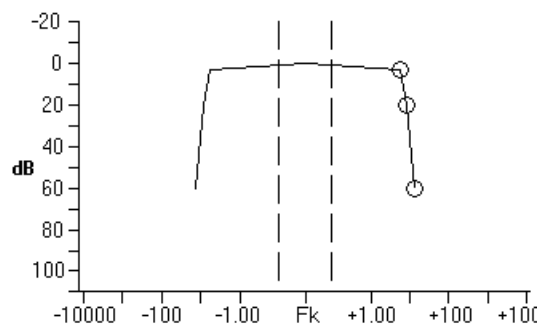
IF Freq. (Fk): 110.2000 MHz

Atten. Offset (Fo)

3.00 dB 5.5000 kHz

20.0 dB 8.3750 kHz

60.0 dB 12.875 kHz



## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated: Measured

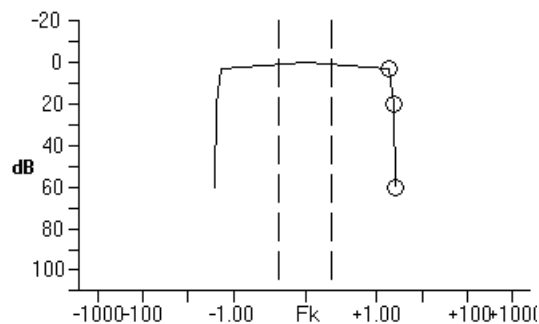
IF Freq. (Fk): 2.160000 MHz

Atten. Offset (Fo)

3.00 dB 1.9250 kHz

20.0 dB 2.3250 kHz

60.0 dB 2.5750 kHz



## RECEIVER EQUIPMENT CHARACTERISTICS

## EMISSION DESIGNATORS

Em. Designator: (U) 9K80D7W

## Sensitivities

Sensitivity: (U) -116 dBm

Necessary BW: (U) 9.8000 kHz

Perf. Value: (U) 5

Noise Figure: (U) 9.00 dB

Noise Temp. (U) 2014 K

Spur. Reject (U) 90.0 dB

Intermod. Reject:

Adj. Channel Sel.:

Perf. Crit.: (U) BER - Bit Error Rate

## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated: Measured

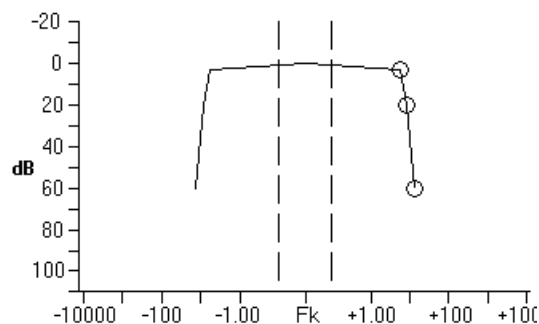
IF Freq. (Fk): 110.2000 MHz

Atten. Offset (Fo)

3.00 dB 5.5000 kHz

20.0 dB 8.3750 kHz

60.0 dB 12.875 kHz



## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated: Measured

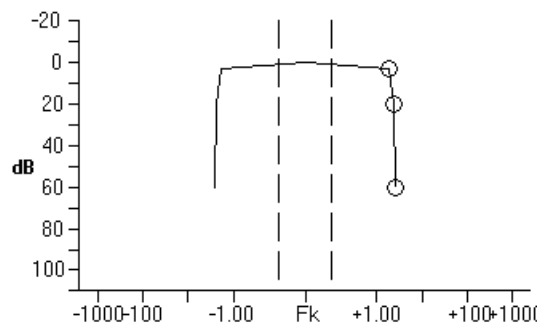
IF Freq. (Fk): 2.160000 MHz

Atten. Offset (Fo)

3.00 dB 1.9250 kHz

20.0 dB 2.3250 kHz

60.0 dB 2.5750 kHz





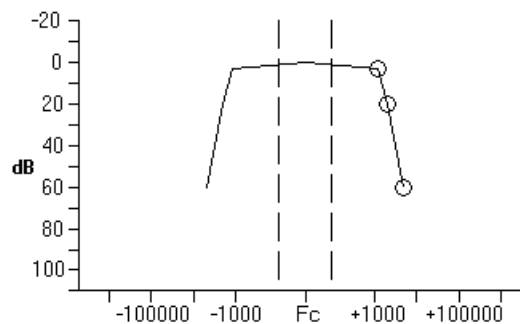
## RECEIVER EQUIPMENT CHARACTERISTICS

## RF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated:Measured

<u>Atten.</u>	<u>Offset (Fo)</u>
3.00 dB	1200.0 kHz
20.0 dB	2000.0 kHz
60.0 dB	5000.0 kHz



