Test Report



Curtis-Straus LLC, a wholly owned subsidiary of BV CPS

Report No	EQ0116-1
Client	Ideal Industries, Inc.
Address	Becker Place Sycamore, IL 60178
Phone	815-895-1295
Items tested FCC ID IC ID FRN	VDT1300 2AAMXVDT1300 11250A-VDT1300 0002862225
Equipment Type Equipment Code Emission Designator	Digital Transmission System DTS 765KG1D
FCC/IC Rule Parts	47 CFR 15.247, RSS-247 Issue 1
Test Dates	January 20 to 22, 2016
Results	As detailed within this report
Prepared by	Tuyen A. Truong – Test Engineer
Authorized by	Yunis Fazilogiu - Sr. EMC Engineer
Issue Date	2/25/16
Conditions of Issue	This Test Report is issued subject to the conditions stated in the ' <i>Conditions of Testing</i> ' section on page 37 of this report.

Curtis-Straus LLC is accredited by the American Association for Laboratory Accreditation for the specific scope of accreditation under Certificate Number 1627-01. This report may contain data which is not covered by the A2LA accreditation.





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Form Final Report REV 7-20-07 (DW)



Summary

This test report supports an application for certification of a transmitter operating pursuant to 47 CFR 15.247 and RSS-247. The product is the VDT1300. It is a digitally modulated transmitter that operates within the 902.7 - 927.3 MHz frequency band. Product was tested with an on board PCB antenna with a gain of +2.3dBi.

We found that the product met the above requirements without modification. The test samples were received in good condition.

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Test Methodology

All testing was performed according to the following rules/procedures/documents; CFR 47 Part 15.247, RSS-247 Issue 1, RSS-Gen Issue 4, FCC KDB 558074 D01 DTS Measurement Guidance v03r04 and ANSI C63.10-2013.

Radiated emissions were maximized by rotating the device around its axes (in its specific installation orientation) as well as varying the test antenna's height and polarity. The device antenna could not be maximized separately. AC line conducted emissions testing was performed with a $50\Omega/50\mu$ H LISN. The EUT operating voltage was 120/277VAC at 60Hz.

RF measurements were performed at the antenna port and 3 channels were tested as follows: Low: 902.7MHz Middle: 915MHz High: 927.3MHz

Following bandwidths were used during radiated spurious and line conducted emissions tests.

Frequency	RBW	VBW
0.15-30MHz	9kHz	30kHz
30-1000MHz	120kHz	1MHz
1-25GHz	1MHz	3MHz

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Product Tested - Configuration Documentation

					E	UT Configuratio	n				
Work O	rder:	Q0116									
Com	pany:	Ideal Ir	ndustries, Inc								
Company Add	lress:	Becker	Place								
		Sycame	ore, IL 6017	8							
Coi	ntact:	Tim Tu	ınnell								
				MN			PN			SN	
]	EUT:		V]	DT1300					Sample 1	(used for c	onducted testing)
			V	DT1300					Sample	2 (used for a	radiated testing)
EUT Descrip	ption:	Dual T	echnology N	Iotion Sensor							
EUT Max Frequ	ency:	<108 N	AHz (associa	ted circuitry)							
EUT TX Frequ	ency:	902.7 t	o 927.3 MHz	z							
				-							
Port Label	Port	Туре	# ports	# populated	cable ty	ype shielded	ferrites	length (m)	in/out	under test	comment
AC Mains	Powe	r AC	1	1	Power A	C No	No	2	in	yes	
Software Operating N	Iode D	escriptio	n:								
EUT is set to transmit of	on Low	(902.7 N	(Hz), Mid (9	15 MHz) and Hi	igh (927.3 l	MHz) respectively	Power cycling	allowed switching	g among the	three chan	nels.

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Statement of Conformity

The VDT1300 has been found to conform to the following parts of 47 CFR and as detailed below:

RSS-GEN	RSP-100	RSS 247	Part 15	Comments
6.3			15.15(b)	There are no controls accessible to the user that
				varies the output power to operate in violation of the
				regulatory requirements.
	3.1		15.19	The label is shown in the label exhibit.
	4		15.21	Information to the user is shown in the instruction manual exhibit.
			15.27	No special accessories are required for compliance.
3, 6.1			15.31	The EUT was tested in accordance with the
				measurement standards in this section.
6.13			15.33	Frequency range was investigated according to this
				section, unless noted in specific rule section under
				which the equipment operates.
8.1			15.35	The EUT emissions were measured using the
				measurement detector and bandwidth specified in
				this section, unless noted in specific rule section
				under which the equipment operates.
8.3			15.203	The antenna for this device is permanently installed
				PCB antenna with a gain of 2.3dBi
8.10			15.205	The fundamental is not in a Restricted band and the
			15.209	spurious and harmonic emissions in the Restricted
				bands comply with the general emission limits of
				15.209 or RSS-Gen as applicable
8.8			15.207	EUT meets the AC Line conducted emissions
				requirements of this section.
			15.247	The unit complies with the requirements of 15.247
		RSS 247		The unit complies with the requirements of RSS-247
6.6				Occupied Bandwidth measurements were made.

Modifications to the product: None

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Test Results

Bandwidth

LIMIT

The minimum 6 dB bandwidth shall be at least 500 kHz. [15.247(a) (2)]

MEASUREMENTS / RESULTS

Date: 20-Jan-16	Company: Ide	eal Industries, In	IC.						Work Orde	r: Q0116
Engineer: Tuyen Truong	EUT Desc: VE	DT1300				EUT Op	eratin	g Voltage	/Frequency	: 120Vac/6
Temp: 21°C	Humidity: 26	%	Pres	sure: 1010mBar						
Frequency F	Range: 902.7-927.3 N	1Hz								
Notes:										
									6dB BW	
Frequency (MHz)			Reading (KHz)					Limit (KHz)	Margin (KHz)	Resu (Pass/F
902.7			644.124					≥500	+144.124	4 Pas
915			645.689					≥500	+145.689	9 Pas
927.3			645.687					≥500	+145.687	7 Pas
Test Site: Chamber 2 Analyzer: SA#1328 1/19/2016	Attenuation: As	Set#791							Copyright Cu	rtis-Straus LLC
Spectrum Analyzers / Receive		Range 9kHz-13.2 GHz	MN E4405B	Mfr Agilent	SN MY44210241	Asset 1328	Cat I	Calibrat 8/19/		Calibrated 8/19/201
SA EMI Chamber (1	320)	0112 10.2 0112		5						
SA EMI Chamber (1 Radiated Emissions EMI Chamber 2	Sites	FCC Code 719150	IC Code 2762A-7	VCCI Code A-0015	Range 30-1000MHz		Cat II	Calibrat 3/22/		
Radiated Emissions	Sites ators / Filters	FCC Code 719150 Range		VCCI Code		Asset 791			2017 ion Due	Calibrated 3/22/2019 Calibrated 7/31/2019

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

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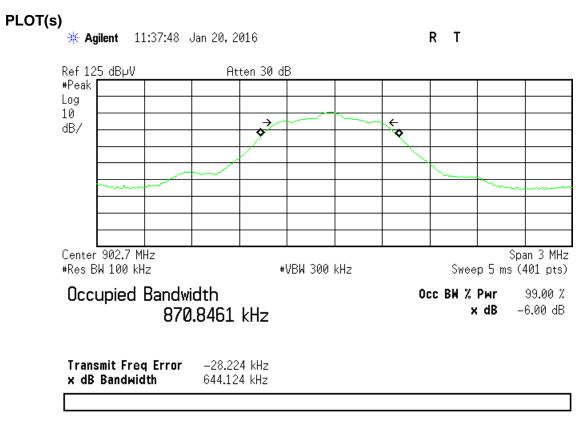
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902.7 MHz - 6dB Bandwidth

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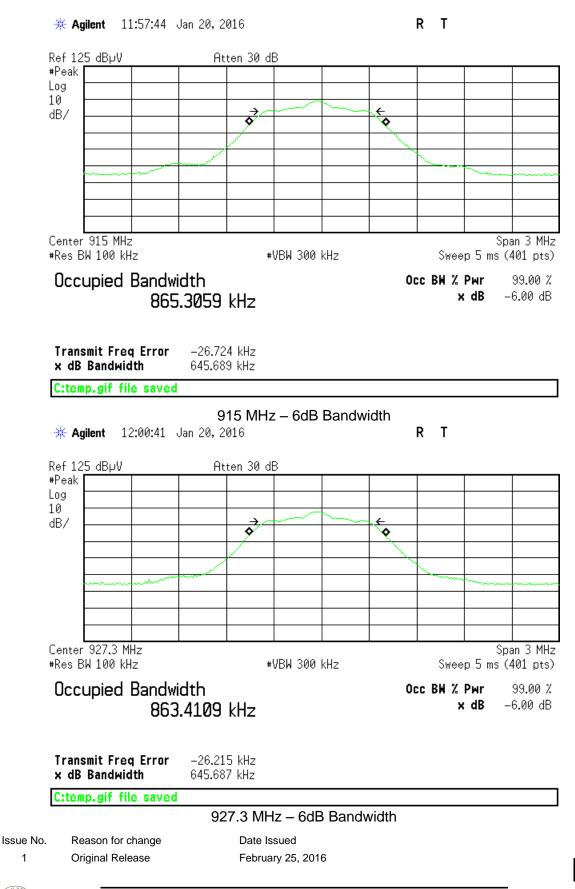


