

UNCLASSIFIED		
SECURITY SUMMARY & SPECIAL HANDLING REQUIREMENTS		
<p>The title of this application is : L3 COMM ST3010S DATA TRANSMITTER</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		
<p>Special Handling Instruction : A</p>		
CLASSIFICATION		
UNCLASSIFIED		

FULL RECORD PRINT FOR L3 Comm ST3010S Data Transmitter

Selected Frequencies

(U) 2200.0 MHz - (U) 2290.0 MHz

System Name : (U) L3 Comm ST3010S Data Transmitter**(Nomenclature)****Stage** : (U) 4 - Operational**Agency** : (U) N - Department of the Navy**NTIA Certified** : (U) No**Overall Security** : Unclassified**Date/Time Last Mod.** : 1/27/2010 12:40:03 PM (GMT)**System Description** : (U) Transmission of data and video during flight, ground testing, and tactical operations.**Target Date(s)****System Activation** : (U) 1/1/2010**System Termination** : (U) 12/31/2030**NSEP Use** : (U) Yes**ITU Waiver** : (U) No**Control Numbers**

SPS- 17284/1

Source Documents

•(U) SPS - 17284/1 L3 Comm ST3010S Data Transmitter Certification Application 1/27/2010

Geographic Areas for Stage 4**City, State/Country** : (U) Raytheon Missile Systems, (U) AZ**Location Type** : (U) Single Point**Lat/Lon** : ()**City, State/Country** : (U) US&P DoD test & training ranges in Atlantic & Pacific Oceans.**Location Type** : (U) Empty**City, State/Country** : (U) World Wide**Location Type** : (U) Single Point**Lat/Lon** : ()**Estimated Initial Cost of the System** : (U) \$100000**System Essentiality**

(U) Transmission of data and video during flight, ground testing, and tactical operations.

Replacement Information

(U) N/A

Stations**Station Name** : (U) Standard Missile 3 Block IB KW**Transmitters**

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(U) L3 Comm ST3010S Data Transmitter

Antennas

(U) S-Band Wrap-Around Antenna

Station Name : (U) DoD Sea RX - Generic

Station Name : (U) DoD Land Rx - Generic

Station Name : (U) DoD Land Mobile Rx - Generic

Links - Selected ModesLinkTransmitting Station

(U) Standard Missile 3 Block IB KW

Receiving Station

(U) DoD Sea RX

Radio Service : MobileStation Class : MOEAEquipment Combination

Transmitter : (U) L3 Comm ST3010S Data Transmitter

Tx Antenna : (U) S-Band Wrap-Around Antenna

Receiver : Generic

Rx Antenna : Generic

Selected ModesFrequency

(U) 2200.0 MHz - (U) 2290.0 MHz

(U) 2200.0 MHz - (U) 2290.0 MHz

Em. Des

(U) 17M4F1D

(U) 4M50F1D

Power

Mean (U) 10.0 W

Mean (U) 10.0 W

Notes

PRI

PRI

Transmitting Station

(U) Standard Missile 3 Block IB KW

Receiving Station

(U) DoD Land Rx

Radio Service : Aeronautical MobileStation Class : MOEAEquipment Combination

Transmitter : (U) L3 Comm ST3010S Data Transmitter

Tx Antenna : (U) S-Band Wrap-Around Antenna

Receiver : Generic

Rx Antenna : Generic

Selected ModesFrequency

(U) 2200.0 MHz - (U) 2290.0 MHz

(U) 2200.0 MHz - (U) 2290.0 MHz

Em. Des

(U) 17M4F1D

(U) 4M50F1D

Power

Mean (U) 10.0 W

Mean (U) 10.0 W

Notes

PRI

PRI

Transmitting Station

(U) Standard Missile 3 Block IB KW

Receiving Station

(U) DoD Land Mobile Rx

Radio Service : MobileStation Class : MOEAEquipment Combination

Transmitter : (U) L3 Comm ST3010S Data Transmitter

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Tx Antenna : (U) S-Band Wrap-Around Antenna