## RECEIVER EQUIPMENT CHARACTERISTICS

Nomenclature: (U) Base Station (VHF)

Manufacturer: (U) HARRIS CORP

NTIA Approval Status: (U) Approved

Coordination ID: J/F 12

Date of Import: 8/29/2016 5:33:35 PM (GMT)

Date/Time Last Mod.: 7/29/2016 6:48:32 PM (GMT)

Model Name: (U) Master V

Fcc Acc. Number: (U) OWDTR-0065-E

Image Reject: (U) 90.0 dB

Oscillator Tuned: (U) Either

Cond. Undesired Em.: (U) 0.000 dBm

Proxy: No

Homodyne: No

## FREQUENCIES

Tuning Range: (U) 150.0000 MHz - 174.0000 MHz

Tuning Method: (U) Synthesizer

Tuning Increment: (U) 1.2500 kHz

Freq. Stability: (U) 0.1ppm

## EMISSION DESIGNATORS

Em. Designator: (U) 7K96F1E

## Sensitivities

Sensitivity: (U) -118 dBm

Necessary BW: (U) 7.9600 kHz

Perf. Value: (U) 5

Noise Figure: (U) 6.00 dB

Noise Temp. (U) 865 K

Spur. Reject (U) 90.0 dB

Intermod. Reject: (U) 80.0 dB

Adj. Channel Sel.:

Perf. Crit.: (U) BER - Bit Error Rate

## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated: Measured

IF Freq. (Fk): 2.160000 MHz

Atten. Offset (Fo)

3.00 dB

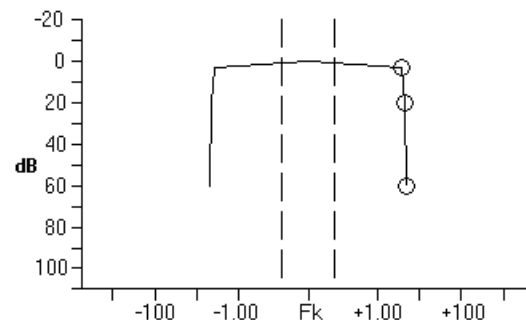
3.8500 kHz

20.0 dB

4.6500 kHz

60.0 dB

5.1500 kHz



## RECEIVER EQUIPMENT CHARACTERISTICS

## EMISSION DESIGNATORS

Em. Designator: (U) 9K35G1D

## Sensitivities

Sensitivity: (U) -118 dBm

Necessary BW: (U) 9.3500 kHz

Perf. Value: (U) 5

Noise Figure: (U) 6.00 dB

Noise Temp. (U) 865 K

Spur. Reject (U) 90.0 dB

Intermod. Reject: (U) 80.0 dB

Adj. Channel Sel.:

Perf. Crit.: (U) BER - Bit Error Rate

## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated: Measured

IF Freq. (Fk): 2.160000 MHz

Atten. Offset (Fo)

3.00 dB

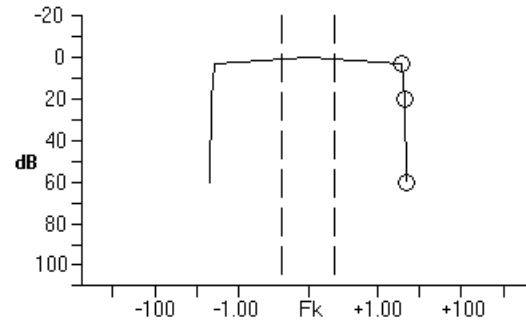
3.8500 kHz

20.0 dB

4.6500 kHz

60.0 dB

5.1500 kHz



## EMISSION DESIGNATORS

Em. Designator: (U) 9K64G1W

## Sensitivities

Sensitivity: (U) -118 dBm

Necessary BW: (U) 9.6400 kHz

Perf. Value: (U) 5

Noise Figure: (U) 6.00 dB

Noise Temp. (U) 865 K

Spur. Reject (U) 90.0 dB

Intermod. Reject: (U) 80.0 dB

Adj. Channel Sel.:

Perf. Crit.: (U) BER - Bit Error Rate

## RECEIVER EQUIPMENT CHARACTERISTICS

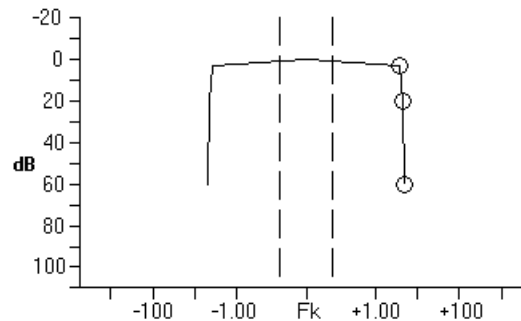
## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated:Measured

IF Freq. (Fk): 2.160000 MHz

<u>Atten.</u>	<u>Offset (Fo)</u>
3.00 dB	3.8500 kHz
20.0 dB	4.6500 kHz
60.0 dB	5.1500 kHz

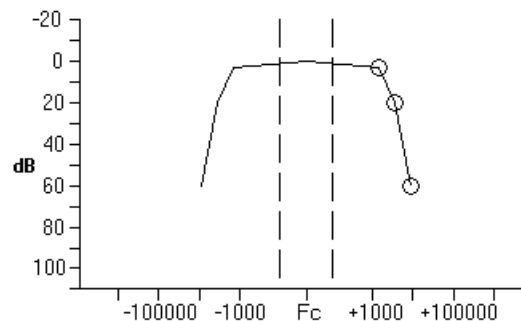


## RF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated:Measured

<u>Atten.</u>	<u>Offset (Fo)</u>
3.00 dB	1375.0 kHz
20.0 dB	3500.0 kHz
60.0 dB	9000.0 kHz



## RECEIVER EQUIPMENT CHARACTERISTICS

Nomenclature: (U) Base Station RX

Manufacturer: (U) M/A COM MAC

NTIA Approval Status: (U) Approved

Coordination ID: J/F 12

Date of Import: 8/29/2016 5:33:35 PM (GMT)

Date/Time Last Mod.: 7/29/2016 6:48:33 PM (GMT)

Model Name:

Fcc Acc. Number:

Image Reject: (U) 100 dB

Oscillator Tuned: (U) Either

Cond. Undesired Em.: (U) 0.000 dBm

Proxy: No

Homodyne: No

## FREQUENCIES

Tuning Range: (U) 350.0000 MHz - 520.0000 MHz

Tuning Method: (U) Synthesizer

Tuning Increment: (U) 12.500 kHz

Freq. Stability: (U) 0.1ppm

## EMISSION DESIGNATORS

Em. Designator: (U) 8K00F1D

## Sensitivities

Sensitivity: (U) -116 dBm

Necessary BW: (U) 8.0000 kHz

Perf. Value: (U) 480

Noise Figure: (U) 9.00 dB

Noise Temp.

Spur. Reject (U) 90.0 dB

Intermod. Reject:

Adj. Channel Sel.:

Perf. Crit.: (U) BER - Bit Error Rate

## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated: Calculated

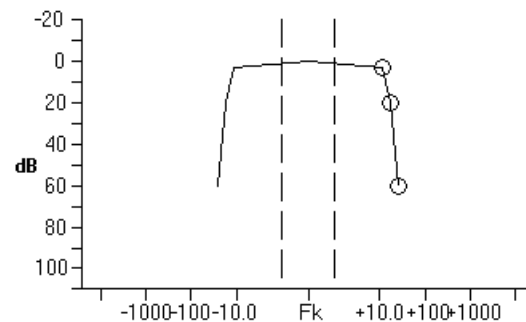
IF Freq. (Fk): 110.2000 MHz

Atten. Offset (Fo)