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Fundamental Emission Output Power

LIMIT

Conducted Output Power 1 Watt [15.247(b) (3)]

Per 558074 D01 DTS Measurement Guidance v0304 Section 9.2.2.2 (AVGSA-1 Average Conducted Output Power)

MEASUREMENTS / RESULTS

Date: 20-Jan-16		Compar	y: Ideal Industrie	es, Inc.					۷	Vork Orde	r: Q0116
Engineer: Tuyen Truong		EUT Des	sc: VDT1300				EUT Op	eratii	ng Voltage/	Frequency	120Vac/60
Temp: 21°C		Humidi	ty: 26%	Pressu	re: 1010mBar						
Freque	ency Range:	902.7-92	27.3 MHz								
Notes:											
										FCC 15.24	17
Frequency	Reading		Attenuation	n	Final	Conducted Rea	ding	F	Limit	Margin	Resul
(MHz)	(dBm)		(dB)			(dBm)	_		(dBm)	(dB)	(Pass/Fa
902.7	-3.45		19.55			16.10			30.0	-13.90	Pass
915	-4.77		19.55			14.78			30.0	-15.22	Pass
927.3	-5.83		19.55			13.72			30.0	-16.28	Pass
Table Result:	Pass	by	-13.90 dł	В				Wo	rst Freq:	902.	7 MHz
Test Site: Chamber 2	At	tenuatio	n: Asset#791								
Analyzer: SA#1328										Copyright Cu	rtis-Straus LLC
1/19/2016 Spectrum Analyzers / Receive		ors	Range	MN	Mfr	SN	Asset	Cat	Calibratio		Calibrated
	328)		9kHz-13.2 GHz	E4405B	Agilent	MY44210241	1328	1	8/19/2	016	8/19/2015
SA EMI Chamber (1	,										
	Sites		FCC Code 719150	IC Code 2762A-7	VCCI Code A-0015	Range 30-1000MHz		Cat ∥	Calibratio 3/22/2		Calibrated 3/22/2018
SA EMI Chamber (1 Radiated Emissions	s Sites			2762A-7 MN			Asset 791			017 on Due	

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

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Original Release

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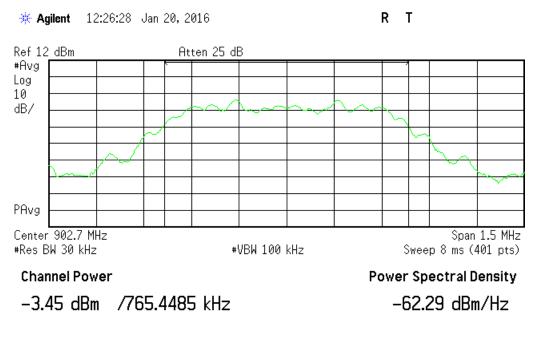


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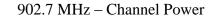


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PLOTS



C:temp.gif file saved



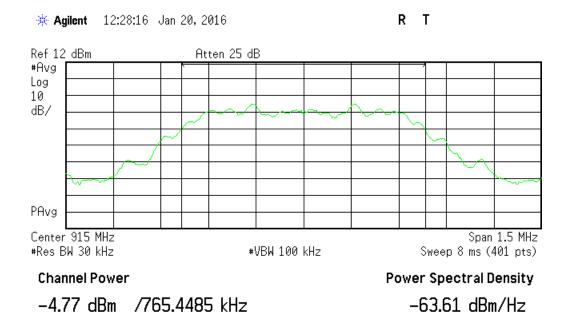
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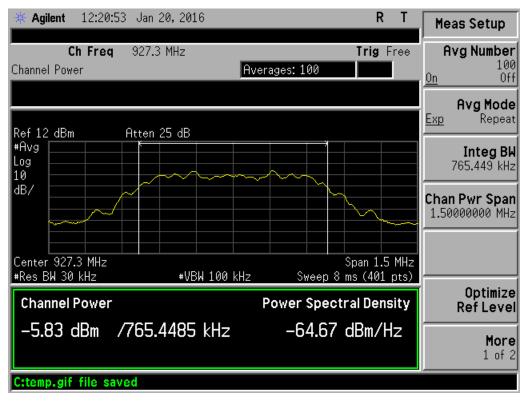
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C:temp.gif file saved 915 MHz – Channel Power



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927.3 MHz - Channel Power

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Radiated Spurious Emissions

LIMITS

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a). [15.247(d)]

MEASUREMENTS / RESULTS

(H/V) (H/V) <t< th=""><th>Radiated</th><th>d Emissio</th><th>ons Tab</th><th>le</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>	Radiated	d Emissio	ons Tab	le									
Term: 22.4°C Humidity: 24% Presure: 100mBar Brequency Range: 30 - 1000 MHz Measurement Distance: 3 m. Note: Txon Low channel EUT Max Freq: +000 MHz Default autom of the standing of th	Date:	21-Jan-16		Company:	Ideal Indus	tries, Inc.						Work Order:	Q0116
Frequency Range: 30 - 1000 MHz Measurement Distance: 3 m Notes: TX on Low channel EUT Max Freq: <108 MHz EUT TX Freq: :02.7 3 MHz Cut (Rest) FCC 15.209 Peararg (Rest) FCC 15.209 V 440.0 - FCC 15.209 V Advance The and the advance FCC 15.209 V 440.0 - FCC 15.209 V Advance Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">FCC 15.209 V Advance - - - FCC 15.209 V Advance - - - - - - - - - - - - - - - -													