Receiver : Generic

Rx Antenna : Generic

Selected ModesFrequency

(U) 2200.0 MHz - (U) 2290.0 MHz

(U) 2200.0 MHz - (U) 2290.0 MHz

Em. Des

(U) 17M4F1D

(U) 4M50F1D

Power

Mean (U) 10.0 W

Mean (U) 10.0 W

Notes

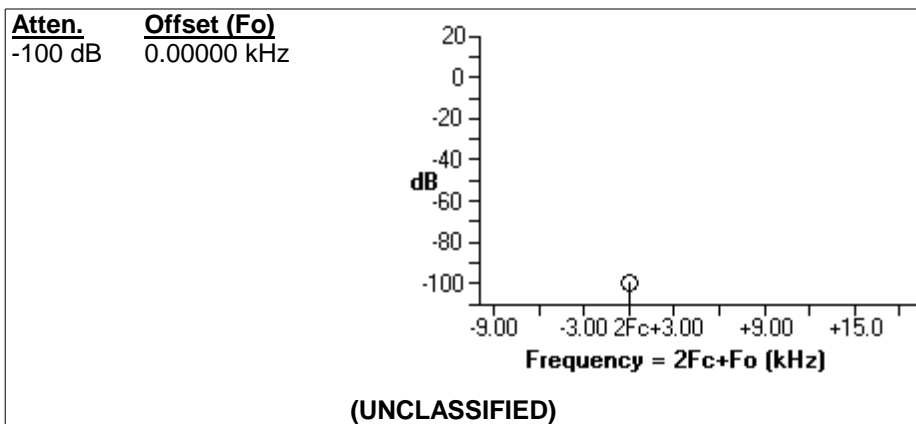
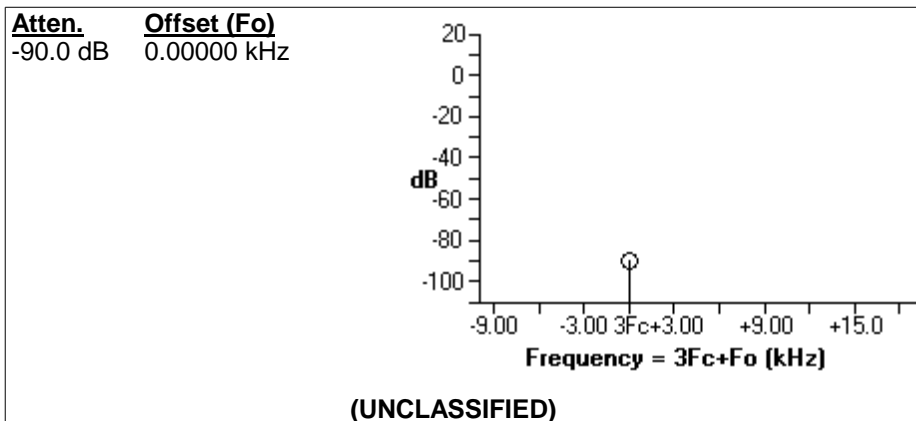
PRI

PRI

FULL RECORD PRINT FOR L3 Comm ST3010S Data Transmitter

TRANSMITTER L3 Comm ST3010S Data Transmitter

Nomenclature : (U) L3 Comm ST3010S Data Transmitter
Manufacturer : (U) L-3 SPACE COMMUNICATIONS
Model Name : (U) ST-3010S
NTIA Approval Status : (U) Unapproved
Date/Time Last Mod. : 1/13/2010 3:26:35 PM (GMT)
Coordination ID : (U) J/F 12
Freq. Stability : (U) 20 ppm
Output Device : (U) Field Effect Transistor
Tuning Method : (U) PLL Synthesizer
Radar/Comm : (U) Communications
Supp. of Harmonics : (U) Yes

Figure 1 - 2nd Harmonic Curve (U)**Figure 2 - 3rd Harmonic Curve (U)**

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Figure 3 - Other Harmonic Curve (U)

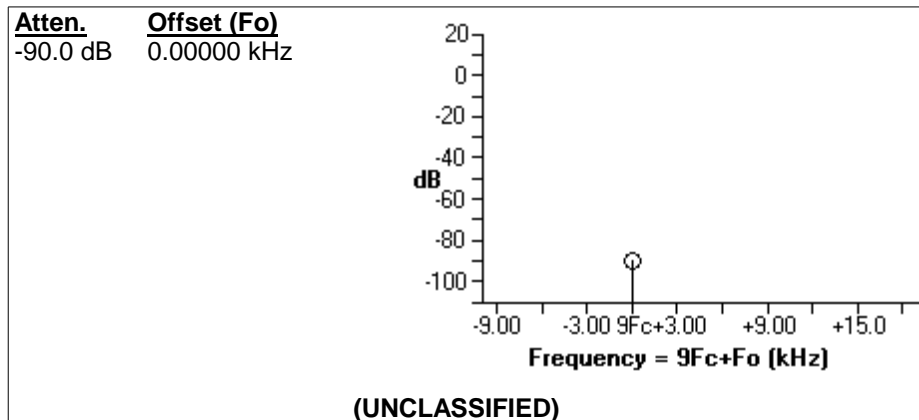
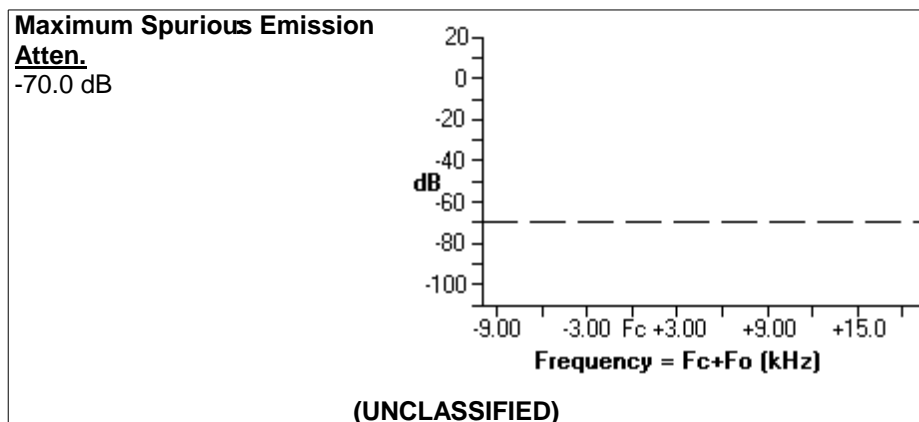