3.00 dB 11.000 kHz

20.0 dB 16.750 kHz

60.0 dB 25.750 kHz



## RECEIVER EQUIPMENT CHARACTERISTICS

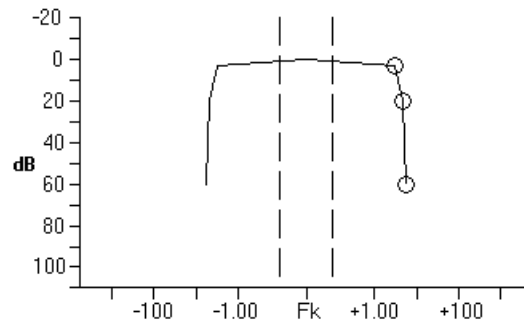
## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated: Calculated

IF Freq. (Fk): 2.160000 MHz

Atten.	Offset (Fo)
3.00 dB	3.0000 kHz
20.0 dB	4.8500 kHz
60.0 dB	5.7500 kHz

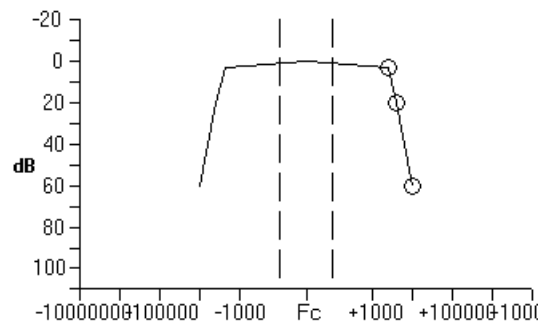


## RF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated: Calculated

Atten.	Offset (Fo)
3.00 dB	2400.0 kHz
20.0 dB	4000.0 kHz
60.0 dB	10000 kHz



CLASSIFICATION <b>UNCLASSIFIED</b>		PAGE 47									
<b>RECEIVER EQUIPMENT CHARACTERISTICS</b>											
<b>Nomenclature:</b> (U) MASV-H00M1 M150.8-M174		<b>Manufacturer:</b> (U) TYCHO-TECH									
<b>NTIA Approval Status:</b> (U) Approved		<b>Coordination ID:</b> J/F 12									
<b>Date of Import:</b> 8/29/2016 5:33:35 PM (GMT)		<b>Date/Time Last Mod.:</b> 7/29/2016 6:48:34 PM (GMT)									
<b>Model Name:</b> (U) MASV-H001		<b>Fcc Acc. Number:</b> (U) OWDTR-0065-E									
<b>Image Reject:</b> (U) 100 dB		<b>Oscillator Tuned:</b>									
<b>Cond. Undesired Em.:</b> (U) -111 dBm		<b>Proxy:</b> No									
<b>Homodyne:</b> No											
<b>FREQUENCIES</b>											
<b>Tuning Range:</b> (U) 150.8000 MHz - 174.0000 MHz		<b>Tuning Method:</b>									
<b>Tuning Increment:</b> (U) 6.2500 kHz		<b>Freq. Stability:</b> (U) 0.1ppm									
<b>EMISSION DESIGNATORS</b>											
<b>Em. Designator:</b> (U) 9K80F1D		<b>Sensitivities</b> <b>Sensitivity:</b> (U) -118 dBm <b>Necessary BW:</b> (U) 9.8000 kHz <b>Perf. Value:</b> (U) 0.1 <b>Noise Figure:</b> (U) 6.00 dB <b>Noise Temp.</b> (U) 865 K <b>Spur. Reject</b> (U) 90.0 dB <b>Intermod. Reject:</b> (U) 80.0 dB <b>Adj. Channel Sel.:</b> (U) 100 dB <b>Perf. Crit.:</b> (U) BER - Bit Error Rate									
<b>IF SELECTIVITY CURVE</b>											
<b>(UNCLASSIFIED)</b>											
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>Measured/Calculated:</b> Measured</p> <p><b>IF Freq. (Fk):</b> 110.2000 MHz</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;"><b>Atten.</b></th> <th style="text-align: left; border-bottom: 1px solid black;"><b>Offset (Fo)</b></th> </tr> </thead> <tbody> <tr> <td>3.00 dB</td> <td>11.000 kHz</td> </tr> <tr> <td>20.0 dB</td> <td>16.750 kHz</td> </tr> <tr> <td>60.0 dB</td> <td>25.750 kHz</td> </tr> </tbody> </table> </div> <div style="width: 50%; text-align: center;"> <p>The graph shows the IF selectivity curve with the y-axis in dB (from -20 to 100) and the x-axis in kHz (from -1000 to 1000). The curve is flat at 0 dB between -10.0 and +10.0 kHz, then drops sharply. Data points are marked at 0, 20, and 60 dB.</p> </div> </div>				<b>Atten.</b>	<b>Offset (Fo)</b>	3.00 dB	11.000 kHz	20.0 dB	16.750 kHz	60.0 dB	25.750 kHz
<b>Atten.</b>	<b>Offset (Fo)</b>										
3.00 dB	11.000 kHz										
20.0 dB	16.750 kHz										
60.0 dB	25.750 kHz										
CLASSIFICATION <b>UNCLASSIFIED</b>											