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Date:	21-Jan-16		Company:	Ideal Indus	tries, Inc						Work Orde	r: Q0116
Engineer:	Tuyen Truong		EUT Desc:					F	JT Opera	ting Vol	tage/Frequency	120Vac/60H
•	22.8°C		Humidity:			Prossur	e: 1009mBar	_	or opera		age/i iequeiie;	
Temp.		_				Tressur	e. Toosinbai					
	•	ncy Range:	30 - 1000 I	MHz				Me			nce: 3 m	
Notes:	TX on High cha	annel							EU	JT Max F	req: <108 MHz	
				-			-		E	EUT TX F	req: 902.7 - 927	
											FCC 15.	209
Antenna	-	D I'm .	Preamp	Antenna	Cable	Adjusted	1.1	Manada	De cult	1.1		Denvik
olarization	Frequency	(dBµV)	Factor (dB)	Factor (dB/m)	Factor (dB)	Reading (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result Pass/Fail)	Lim (dBµV		Result (Pass/Fail)
(H/V)	(MHz)		(db) 25.4		(ub) 0.4		(dbµv/m)		Pass/Fall)	(авµv 40.0		Pass
h	42.1 42.15	28.9 43.4	25.4 25.4	12.2 12.2	0.4	16.1 30.6				40.		Pass
v	42.15 59.1	43.4 33.8	25.4 25.5		0.4					40.		
v	161.0	33.8 35.2	25.5 25.9	7.5 12.4	0.5	16.3 22.5				40.		Pass
V	185.2	35.2 30.1	25.9 25.8	12.4	0.8	22.5 16.4				43.		Pass Pass
h			25.8	-		-				-	-	
h	466.5	30.6		17.3	1.4	23.8				46.	-	Pass
V	791.5 793.9	31.1 35.9	25.6 25.6	21.1 21.2	1.8 1.8	28.4				46.		Pass
h v	793.9 968.5	35.9 31.5	25.6	21.2	1.8	33.3 31.1				46. 54.	-	Pass Pass
-		51.5	20.0	20.1	1.0	51.1						
Iani	e Result:	Pass	by	-94	dB				и	lorst Fr	ea : 42.1	5 MHz
	e Result:	Pass	by	-9.4						/orst Fr		5 MHz
Test Site:	EMI Chamber		Cable 1:	Asset #20	52			Cable 2: A	sset #205		Cable 3	3:
Test Site: Analyzer:	EMI Chamber Asset #1327	2	Cable 1: Preamp:	Asset #20 Red-White	52			Cable 2: A Antenna: R	sset #205		Cable 3 Preselecto	3: r:
Test Site: Analyzer: Ssoft Radiate	EMI Chamber	2 alculator	Cable 1: Preamp: v 1.017.154	Asset #20 Red-White	52	actor			sset #205		Cable 3 Preselecto	3:
Test Site: Analyzer: Ssoft Radiate	EMI Chamber Asset #1327 ed Emissions C	2 alculator	Cable 1: Preamp: v 1.017.154	Asset #20 Red-White	52	actor			sset #205		Cable 3 Preselecto	3: r:
Test Site: Analyzer: soft Radiate usted Read	EMI Chamber Asset #1327 ed Emissions C	2 alculator · Preamp Fac	Cable 1: Preamp: v 1.017.154 ctor + Anter	Asset #203 Red-White Inna Factor - Ra	52 + Cable F	actor	Mfr		sset #205	3	Cable 3 Preselecto	3: 7: ht Curtis-Straus LLC
Test Site: Analyzer: ssoft Radiate justed Read	EMI Chamber Asset #1327 ed Emissions C ling = Reading -	2 alculator Preamp Face aceivers /Pre	Cable 1: Preamp: v 1.017.154 ctor + Anter	Asset #203 Red-White Inna Factor - Ra	52 + Cable F		Mfr Agilent	Antenna: R	sset #205 ed-White Asset	3	Cable : Preselecto Copyrigi	3: r: nt Curtis-Straus LLC Calibrated
Test Site: Analyzer: ssoft Radiate justed Read	EMI Chamber Asset #1327 ed Emissions C ling = Reading - n Analyzers / Re SA EMI Chan	2 alculator Preamp Face acceivers /Pre	Cable 1: Preamp: v 1.017.154 ctor + Anter	Asset #203 Red-White Inna Factor - Ra 9kHz-2	52 + Cable F ange 13.2 GHz	MN E4405B	Agilent	Antenna: Ro SN MY45103416	sset #205 ed-White Asset	3 Cat	Cable 3 Preselecto Copyrigi Calibration Due 7/10/2016	2: 7: tt Curtis-Straus LLC Calibrated 7/10/201
Test Site: Analyzer: ssoft Radiate justed Read	EMI Chamber Asset #1327 ed Emissions C ling = Reading -	2 alculator Preamp Face eceivers /Pre- hber (1327) ssions Sites	Cable 1: Preamp: v 1.017.154 ctor + Anter	Asset #20 Red-White Inna Factor - Ra 9kHz- FCC	52 + Cable F	MN		Antenna: R	Asset 1327	3 Cat	Cable 3 Preselecto Copyrigi Calibration Due	Calibrated 7/10/201: Calibrated
Test Site: Analyzer: Ssoft Radiate justed Read v. 1/19/2016 Spectrum	EMI Chamber Asset #1327 ed Emissions C ling = Reading - n Analyzers / Re SA EMI Chan Radiated Emis	2 alculator Preamp Face ober (1327) ssions Sites mber 2	Cable 1: Preamp: v 1.017.154 ctor + Anter	Asset #20 Red-White Inna Factor - Ra 9kHz- FCC 71	52 + Cable F ange 13.2 GHz : Code	MN E4405B IC Code	Agilent VCCI Code	Antenna: R SN MY45103416 Range	Asset 1327	3 Cat (I Cat (II	Cable 3 Preselecto Copyrigi Calibration Due 7/10/2016 Calibration Due	3: r: t Curtis-Straus LLC Calibrated 7/10/201 Calibrated 3/22/201
Test Site: Analyzer: Ssoft Radiate justed Read v. 1/19/2016 Spectrum	EMI Chamber Asset #1327 ad Emissions C ling = Reading - A Analyzers / Re SA EMI Chan Radiated Emi EMI Char	2 alculator Preamp Fac accivers /Pre hber (1327) ssions Sites mber 2 tttenuators /	Cable 1: Preamp: v 1.017.154 ctor + Anter	Asset #20 Red-White Inna Factor - Ra 9kHz- 71 Ra	52 + Cable F ange 13.2 GHz 5 Code 9150 ange	MN E4405B IC Code 2762A-7	Agilent VCCI Code A-0015	Antenna: R SN MY45103416 Range 30-1000MHz	Asset #205 Asset Asset	3 Cat (I Cat (II	Cable 3 Preselecto Copyrigi Calibration Due 7/10/2016 Calibration Due 3/22/2017	3: f: It Curtis-Straus LLC Calibrated 3/22/201 Calibrated
Test Site: Analyzer: Ssoft Radiate justed Read v. 1/19/2016 Spectrum	EMI Chamber Asset #1327 ad Emissions C Ing = Reading - An Analyzers / Re SA EMI Chan Radiated Emi EMI Chai nps /Couplers A Red-W Anten	2 alculator Preamp Face ober (1327) ssions Sites mber 2 attenuators / /hite nas	Cable 1: Preamp: v 1.017.154 ctor + Anter	Asset #20: Red-White anna Factor - Ra 9kHz- 71 Ra 0.009- Ra	52 + Cable F ange 13.2 GHz : Code 9150 ange 2000MHz ange	MN E4405B IC Code 2762A-7 MN ZFL-1000-LN MN	Agilent VCCI Code A-0015 Mfr CS Mfr	Antenna: R SN MY45103416 Range 30-1000MHz SN N/A SN	Asset 1327 Asset 1258 Asset	3 Cat (Cat (Cat (Cat (Cat (Cable 3 Preselecto Copyrigi Calibration Due 3/22/2017 Calibration Due 12/27/2016 Calibration Due	Calibrated 7/10/201 Calibrated 3/22/201 Calibrated 12/27/201 Calibrated
Test Site: Analyzer: ssoft Radiate justed Read	EMI Chamber Asset #1327 ed Emissions C ling = Reading - An Analyzers / Re SA EMI Chan Radiated Emi EMI Chan nps /Couplers A Red-W	2 alculator Preamp Face ober (1327) ssions Sites mber 2 attenuators / /hite nas	Cable 1: Preamp: v 1.017.154 ctor + Anter	Asset #20: Red-White anna Factor - Ra 9kHz- 71 Ra 0.009- Ra	52 + Cable F ange 13.2 GHz : Code 9150 ange 2000MHz	MN E4405B IC Code 2762A-7 MN ZFL-1000-LN	Agilent VCCI Code A-0015 Mfr CS	Antenna: R SN MY45103416 Range 30-1000MHz SN N/A	Asset 1327 Asset 1258	3 Cat (I Cat (I Cat (I I	Cable 3 Preselecto Copyrigi Calibration Due 7/10/2016 Calibration Due 3/22/2017 Calibration Due 12/27/2016	Calibrated 7/10/201 Calibrated 3/22/201 Calibrated 12/27/201 Calibrated
Test Site: Analyzer: soft Radiate justed Read	EMI Chamber Asset #1327 ad Emissions C Ing = Reading - An Analyzers / Re SA EMI Chan Radiated Emi EMI Chai nps /Couplers A Red-W Anten	2 alculator Preamp Fac ober (1327) ssions Sites mber 2 ttenuators / thite nas e Bilog	Cable 1: Preamp: v 1.017.154 ctor + Anter	Asset #20: Red-White anna Factor - Ra 9kHz- 71 Ra 0.009- Ra	52 + Cable F ange 13.2 GHz : Code 9150 ange 2000MHz ange	MN E4405B IC Code 2762A-7 MN ZFL-1000-LN MN	Agilent VCCI Code A-0015 Mfr CS Mfr	Antenna: R SN MY45103416 Range 30-1000MHz SN N/A SN	Asset 1327 Asset 1258 Asset	Cat (I Cat (I Cat (I Cat (I	Cable 3 Preselecto Copyrigi Calibration Due 3/22/2017 Calibration Due 12/27/2016 Calibration Due	Calibrated 7/10/201 Calibrated 3/22/201 Calibrated 12/27/201 Calibrated 8/12/201
Test Site: Analyzer: soft Radiate usted Read 4. 1/19/2016 Spectrum Prean	EMI Chamber Asset #1327 ed Emissions C ling = Reading - n Analyzers / Re SA EMI Chan Radiated Emi: EMI Chan Red-Whit Red-Whit	2 alculator Preamp Fac aceivers /Pre mber (1327) ssions Sites mber 2 uttenuators / /hite nas e Bilog cal Meters	Cable 1: Preamp: v1.017.154 tor + Anter selectors	Asset #20: Red-White anna Factor - Ra 9kHz- 71 Ra 0.009- Ra	52 + Cable F ange 13.2 GHz : Code 9150 ange 2000MHz ange	MN E4405B IC Code 2762A-7 MN ZFL-1000-LN JB1	Agilent VCCI Code A-0015 Mfr CS Mfr Sunol	Antenna: R SN MY45103416 Range 30-1000MHz SN N/A SN A091604-1	Asset #205 ed-White Asset 1327 Asset 1258 Asset 1105	Cat (I Cat (I Cat (I Cat (I	Cable 3 Preselecto Copyrigi Calibration Due 7/10/2016 Calibration Due 3/22/2017 Calibration Due 8/12/2017	Calibrated 7/10/201 Calibrated 3/22/201 Calibrated 12/27/202 Calibrated 8/12/201 Calibrated
Test Site: Analyzer: soft Radiate usted Read . 1/19/2016 Spectrum Prean	EMI Chamber Asset #1327 ad Emissions C ling = Reading - An Analyzers / Re SA EMI Chan Radiated Emi EMI Chan nps /Couplers A Red-W Anten Red-Whit Meteorologi	2 alculator Preamp Face occivers /Pre- nber (1327) ssions Sites mber 2 stenuators / 'hite nas e Bilog cal Meters Pressure Only	Cable 1: Preamp: v1.017.154 tor + Anter selectors	Asset #20: Red-White anna Factor - Ra 9kHz- 71 Ra 0.009- Ra	52 + Cable F ange 13.2 GHz : Code 9150 ange 2000MHz ange	MN E4405B IC Code 2762A-7 MN ZFL-1000-LN MN JB1 MN	Agilent VCCI Code A-0015 Mfr CS Mfr Sunol Mfr	Antenna: R SN MY45103416 Range 30-1000MHz SN N/A SN A091604-1 SN	Asset #205 Asset #205 Asset 1327 Asset 1258 Asset 1105 Asset	Cat (I Cat (I Cat (I Cat (I Cat (Cat (Cable 3 Preselecto Copyrel Calibration Due 7/10/2016 Calibration Due 3/22/2017 Calibration Due 8/12/2017 Calibration Due	 Calibrated 7/10/201 Calibrated 3/22/201 Calibrated 12/27/20² Calibrated 12/27/20² Calibrated 8/12/201 Calibrated 3/19/201
Test Site: Analyzer: soft Radiate justed Read 2. 1/19/2016 Spectrum Prean	EMI Chamber Asset #1327 ed Emissions C ing = Reading - n Analyzers / Re SA EMI Chan Radiated Emi EMI Chan Red-Whit Red-Whit Meteorologi Weather Clock (F TH A#2 Cabl	2 alculator Preamp Face ober (1327) ssions Sites mber 2 stenuators / thite nas e Bilog cal Meters Pressure Only 2081 es	Cable 1: Preamp: v1.017.154 tor + Anter selectors	Asset #20 Red-White ma Factor - Ra 9kHz- FCC 71 Ra 0.009- Ra 30-20	52 + Cable F inge 13.2 GHz : Code 9150 inge 2000MHz 2000MHz ange	MN E4405B IC Code 2762A-7 MN ZFL-1000-LN MN JB1 MN BA928	Agilent VCCI Code A-0015 Mfr CS Mfr Sunol Mfr Oregon Scientific HDE Mfr	Antenna: R SN MY45103416 Range 30-1000MHz SN N/A SN A091604-1 SN	Asset #205 Asset #205 Asset 1327 Asset 1258 Asset 1105 Asset 831	Cat (Cat (Cable 3 Preselecto Copyrigi Calibration Due 7/10/2016 Calibration Due 3/22/2017 Calibration Due 12/27/2016 Calibration Due 8/12/2017 Calibration Due 3/19/2016 4/2/2016 Calibration Due	Calibrated 7/10/201: Calibrated 3/22/201: Calibrated 12/27/201 Calibrated 8/12/201: Calibrated 3/19/201: 4/2/2015 Calibrated
Test Site: Analyzer: Ssoft Radiate ljusted Read v. 1/19/2016 Spectrum Prean	EMI Chamber Asset #1327 ed Emissions C ling = Reading - h Analyzers / Re SA EMI Chan Radiated Emi EMI Chan Red-Whit Anten Red-Whit Meteorologi Weather Clock (F TH A#2	2 alculator Preamp Fac ober (1327) ssions Sites mber 2 attenuators / 'hite nas e Bilog cal Meters Pressure Only 2081 es 2052	Cable 1: Preamp: v1.017.154 tor + Anter selectors	Asset #20: Red-White anna Factor - Ra 9kHz- 71 Ra 0.009-3 Ra 30-20 Ra 9kHz	52 + Cable F inge 13.2 GHz : Code 9150 inge 2000MHz 000MHz	MN E4405B IC Code 2762A-7 MN ZFL-1000-LN MN JB1 MN BA928	Agilent VCCI Code A-0015 Mfr CS Sunol Mfr Oregon Scientific HDE	Antenna: R SN MY45103416 Range 30-1000MHz SN N/A SN A091604-1 SN	Asset #205 Asset #205 Asset 1327 Asset 1258 Asset 1105 Asset 831	3 Cat (Cat (Cat (Cat (Cat (Cable 3 Preselecto Copyrigi Calibration Due 7/10/2016 Calibration Due 3/22/2017 Calibration Due 8/12/2017 Calibration Due 8/12/2017 Calibration Due 3/19/2016 4/2/2016	3: 7: Calibratec 7/10/201 Calibratec 3/22/201 Calibratec 8/12/201 Calibratec 3/19/201 4/2/201