Figure 4 - Spurious Emission Curve (U)

Frequencies

Tuned Frequency : (U) 2200.0 MHz - 2300.0 MHz

Tuning Increment : (U) 0.50000 kHz

Em. Designator : (U) 4M50F1D

Necessary BW : (U) 4500.0 kHz

Modulation - 4M50F1D

Occupied Bandwidth : (U) 4500.0 kHz

Measured/Calculated : (U) Measured

Radar/Communications : (U) Communications

Modulation Type : (U) Digital Modulation

Max. Modulation Frequency : (U) 15000 kHz

Spread Spectrum : No

Dig. Modulation Type : (U) BFSK - Binary Frequency Shift Keying

Digital Bit Rate : (U) 2500000 bps

Deviation Ratio : (U) 0.700

Digital Peak Deviation : (U) 10500 kHz

FULL RECORD PRINT FOR Transmitter

Digital Pulse Format : (U) Non-return to Zero
 Figure 5 - Fundamental Curve (U)

Meas/Calc : Measured

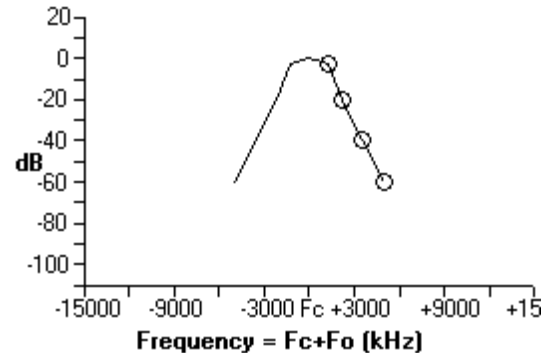
Level Offset (Fo)

-3.00 dB 1250.0 kHz

-20.0 dB 2250.0 kHz

-40.0 dB 3500.0 kHz

-60.0 dB 5000.0 kHz



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Em. Designator : (U) 17M4F1D
Necessary BW : (U) 17400 kHz

Modulation - 17M4F1D

Occupied Bandwidth : (U) 17400 kHz

Measured/Calculated : (U) Measured

Radar/Communications : (U) Communications

Modulation Type : (U) Digital Modulation

Max. Modulation Frequency : (U) 15000 kHz

Spread Spectrum : No

Dig. Modulation Type : (U) BFSK - Binary Frequency Shift Keying

Digital Bit Rate : (U) 2500000 bps

Deviation Ratio : (U) 0.700

Digital Peak Deviation : (U) 10500 kHz

Digital Pulse Format : (U) Non-return to Zero

Figure 6 - Fundamental Curve (U)

Meas/Calc : Measured

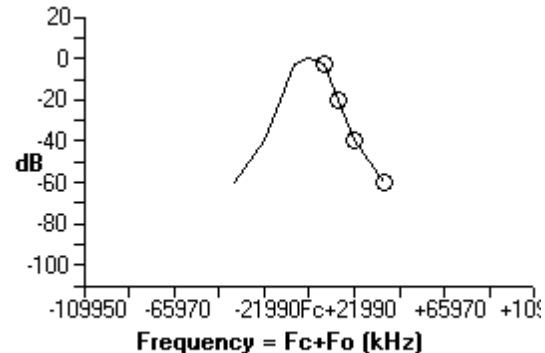
Level Offset (Fo)

-3.00 dB 7500.0 kHz

-20.0 dB 13900 kHz

-40.0 dB 22250 kHz

-60.0 dB 36650 kHz



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Powers

Power Type : Mean

Upper Limit : (U) 10.0 W

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ANTENNA S-Band Wrap-Around Antenna

Nomenclature : (U) S-Band Wrap-Around Antenna
Antenna Code : Linear
Manufacturer : (U) BALL AEROSPACE
Model Name : (U) P/N 2261563
NTIA Approval Status : (U) Unapproved
Date/Time Last Mod. : 1/13/2010 2:17:16 PM (GMT)
Coordination ID : (U) J/F 12
Lower Freq. Limit : (U) 2220.0 MHz
Upper Freq. Limit : (U) 2255.0 MHz
Polarization : (U) Right Hand Circular
Main Beam Gain : (U) -2.84 dBi
Atten. Rel/Act : (U) Relative dB
Horz. Beamwidth : (U) 360 degrees
Vert. Beamwidth : (U) 180 degrees

Line Diagram: L3 Comm ST3010S Data Transmitter