## RECEIVER EQUIPMENT CHARACTERISTICS

## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated: Measured

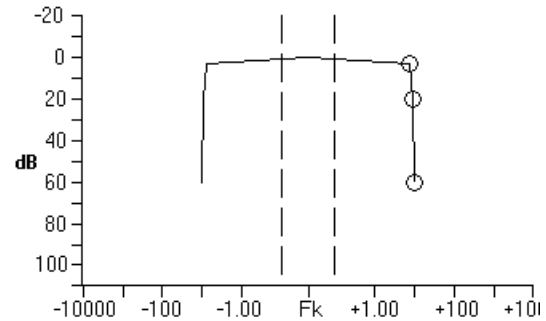
IF Freq. (Fk): 2.160000 MHz

Atten. Offset (Fo)

3.00 dB 7.7000 kHz

20.0 dB 9.6000 kHz

60.0 dB 10.300 kHz



## EMISSION DESIGNATORS

Em. Designator: (U) 8K00F1D

## Sensitivities

Sensitivity: (U) -118 dBm

Necessary BW: (U) 8.0000 kHz

Perf. Value: (U) 0.1

Noise Figure: (U) 6.00 dB

Noise Temp. (U) 865 K

Spur. Reject (U) 90.0 dB

Intermod. Reject: (U) 80.0 dB

Adj. Channel Sel.: (U) 100 dB

Perf. Crit.: (U) BER - Bit Error Rate

## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated: Measured

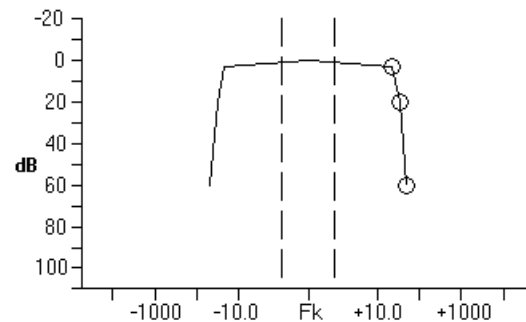
IF Freq. (Fk): 110.2000 MHz

Atten. Offset (Fo)

3.00 dB 22.000 kHz

20.0 dB 33.500 kHz

60.0 dB 51.500 kHz





## RECEIVER EQUIPMENT CHARACTERISTICS

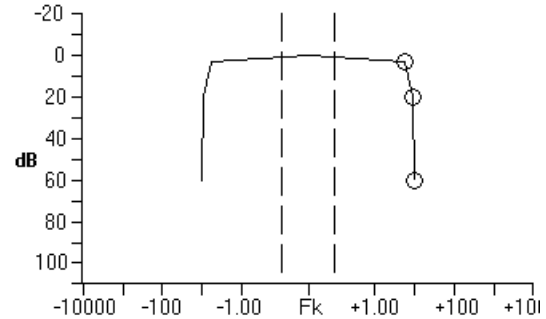
## IF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated: Calculated