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

Date:	21-Jan-16			Company:	Ideal Indus	tries, Inc.						۱ ۱	Vork Order:	Q0116
Engineer:	Tuyen Truong			EUT Desc:	VDT1300						EUT Operat	ing Voltage/	Frequency:	120Vac/60
Temp:	22.8°C			Humidity:	24%			Pressure:	1009mBar					
		Freque	ncy Range:	1 to 6 GHz							Measureme	nt Distance:	3 m	
Notes:											EU.	T Max Freq:	<108 MHz	
											E	UT TX Freq:	902.7 - 927.	3 MHz
									FCC 15.	209 High Fre	equency -	FCC 15.	209 High Fre	equency -
Antenna	Frequency	Peak	Average	Preamp	Antenna	Cable	Adjusted	Adjusted		Peak			Average	
Polarization	Frequency	Reading	Reading	Factor	Factor	Factor	Peak Reading	Avg Reading	Limit	Margin	Result	Limit	Margin	Result
(H/V)	(MHz)	(dBµV)	(dBµV)	(dB)	(dB/m)	(dB)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)	(dBµV/m)	(dB)	(Pass/Fai
×	1805.4	40.18	31.5	18.8	30.6	2.6	54.6	45.9	74.0	-19.4	Pass	54.0	-8.1	Pass
h	1805.4	40.51	32.4	18.8	30.6	2.6	54.9	46.8	74.0	-19.1	Pass	54.0	-7.2	Pass
v	1830.0	35.89	25.8	18.8	30.7	2.7	50.5	40.4	74.0	-23.5	Pass	54.0	-13.6	Pass
h	1830.0	36.63	27.8	18.8	30.7	2.7	51.2	42.4	74.0	-22.8	Pass	54.0	-11.6	Pass
v	1854.6	35.06	24.0	18.8	30.9	2.7	49.9	38.8	74.0	-24.1	Pass	54.0	-15.2	Pass
h	1854.6	37.67	27.3	18.8	30.9	2.7	52.5	42.1	74.0	-21.5	Pass	54.0	-11.9	Pass
Table	e Result:		Pass	by	-7.2	dB					W	orst Freq:	1805.4	MHz
Test Site:	EMI Chamber	2		Cable 1:	Asset #20	52				Cable 2:	Asset #2053		Cable 3:	
Analyzer	Asset #1327			Preamp:	Asset #15	17				Antenna:	Blue Horn		Preselector:	

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Test Report for Ideal Industries, Inc. • Report No. EQ0116-1

February 25, 2016

Date:	: 21-Jan-16			Company:	Ideal Industrie	es, Inc.						W	ork Order	r: Q0116
Engineer:	: Tuyen Truong			EUT Desc:							EUT Oper	ating Voltage/F	requency	120Vac/60H
Temp:	: 22.8°C			Humidity:	24%			Pressure: 10	009mBar		-			
		Freque	ncy Range:	6-10 GHz						Ν	leasurem	nent Distance: 1	m	
Notes:	:										E	UT Max Freq: <	108 MHz	
												EUT TX Freq: 9		
				_					FCC 15.209 High	Freque	ncy - Pea	k FCC 15.209 H	igh Frequ	uency - Avera
Antenna Polarization	Frequency	Peak Reading	Average Reading	Preamp Factor		Cable Factor	Adjusted Peak Reading	Adjusted Avg Reading	Limit Ma	rgin	Result	Limit	Margin	Result
(H/V)	(MHz)	(dBµV)	(dBµV)	(dB)		(dB)	(dBµV/m)	(dBµV/m)		IB)	(Pass/Fail)	(dBµV/m)	(dB)	(Pass/Fail)
			NO EMIS	SIONS FOU	JND WITHIN 1	0dB OF	THE LIMIT							
Tabl	le Result:			by	dE	3					L	Norst Freq:		- MHz
Test Site:	: EMI Chamber	2		Cable 1:	Asset #2052				Ca	ble 2: A	sset #205	3	Cable 3	3:
	: Asset #1327			Preamp:	Asset #1517				Ant	enna: Bl	ue Horn	Pr	eselector	r:
Soft Radiate	ed Emissions C	alculator	v 1.017.154										Copyright C	Curtis-Straus LLC
liveted Dees				na Faatar i	Cable Feeter									
djusted Read	ding = Reading ·			na Factor -	Cable Factor									
	ding = Reading ·			na Factor -	Cable Factor									
ev. 1/19/20	ding = Reading · 16 rum Analyzer	Preamp Fa	ers/Presel		Rang	ge	MN	Mfr	SN	Asset		Calibration D	ue C	Calibrated o
ev. 1/19/201	ding = Reading · 16 rum Analyzer	Preamp Fa	ers/Presel			ge	MN E4405B	Mfr Agilent	SN MY45103416	Asset 1327	Cat I	Calibration D 7/10/2016	ue C	
ev. 1/19/20	ding = Reading · 16 r um Analyzer SA EMI	Preamp Fa	ers /Presel 1327)		Rang	ge 2 GHz								Calibrated o 7/10/2015
ev. 1/19/201	sing = Reading - 16 rum Analyzer SA EMI Radiated	• Preamp Fa s / Receiv Chamber (ers /Presel 1327) s Sites		Rang 9kHz-13.	ge 2 GHz ode	E4405B	Agilent	MY45103416		I	7/10/2016		Calibrated o 7/10/2015
ev. 1/19/20 ⁷ Spectr	ding = Reading - 16 rum Analyzer SA EMI Radiated EMI	• Preamp Fa s / Receiv Chamber (Emission Chamber	ictor + Anten ers /Presel 1327) s Sites 2	ectors	Rang 9kHz-13. FCC C 7191	ge 2 GHz ode 50	E4405B IC Code 2762A-7	Agilent VCCI Code A-0015	MY45103416 Range 1-18GHz	1327	l Cat	7/10/2016 Calibration D 4/29/2017	Due C	Calibrated o 7/10/2015 Calibrated o 4/29/2015
ev. 1/19/20 ⁻ Spectr	ding = Reading - 16 rum Analyzer SA EMI Radiated EMI camps /Coupl	• Preamp Fa s / Receiv Chamber (Emission Chamber	ers /Presel 1327) s Sites 2 lators / Filt	ectors	Rang 9kHz-13. FCC C	ge 2 GHz ode 50 ge	E4405B	Agilent VCCI Code	MY45103416 Range		l Cat	7/10/2016 Calibration D	Due C	Calibrated o 7/10/2015 Calibrated o 4/29/2015
ev. 1/19/20 ⁷ Spectr	ting = Reading - 16 rum Analyzer SA EMI Radiated EM eamps /Coupl 1517	• Preamp Fa s / Receiv Chamber (• Emission • Chamber • chamber	ers /Presel 1327) s Sites 2 nators / Filt	ectors	Rang 9kHz-13. FCC C 7191 Rang	ge 2 GHz code 50 ge 6Hz	E4405B IC Code 2762A-7 MN	Agilent VCCI Code A-0015 Mfr	MY45103416 Range 1-18GHz SN	1327 Asset	l Cat l Cat	7/10/2016 Calibration D 4/29/2017 Calibration D	Due C	Calibrated o 7/10/2015 Calibrated o 4/29/2015 Calibrated o
ev. 1/19/20 ⁷ Spectr	sing = Reading 16 rum Analyzer SA EMI Radiated EMI eamps /Coupi 1517 High	• Preamp Fa s / Receiv Chamber (Emission Chamber Chamber ers Attenu 7 HF Pream	ers /Presel 1327) s Sites 2 nators / Filt	ectors	Rang 9kHz-13. FCC C 71911 Rang 1-20G	ge 2 GHz ode 50 ge 6Hz GHz	E4405B IC Code 2762A-7 MN CS	Agilent VCCI Code A-0015 Mfr CS	MY45103416 Range 1-18GHz SN N/A	1327 Asset 1517	I Cat I Cat II	7/10/2016 Calibration D 4/29/2017 Calibration D 8/6/2016	Due C Due C	Calibrated o 7/10/2015 Calibrated o 4/29/2015 Calibrated o 8/6/2015
ev. 1/19/20 ⁷ Spectr	sing = Reading - 16 rum Analyzer SA EMI Radiated EMI camps /Coupl 1517 High	S / Receiv Chamber (Emission Chamber Chamber Chamber HF Pream Pass Filte	ers /Presel 1327) s Sites 2 nators / Filt	ectors	Rang 9kHz-13. FCC C 7191: Rang 1-20G 0.03-9 (ge 2 GHz ode 50 ge GHz GHz ge	E4405B IC Code 2762A-7 MN CS VHP-16	Agilent VCCI Code A-0015 Mfr CS Mini-Circuits	MY45103416 Range 1-18GHz SN N/A NA	1327 Asset 1517 1288	Cat I Cat II II	7/10/2016 Calibration D 4/29/2017 Calibration D 8/6/2016 1/7/2017	Due C Due C	Calibrated o 7/10/2015 Calibrated o 4/29/2015 Calibrated o 8/6/2015 1/7/2016
ev. 1/19/20 ⁷ Spectr	sing = Reading- 16 rum Analyzer SA EMI Radiated EMI eamps /Coupl 1517 Higt B	S / Receiv Chamber (Emission Chamber Chamber Chamber HF Pream Pass Filte	ers /Presel 1327) s Sites 2 nators / Filt np	ectors	Rang 9kHz-13. FCC C 71911 Rang 0.03-9 (Rang	ge 2 GHz ode 50 ge GHz GHz ge	E4405B IC Code 2762A-7 MN CS VHP-16 MN	Agilent VCCI Code A-0015 Mfr CS Mini-Circuits Mfr	MY45103416 Range 1-18GHz SN N/A NA SN	1327 Asset 1517 1288 Asset	i Cat i Cat ii ii Cat i	7/10/2016 Calibration D 4/29/2017 Calibration D 8/6/2016 1/7/2017 Calibration D	Due C Due C Due C	Calibrated o 7/10/2015 Calibrated o 4/29/2015 Calibrated o 8/6/2015 1/7/2016 Calibrated o
v. 1/19/20 ⁻ Spectr	sing = Reading- 16 rum Analyzer SA EMI Radiated EMI eamps /Coupl 1517 Higt B	Preamp Fa s/ Receiv Chamber (Emission Chamber Chamber HF Pream Pass Filte untennas lue Hom blogical M	eters	ectors	Rang 9kHz-13. FCC C 71911 Rang 0.03-9 (Rang	ge 2 GHz ode 50 ge GHz GHz ge	E4405B IC Code 2762A-7 MN CS VHP-16 MN 3117	Agilent VCCI Code A-0015 Mfr CS Mini-Circuits Mfr ETS	MY45103416 Range 1-18GHz SN N/A NA SN 157647 SN	1327 Asset 1517 1288 Asset 1861	I Cat I II II Cat I	7/10/2016 Calibration D 4/29/2017 Calibration D 8/6/2016 1/7/2017 Calibration D 2/8/2017	Due C Due C Due C	Calibrated o 7/10/2015 Calibrated o 4/29/2015 Calibrated o 8/6/2015 1/7/2016 Calibrated o 2/8/2015
v. 1/19/20 ⁻ Spectr	sing = Reading - 16 rum Analyzer SA EMI Radiated EMI eamps /Coupl 1517 High B Meteorc Weather Ck	Preamp Fa s/ Receiv Chamber (Emission Chamber Chamber HF Pream Pass Filte untennas lue Hom blogical M	eters	ectors	Rang 9kHz-13. FCC C 71911 Rang 0.03-9 (Rang	ge 2 GHz ode 50 ge GHz GHz ge	E4405B IC Code 2762A-7 MN CS VHP-16 MN 3117 MN	Agilent VCCI Code A-0015 Mfr CS Mini-Circuits Mfr ETS Mfr	MY45103416 Range 1-18GHz SN N/A NA SN 157647 SN	1327 Asset 1517 1288 Asset 1861 Asset	Cat Cat I I Cat I Cat I Cat	7/10/2016 Calibration D 4/29/2017 Calibration D 8/6/2016 1/7/2017 Calibration D 2/8/2017 Calibration D	Due C Due C Due C	Calibrated o 7/10/2015 Calibrated o 4/29/2015 Calibrated o 8/6/2015 1/7/2016 Calibrated o 2/8/2015 Calibrated o
ev. 1/19/20 ⁷ Spectr	sing = Reading- 16 rum Analyzer SA EMI Radiated EMI teamps /Coupl 1517 1517 Higt B Meteorc Weather Clo	Preamp Fa s / Receiv Chamber (Emission I Chamber res Attenu r HF Pream Pass Filte untennas lue Hom blogical M pck (Press	eters	ectors	Rang 9kHz-13. FCC C 71911 Rang 0.03-9 (Rang	ge 2 GHz 50 ge GHz GHz GHz Bhz	E4405B IC Code 2762A-7 MN CS VHP-16 MN 3117 MN BA928	Agilent VCCI Code A-0015 Mfr CS Mini-Circuits Mfr ETS Mfr Oregon Scientific	MY45103416 Range 1-18GHz SN N/A NA SN 157647 SN	1327 Asset 1517 1288 Asset 1861 Asset 831	Cat Cat I I Cat I Cat I Cat	7/10/2016 Calibration D 4/29/2017 Calibration D 8/6/2016 1/7/2017 Calibration D 2/8/2017 Calibration D 3/19/2016	Due C Due C Due C	Calibrated o 7/10/2015 Calibrated o 4/29/2015 Calibrated o 2/8/2015 Calibrated o 2/8/2015 Calibrated o 3/19/2014 4/2/2015
ev. 1/19/20 ⁷ Spectr	sing = Reading - 16 rum Analyzer SA EMI Radiated EMI tamps /Coupl 1517 High B Meteord Weather Clo Ti	Preamp Fa s/Receiv Chamber (Emission Chamber ers Attenu ' HF Pream Pass Filte Intennas lue Horn blogical M bock (Press H A#2081	eters	ectors	Rang 9kHz-13. FCC C 7191: 1-20G 0.03-9 (Rang 1-18G	ge 2 GHz 50 ge HHz GHz ge Shz ge 8GHz	E4405B IC Code 2762A-7 MN CS VHP-16 MN 3117 MN BA928	Agilent VCCI Code A-0015 Mfr CS Mini-Circuits Mfr ETS Mfr Oregon Scientific HDE	MY45103416 Range 1-18GHz SN N/A NA SN 157647 SN	1327 Asset 1517 1288 Asset 1861 Asset 831	Cat Cat I I Cat I Cat I Cat I I	7/10/2016 Calibration D 4/29/2017 Calibration D 8/6/2016 1/7/2017 Calibration D 2/8/2017 Calibration D 3/19/2016 4/2/2016	Due C Due C Due C	Calibrated o 7/10/2015 Calibrated o 4/29/2015 Calibrated o 8/6/2015 1/7/2016 Calibrated o 2/8/2015 Calibrated o 3/19/2014