IF Freq. (Fk): 2.160000 MHz

Atten.	Offset (Fo)
3.00 dB	6.0000 kHz
20.0 dB	9.3000 kHz
60.0 dB	10.300 kHz

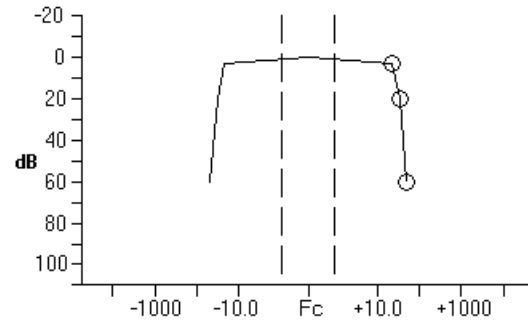


## RF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated: Calculated

Atten.	Offset (Fo)
3.00 dB	22.000 kHz
20.0 dB	33.500 kHz
60.0 dB	51.500 kHz

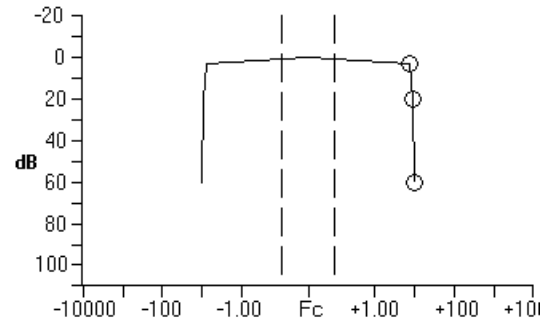


## RF SELECTIVITY CURVE

(UNCLASSIFIED)

Measured/Calculated: Calculated

Atten.	Offset (Fo)
3.00 dB	7.7000 kHz
20.0 dB	9.3000 kHz
60.0 dB	10.300 kHz



CLASSIFICATION <b>UNCLASSIFIED</b>		PAGE 50
ANTENNA EQUIPMENT CHARACTERISTICS		
Nomenclature: (U) DS4A00F36U-N		Manufacturer: (U) dbSpectra
NTIA Approval Status: (U) Approved		Coordination ID: J/F 12
Date of Import: 8/29/2016 5:33:35 PM (GMT)		Date/Time Last Mod.: 7/29/2016 6:48:35 PM (GMT)
Model Name: (U)DS4A00F36U-n		Antenna Type:(U) Vertical Dipole
Antenna Category: Linear		
FREQUENCIES		
Lower Frequency Limit: (U) 406.0000 MHz Upper Frequency Limit: (U) 436.0000 MHz		
ANTENNA CHARACTERISTICS		
Polarization: (U) Vertical		Atten. Rel/Act:(U) Relative dB
BEAMWIDTH		
Horizontal: (U) 360 degrees		Vertical: (U) 80.0 degrees
SCAN CHARACTERISTICS		
GAIN		
Main Beam: (U) 0.000 dBi		1st Horz. Side Lobe Atten.: (U) 0.000 dB
		1st Ver. Side Lobe Atten.: (U) 0.000 dB
CLASSIFICATION <b>UNCLASSIFIED</b>		

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ANTENNA EQUIPMENT CHARACTERISTICS		
Nomenclature: (U) Fixed Base Station (VHF)		Manufacturer: (U) ANDREW CORP
NTIA Approval Status: (U) Approved		Coordination ID: J/F 12
Date of Import: 8/29/2016 5:33:35 PM (GMT)		Date/Time Last Mod.: 7/29/2016 6:48:36 PM (GMT)
Model Name:		Antenna Type:(U) Dipole Array
Antenna Category: Linear		
FREQUENCIES		
Lower Frequency Limit: (U) 150.0000 MHz Upper Frequency Limit: (U) 174.0000 MHz		
ANTENNA CHARACTERISTICS		
Polarization: (U) Vertical		Atten. Rel/Act:(U) Relative dB
BEAMWIDTH		
Horizontal: (U) 360 degrees		Vertical: (U) 16.0 degrees
SCAN CHARACTERISTICS		
GAIN		
Main Beam: (U) 8.10 dBi		1st Horz. Side Lobe Atten.: (U) 0.000 dB
		1st Ver. Side Lobe Atten.: (U) 0.000 dB
CLASSIFICATION <b>UNCLASSIFIED</b>		

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ANTENNA EQUIPMENT CHARACTERISTICS		
Nomenclature: (U) MASTR V RX antenna	Manufacturer: (U) KATHREIN INC.	
NTIA Approval Status: (U) Approved	Coordination ID: J/F 12	
Date of Import: 8/29/2016 5:33:35 PM (GMT)	Date/Time Last Mod.: 7/29/2016 6:48:37 PM (GMT)	
Model Name: (U) k751637	Antenna Type: (U) Collinear Array	
Antenna Category: Phased Array		
FREQUENCIES		
Lower Frequency Limit: (U) 380.0000 MHz Upper Frequency Limit: (U) 400.0000 MHz		
ANTENNA CHARACTERISTICS		
Polarization: (U) Vertical	Atten. Rel/Act:	
Num. Main Beam:	Num. Elements:	
BEAMWIDTH		
Horizontal: (U) 360 degrees	Vertical: (U) 17.0 degrees	
SCAN CHARACTERISTICS		
Vertical Scan Type: (U) Fixed	Vertical Scan Rate:	
GAIN		
Main Beam: (U) 5.50 dBi		
CLASSIFICATION <b>UNCLASSIFIED</b>		

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ANTENNA EQUIPMENT CHARACTERISTICS		
Nomenclature: (U) MASTR V TX antenna	Manufacturer: (U) KATHREIN INC.	
NTIA Approval Status: (U) Approved	Coordination ID: J/F 12	
Date of Import: 8/29/2016 5:33:35 PM (GMT)	Date/Time Last Mod.: 7/29/2016 6:48:38 PM (GMT)	
Model Name: (U) k751537	Antenna Type: (U) Collinear Array	
Antenna Category: Phased Array		
FREQUENCIES		
Lower Frequency Limit: (U) 380.0000 MHz Upper Frequency Limit: (U) 400.0000 MHz		
ANTENNA CHARACTERISTICS		
Polarization: (U) Vertical	Atten. Rel/Act:	
Num. Main Beam:	Num. Elements:	
BEAMWIDTH		
Horizontal: (U) 360 degrees	Vertical: (U) 30.0 degrees	
SCAN CHARACTERISTICS		
Vertical Scan Type: (U) Fixed	Vertical Scan Rate:	
GAIN		
Main Beam: (U) 3.00 dBi		
CLASSIFICATION <b>UNCLASSIFIED</b>		

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ANTENNA EQUIPMENT CHARACTERISTICS		
Nomenclature: (U) ANDREW DB616E-BC		Manufacturer: (U) ANDREW CORP
NTIA Approval Status: (U) Approved		Coordination ID: J/F 12
Date of Import: 8/29/2016 5:33:35 PM (GMT)		Date/Time Last Mod.: 7/29/2016 6:48:39 PM (GMT)
Model Name: (U) DB616E-BC		Antenna Type: (U) Collinear Array
Antenna Category: Linear		
FREQUENCIES		
Lower Frequency Limit: (U) 160.0000 MHz Upper Frequency Limit: (U) 174.0000 MHz		
ANTENNA CHARACTERISTICS		
Polarization: (U) Vertical		Atten. Rel/Act: (U) Relative dB
BEAMWIDTH		
Horizontal: (U) 360 degrees		Vertical: (U) 18.0 degrees
SCAN CHARACTERISTICS		
GAIN		
Main Beam: (U) 7.60 dBi		1st Horz. Side Lobe Atten.:
		1st Ver. Side Lobe Atten.:
CLASSIFICATION <b>UNCLASSIFIED</b>		

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ANTENNA EQUIPMENT CHARACTERISTICS		
Nomenclature: (U) SC331-ST2LDF(D01-G10)	Manufacturer: (U) Sinclair Technologies	
NTIA Approval Status: (U) Unapproved	Coordination ID: J/F 12	
Date of Import: 8/29/2016 5:33:35 PM (GMT)	Date/Time Last Mod.: 7/26/2016 7:23:15 PM (GMT)	
Model Name: (U) SC331-ST2LDF(D01-G10)	Antenna Type:(U) Collinear Array	
Antenna Category: Linear		
FREQUENCIES		
Lower Frequency Limit: (U) 410.0000 MHz Upper Frequency Limit: (U) 430.0000 MHz		
ANTENNA CHARACTERISTICS		
Polarization: (U) Vertical	Atten. Rel/Act:(U) Actual dBi	
BEAMWIDTH		
Horizontal: (U) 360 degrees	Vertical: (U) 7.50 degrees	
SCAN CHARACTERISTICS		
GAIN		
Main Beam: (U) 12.1 dBi	1st Horz. Side Lobe Lvl.: (U) 12.1 dB	
	1st Ver. Side Lobe Lvl.: (U) 2.10 dB	
CLASSIFICATION <b>UNCLASSIFIED</b>		