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

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Conducted Spurious Emissions

LIMITS

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth that contains the highest level of desired power based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under

this paragraph shall be $30 \ dB$ instead of 20 dB ... [15.247(d)]

MEASUREMENTS / RESULTS

Date: 20-Jan-16	Company: Ideal Industries, I	nc.	Work Order: Q0116
ngineer: Tuyen Truong	EUT Desc: VDT1300		EUT Operating Voltage/Frequency: 120Vac/60H
Temp: 21°C	Humidity: 26%	Pressure: 1010mBar	
Frequency R	ange: 902-928MHz		
Notes: Maximum Peak	PSD in 100 KHz RBW		
Frequency	Reading	Attenuation	Adjusted Reading
(MHz)	(dBm)	(dB)	(dBm)
(IVI⊓∠)		40.55	17.8
902.7	-1.745	19.55	17.0

Date: 20-Jan-16		Company:	Ideal Industries	nc.		Work Order:	Q0116
Engineer: Tuyen Truong		EUT Desc:	VDT1300	EUT	Operating Voltage	/Frequency:	120Vac/60
Temp: 21°C		Humidity:	26%	Pressure: 1010mBar			
Freque	ency Range	: 902-928 M	lHz				
Notes:							
The Limit here	is set to -300	dB from the	max in-band pea	PSD level in 100kHz RBW (Attenuation factor	included or 19.55dE	3)	
						FCC 15.247	,
Frequency (MHz)	Reading (dBm)		Attenuation (dB)	Final Conducted Reading (dBm)	Limit (dBm)	Margin (dB)	Result (Pass/Fai
902.0	-37.57		19.55	-18.02	-12.20	-5.83	Pass
928.0	-42.63		19.55	-23.08	-12.20	-10.89	Pass
Table Result:	Pass	by	-5.83 dB		Worst Freq:	902.0	MHz
Test Site: Chamber 2 Analyzer: SA#1328	A	Attenuation:	Asset#791				

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Rev. 1/19/2016								
Spectrum Analyzers / Receivers / Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
SA EMI Chamber (1328)	9kHz-13.2 GHz	E4405B	Agilent	MY44210241	1328	I	8/19/2016	8/19/2015
Radiated Emissions Sites	FCC Code	IC Code	VCCI Code	Range		Cat	Calibration Due	Calibrated on
EMI Chamber 2	719150	2762A-7	A-0015	30-1000MHz		Ш	3/22/2017	3/22/2015
Preamps /Couplers Attenuators / Filters	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
HF 20dB 50W Attenuator	0.009-18 GHz	PE 7019-20	Pasternack	1	791	Ш	7/31/2016	7/31/2015
Meteorological Meters		MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	1	3/19/2016	3/19/2014

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

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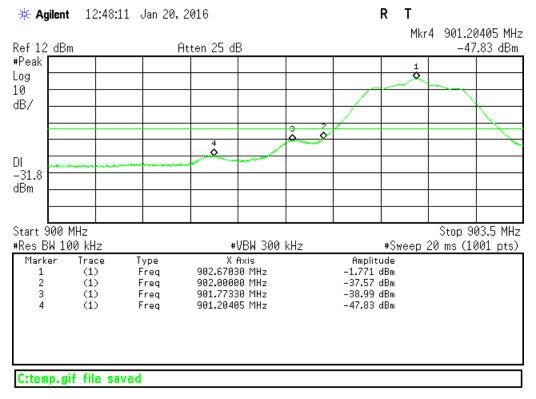


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Plot(s)



Lower Channel - Band Edge (<-20dBm)

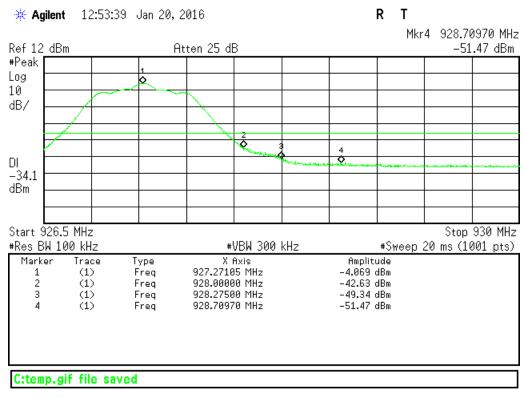
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Upper Channel - Band Edge (<-20dBm)

Conducted Spurious Emission

Conducted spurious emissions at the antenna port were measured in accordance with FCC KDB 558074 D01 DTS Measurement Guidance v03r04 Section 11.0.

Frequency range up to 10GHz was investigated for all 3 channels (low, middle and high) at the EUT antenna port. Except for the fundamental, all emissions were at instrument noise floor. Highest noise floor level was less than -33dBm for the entire frequency range, which is more than 30dB below the fundamental.

EUT Desc: VDT1300		EUT Operating Voltage/Frequency: 120Vac/60H
Humidity: 26%	Pressure: 1010mBar	
30-10000 MHz		
100 KHz RBW		
Reading	Attenuation	Adjusted Reading
(dBm)	(dB)	(dBm)
-1.745	19.55	17.8
enuation: Asset#791		
	30-10000 MHz 100 KHz RBW Reading (dBm) -1.745	Reading Attenuation (dBm) (dB) -1.745 19.55

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Rev. 1/19/2016								
Spectrum Analyzers / Receivers / Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
SA EMI Chamber (1328)	9kHz-13.2 GHz	E4405B	Agilent	MY44210241	1328	I	8/19/2016	8/19/2015
Radiated Emissions Sites	FCC Code	IC Code	VCCI Code	Range		Cat	Calibration Due	Calibrated on
EMI Chamber 2	719150	2762A-7	A-0015	30-1000MHz		Ш	3/22/2017	3/22/2015
Preamps /Couplers Attenuators / Filters	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Preamps /Couplers Attenuators / Filters HF 20dB 50W Attenuator	Range 0.009-18 GHz	MN PE 7019-20	Mfr Pasternack	SN 1	Asset 791	Cat II	Calibration Due 7/31/2016	Calibrated on 7/31/2015
				SN 1 SN				
HF 20dB 50W Attenuator		PE 7019-20	Pasternack	1 SN	791	II	7/31/2016	7/31/2015

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

Issue No. 1 Reason for change Original Release Date Issued February 25, 2016



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Power Spectral Density

LIMIT

...the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission. [15.247(e)]

Per 558074 D01 DTS Measurement Guidance v03r04 Section 10.3 Method AVGPSD-1 (Average PSD)

MEASUREMENTS / RESULTS

Date: 20-Jan-16		Company: Ideal Industri	es, Inc.					v	Vork Orde	er: Q0116
Engineer: Tuyen Truong		EUT Desc: VDT1300				EUT O	peratir	ng Voltage/	Frequenc	y: 120Vac/60
Temp: 21°C		Humidity: 26%	Pressur	e: 1010mBar						
Frequ	ency Range	902.7-927.3 MHz								
Notes:										
									FCC 15.2	47
Frequency	Reading	Attenuatio	n	Final	Conducted Rea	ding		Limit	Margin	Result
(MHz)	(dBm)	(dB)			(dBm)			(dBm)	(dB)	(Pass/Fa
902.7	-15.15	19.55			4.40			8.0	-3.60	Pass
915	-16.89	19.55		r	2.66			8.0	-5.34	Pass
927.3	-16.93	19.55			2.62			8.0	-5.38	Pass
Table Result:	Pass	by -3.60 d	В				Wo	rst Freq:	902	7 MHz
Test Site: Chamber 2	A	ttenuation: Asset#791								
Analyzer: SA#1328									Copyright C	
										urtis-Straus LLC
1/19/2016										urtis-Straus LLC
Spectrum Analyzers / Receive			MN E4405B	Mfr Agilent	SN MY44210241	Asset	Cat	Calibratio	on Due	Calibrated
		ors Range 9kHz-13.2 GHz	MN E4405B	Mfr Agilent	SN MY44210241	Asset 1328	Cat I	Calibratic 8/19/20	on Due	
Spectrum Analyzers / Receive	1328) s Sites				÷				on Due 016 on Due	Calibrated
Spectrum Analyzers / Receive SA EMI Chamber (* Radiated Emissions	1328) s Sites 2 nators / Filters	9kHz-13.2 GHz FCC Code 719150	E4405B IC Code 2762A-7 MN	Agilent	MY44210241 Range		l Cat	8/19/20	on Due 016 on Due 017 on Due	Calibrated 8/19/2015 Calibrated

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

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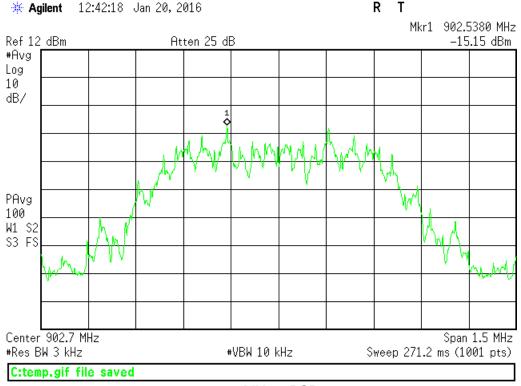


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PLOTS



902.7 MHz - PSD

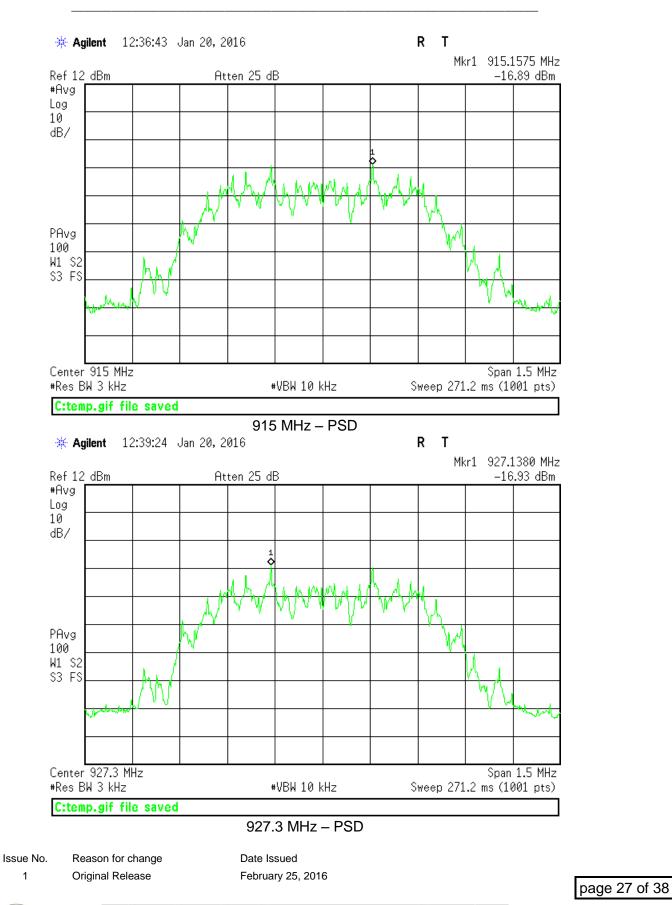
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AC Line Conducted Emissions

LIMITS

Frequency of	Quasi-peak limit	Average limit
emission (MHz)	(dBµV)	(dBµV)
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

[47 CFR 15.207(a)]

MEASUREMENTS / RESULTS

	ate: 22-Jan-16						Company: Id		, Inc			V	Vork Order	: Q0116
	er: Tuyen Truong						EUT Desc: V						_	
Ter	np: 19.0 °C						Humidity: 3	5%					Pressure	: 1015 mBa
NO	les.					Eroquo	ncy Range: 0.	15 20 MHz		EUT	nput Voltage	/Froguopov:	120\/ac/60	17
	Quasi	Poak	Aver	ane	LIS		icy Range. 0.	. 13 - 30 10112		LUTI	input voltage	rrequency.	120 v ac/001	12
	Read		Read		Fact		Cable	ATTN		CC 15.207			FCC 15.20	7
Frequency	QP1	QP2	AVG1	AVG2	L1	L2	Factor	Factor	QP Limit	Margin	Result	AVG Limit	Margin	Result
(MHz)	(dBuV)	(dBuV)	(dBuV)	(dBµV)	(dB)	(dB)	(dB)	(dB)	(dBµV)	(dB)	(Pass/Fail)	(dBuV)	(dB)	(Pass/Fa
0.16	18.9	18.4	12.5	10.6	-0.1	-0.1	-0.1	-19.0	65.6	-27.6	Pass	55.6	-24.0	Pass
0.55	22.3	15.6	15.4	14.9	0.0	0.0	-0.1	-19.0	56.0	-14.6	Pass	46.0	-11.5	Pass
4.34	21.1	19.7	5.4	4.7	0.0	-0.1	-0.1	-19.0	56.0	-15.8	Pass	46.0	-21.5	Pass
8.70	19.6	11.9	3.5	2.1	-0.1	-0.1	-0.2	-19.0	60.0	-21.3	Pass	50.0	-27.3	Pass
16.50	10.5	12.1	1.8	1.7	-0.1	-0.1	-0.3	-19.0	60.0	-28.6	Pass	50.0	-28.8	Pass
22.09	16.4	12.5	5.7	4.4	-0.1	-0.1	-0.3	-19.0	60.0	-24.2	Pass	50.0	-24.9	Pass
Resul	It: Pass						Worst M	largin	-11	5 dB	Frea	uency:	0.550) MHz
asurement Devic	ce: LISN ASSE	T 1732(Line	1) LISN AS	SET 1733	(Line 2)		Cable: C	EMI-09				Analyzer:	Black	
easurement Devic	ce: LISN ASSE	T 1732(Line	1) LISN AS	SET 1733	(Line 2)	At		EMI-09				Analyzer:		
Conducted D	Emissions late: 22-Jan-16 eer: Tuyen Truong	Data Ta		SET 1733	(Line 2)	At	Cable: O tenuator: 2 Company EUT Desc	CEMI-09 COdB Attenu y: Ideal Indust c: VDT1300	ator-06			Analyzer: Site:	Black CEMI 6 Vork Order	r: Q0116
Conducted D Engin Te	Emissions ate: 22-Jan-16 eer: Tuyen Truong mp: 19.0 °C	Data Ta		SET 1733	(Line 2)	At	Cable: () tenuator: 2 Company	CEMI-09 COdB Attenu y: Ideal Indust c: VDT1300	ator-06			Analyzer: Site:	Black CEMI 6 Vork Order	r: Q0116
Conducted D Engin Te	Emissions late: 22-Jan-16 eer: Tuyen Truong	Data Ta		SET 1733	(Line 2)		Cable: C tenuator: 2 Company EUT Desc Humidity	CEMI-09 00B Attenu 00B Attenu 100B Attenu 100B Attenu 100B Attenu 100B Attenu 100B Attenu 100B Attenu 100B Attenu	ator-06 tries, Inc		Spectrum	Analyzer: Site: V	Black CEMI 6 Vork Order Pressure	r: Q0116 e: 1015 mB
Conducted D Engin Te	Emissions late: 22-Jan-16 eer: Tuyen Truong imp: 19.0 °C otes:	Data Ta	ble			Frec	Cable: O tenuator: 2 Company EUT Desc	CEMI-09 00B Attenu 00B Attenu 100B Attenu 100B Attenu 100B Attenu 100B Attenu 100B Attenu 100B Attenu 100B Attenu	ator-06 tries, Inc			Analyzer: Site: V	Black CEMI 6 Vork Order Pressure	r: Q0116 e: 1015 mB
Conducted D Engin Te	Emissions hate: 22-Jan-16 eer: Tuyen Truong mp: 19.0 °C otes:	Data Ta	ble	verage		Frec	Cable: C tenuator: 2 Company EUT Desc Humidity uency Range	2EMI-09 0dB Attenu 2: Ideal Indust 2: VDT1300 7: 35% 2: 0.15 - 30 M	ator-06 tries, Inc	EUT In	Spectrum	Analyzer: Site: V	Black CEMI 6 Vork Order Pressure	r: Q0116 :: 1015 mB dz
Conducted D Engin Te No	Emissions bate: 22-Jan-16 eer: Tuyen Truong mp: 19.0 °C otes: Quas Rea	Data Ta	ble Ar Re	verage vadings	F	Frec LISN actors	Cable: C tenuator: 2 Company EUT Desc Humidity uency Range Cable	2: Ideal Indust 2: Ideal Indust 2: VDT1300 2: 35% 2: 0.15 - 30 M ATTN	ator-06 tries, Inc	EUT In FCC 15.207	Spectrum	Analyzer: Site: V	Black CEMI 6 Vork Orden Pressure 277Vac/60H FCC 15.20	r: Q0116 e: 1015 mE Hz 7
Conducted D Engin Te	Emissions hate: 22-Jan-16 eer: Tuyen Truong mp: 19.0 °C otes:	Data Ta	ble	verage		Frec	Cable: C tenuator: 2 Company EUT Desc Humidity uency Range	2EMI-09 0dB Attenu 2: Ideal Indust 2: VDT1300 7: 35% 2: 0.15 - 30 M	ator-06 tries, Inc	EUT In	Spectrum	Analyzer: Site: V	Black CEMI 6 Vork Order Pressure	r: Q0116 :: 1015 mE Hz 7 Resul
Conducted D Engin Te No Frequency	Emissions late: 22-Jan-16 eer: Tuyen Truong mp: 19.0 °C otes: Quat Rec QP1	Data Ta si-Peak adings QP2	ble A Re AVG1	verage adings AVG2	F L1	Frec LISN actors L2	Cable: C tenuator: 2 Company EUT Dess Humidity uency Range Cable Factor	2: Ideal Indust 2: Ideal Indust 2: VDT1300 2: 35% 2: 0.15 - 30 M ATTN Factor	ator-06 tries, Inc	EUT In FCC 15.207 Margin	Spectrum	Analyzer: Site: V Frequency: :	Black CEMI 6 Vork Orden Pressure 277Vac/604 FCC 15.20 Margin	r: Q0116 :: 1015 mE tz 7 Resu (Pass/F
Conducted D D Engin Te No Frequency (MHz)	Emissions late: 22-Jan-16 eer: Tuyen Truong mp: 19.0 °C otes: Qua: Ret QP1 (dBµV)	Data Ta si-Peak adings QP2 (dBµV)	Ar Re AVG1 (dBµV)	verage adings AVG2 (dBµV)	F L1 (dB)	Frec LISN actors L2 (dB)	Cable: C tenuator: 2 Company EUT Desc Humidity uency Range Cable Factor (dB)	2EMI-09 20dB Attenu 2: Ideal Indust 2: VDT1300 2: 35% 2: 0.15 - 30 M ATTN Factor (dB)	ator-06 tries, Inc	EUT In FCC 15.207 Margin (dB)	Spectrum put Voltage/ Result (Pass/Fail)	Analyzer: Site: V Frequency: : AVG Limit (dBµV)	Black CEMI6 Vork Order Pressure 277Vac/60 FCC 15.20 Margin (dB)	r: Q0116 e: 1015 mE dz
Conducted D Engin Te No Frequency (MHz) 0.23	Emissions ate: 22-Jan-16 eer: Tuyen Truong mp: 19.0 °C tes: Cuast QP1 Ref QP1 (dBµV) 18.9 18.9	Data Ta si-Peak adings QP2 (dBµV) 16.0	A A A AVG1 (dBµV) 10.7	verage adings AVG2 ((BµV) 10.2	F L1 (dB) 0.0	Frec LISN actors L2 (dB) 0.0	Cable: C tenuator: 2 Company EUT Desc Humidity uency Range Cable Factor (dB) -0.1	2: Ideal Indust :: VDT1300 :: 0.15 - 30 M ATTN Factor (dB) -19.0	Hz QP Limit (dBµV) 62.4	EUT In FCC 15.207 Margin (dB) -24.5	Spectrum put Voltage/ Result (Pass/Fail) Pass	Analyzer: Site: V Frequency: : AVG Limit (dBµV) 52.4	Black CEMI6 Vork Order Pressure 2777Vac/60H FCC 15.20 Margin (dB) -22.6	r: Q0116 :: 1015 mE tz 7 Resu (Pass/F Pass
Conducted D Engin Te No Frequency (MHz) 0.23 0.50	Emissions late: 22-Jan-16 eer: Truyen Truong mp: 19.0 °C optimized Ref OP1 (dBµV) 18.9 24.1	Data Ta si-Peak adings QP2 (dBµV) 16.0 28.7	Δle A AVG1 (dBμV) 10.7 17.9	verage adings AVG2 (dBμV) 10.2 15.8	F L1 (dB) 0.0 0.0	Frec LISN actors (dB) 0.0 0.0	Cable: C tenuator: 2 Company EUT Desc Humidity uency Range Cable Factor (dB) -0.1	2: Ideal Indust 2: VDT1300 2: S5% 2: 0.15 - 30 M ATTN Factor (dB) -19.0	Hz (dB _µ V) 62.4 56.0	EUT In FCC 15.207 Margin (dB) -24.5 -8.2	Spectrum put Voltage/ Result (Pass/Fail) Pass Pass	Analyzer: Site: V Frequency: : AVG Limit (dBµV) 52.4 46.0	Black CEMI6 Vork Order Pressure 277Vac/60 FCC 15.20 Margin (dB) -22.6 -9.0	r: Q0116 2: 1015 mB 4z 7 7 Resu (Pass/F Pass Pass