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## Frequency List

Tx Station	Rx Station	Frequency (MHz)	Em. Des.	Radio Service	Stn. Classes
(U) Fixed Base station	(U) Fixed	(U) 150.0500 - 150.8000	(U) 7K69F1E	Fixed	FX
			(U) 9K35G1W		
			(U) 9K64G1W		
		(U) 162.0375 - 173.2000	(U) 7K69F1E		
			(U) 8K00F1D		
			(U) 8K10F1E		
			(U) 9K35G1W		
			(U) 9K64G1W		
			(U) 9K70D1W		
			(U) 9K80D7W		
			(U) 9K80F1D		
		(U) 173.4000 - 174.0000	(U) 7K69F1E		
			(U) 8K00F1D		
			(U) 8K10F1E		
			(U) 9K35G1W		
			(U) 9K64G1W		
			(U) 9K70D1W		
		(U) 350.0000 - 399.9000	(U) 9K80D7W		
			(U) 9K80F1D		
			(U) 8K00F1D		
		(U) 380.0000 - 399.9000	(U) 8K40F1D		
			(U) 9K70F1D		
			(U) 9K80F1D		
		(U) 406.1000 - 420.0000	(U) 8K00F1D		
			(U) 9K80F1D		
			(U) 8K00F1D		
			(U) 8K00F1E		
			(U) 8K40F1D		
			(U) 9K70D1W		
			(U) 9K70F1D		
			(U) 9K80D7W		
			(U) 9K80F1D		
	(U) Land Mobile	(U) 150.0500 - 150.8000	(U) 7K69F1E	Land Mobile	FB
			(U) 9K35G1W		
			(U) 9K64G1W		
		(U) 162.0375 - 173.2000	(U) 7K69F1E		
			(U) 8K00F1D		
			(U) 9K35G1W		
			(U) 9K64G1W		
			(U) 9K80F1D		
			(U) 7K69F1E		
		(U) 173.4000 - 174.0000	(U) 8K00F1D		
			(U) 9K35G1W		
			(U) 9K64G1W		

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Tx Station	Rx Station	Frequency (MHz)	Em. Des.	Radio Service	Stn. Classes
(U) Fixed Base station	(U) Land Mobile	(U) 173.4000 - 174.0000	(U) 9K80F1D	Land Mobile	FB
			(U) 8K00F1D		
			(U) 8K40F1D		
		(U) 350.0000 - 399.9000	(U) 9K70F1D		
			(U) 9K80F1D		
			(U) 8K00F1D		
		(U) 380.0000 - 399.9000	(U) 9K80F1D		
			(U) 8K00F1D		
		(U) 406.1000 - 420.0000	(U) 8K00F1D		
			(U) 8K00F1E		
			(U) 8K40F1D		
			(U) 9K70D1W		
			(U) 9K70F1D		
			(U) 9K80D7W		
			(U) 9K80F1D		

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**Table of Contents For**  
**(U) MASTR V VHF/UHF Base Station**

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2. (U) Full Record Print

**Detail Transmitters**

10. (U) MASTR V, UHF Model SV-RTXMV
15. (U) Fixed Base Station (VHF)
20. (U) Base station (UHF)
26. (U) Master V-H00M1 M150.8-M174

**Detail Receivers**

32. (U) MASTR V, UHF Model SV-RTXMV
42. (U) Base Station (VHF)
45. (U) Base Station RX
47. (U) MASV-H00M1 M150.8-M174

**Detail Antennas**

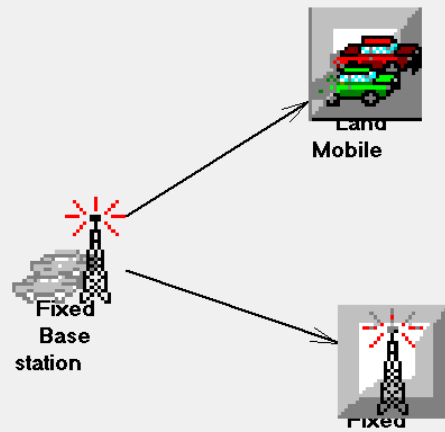
50. (U) DS4A00F36U-N
51. (U) Fixed Base Station (VHF)
52. (U) MASTR V RX antenna
53. (U) MASTR V TX antenna
54. (U) ANDREW DB616E-BC
55. (U) SC331-ST2LDF(D01-G10)

**ALSO:**

- (U) Line Diagram
- (U) Frequency List

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Line Diagram: MASTR V VHF/UHF Base Station



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