measurement Device:	LISINASSEL	1/91				А		20dB Atter	nuator-06		Spectrum		CEMI 6	
Measurement Device:		1701					Cabler	CEMI-09			Spectrum	Applyzor	Plaak	
Result:	Pass						Worst	Margin:	-8.2	dB	Freq	uency:	0.504	MHz
27.46	15.1	14.4	1.3	1.4	-0.2	-0.2	-0.3	-19.0	60.0	-25.5	Pass	50.0	-29.1	Pass
18.64	13.5	14.3	0.5	1.6	-0.2	-0.2	-0.3	-19.0	60.0	-26.2	Pass	50.0	-28.9	Pass

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Rev. 1/19/2016								
Spectrum Analyzers / Receivers / Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Black	9kHz-12.8GHz	8596E	Agilent	3710A00944	337	- I	2/12/2016	2/12/2015
LISNs/Measurement Probes	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
LISN Asset 1791	9KHz-30MHz	NNLK 8121	Schwarzbeck	NNLK 8121-603	1791	I.	5/26/2016	5/26/2015
Conducted Test Sites (Mains / Telco)	FCC Code		VCCI Code			Cat	Calibration Due	Calibrated on
CEMI 6	719150		A-0015			Ш	NA	N/A
Meteorological Meters		MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	1	3/19/2016	3/19/2014
TH A#2085		HTC-1	HDE		2085	Ш	4/2/2016	4/2/2015
Cables	Range		Mfr			Cat	Calibration Due	Calibrated on
CEMI-09	9kHz - 2GHz		C-S			Ш	5/3/2016	5/3/2015
Attenuators	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
20dB Attenuator-06	9kHz-2GHz	PE7000-20	Pasternack	N/A		Ш	7/29/2016	7/29/2015

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Occupied Bandwidth

REQUIREMENT

When an occupied bandwidth is not specified in the applicable RSS, the transmitted signal bandwidth to be reported is to be its 99% emission bandwidth, as calculated or measured. [RSS-GEN 6.6]

MEASUREMENTS / RESULTS

99% OCCUPIED B	ANDWIDTH								
Date: 20-Jan-16	Company:	deal Industries, Ir	IC.					Work Or	der: Q0116
Engineer: Tuyen Truong	EUT Desc: \	/DT1300				EUT Op	peratin	g Voltage/Freque	ncy: 120Vac/60Hz
Temp: 21°C	Humidity: 2	26%	Pres	sure: 1010mBar					
Freque	ncy Range: 902.7-927.3	MHz							
Notes:									
_									
Frequency (MHz)				Occupied Bandwi (KHz)	•				
902.7				763.49					
902.7 915				763.12					
915				765.44					
Analyzer: SA#1328								Co pyrig!	nt Curtis-Straus LLC 200
Rev. 1/19/2016 Spectrum Analyzers / Re SA EMI Cham		Range 9kHz-13.2 GHz	MN E4405B	Mfr Agilent	SN MY44210241	Asset 1328	Cat I	Calibration Due 8/19/2016	Calibrated on 8/19/2015
Radiated Emis EMI Chan		FCC Code 719150	IC Code 2762A-7	VCCI Code A-0015	Range 30-1000MHz		Cat II	Calibration Due 3/22/2017	Calibrated on 3/22/2015
Preamps /Couplers At HF 20dB 50W		Range 0.009-18 GHz	MN PE 7019-20	Mfr Pasternack	SN 1	Asset 791	Cat II	Calibration Due 7/31/2016	Calibrated on 7/31/2015
Meteorologic Weather Clock (P TH A#2	ressure Only)		MN BA928 HTC-1	Mfr Oregon Scientific HDE	SN C3166-1	Asset 831 2081	Cat I	Calibration Due 3/19/2016 4/2/2016	Calibrated on 3/19/2014 4/2/2015

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

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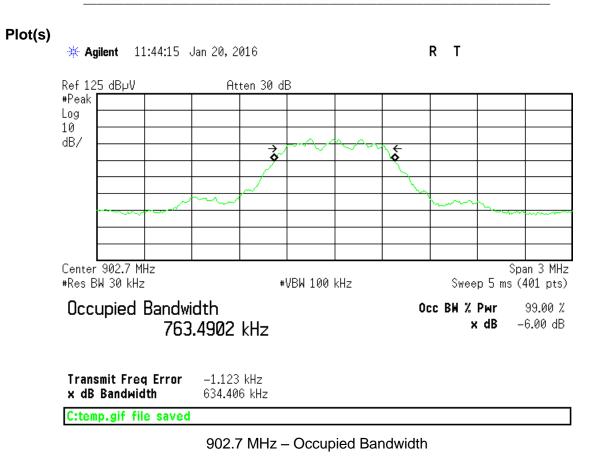
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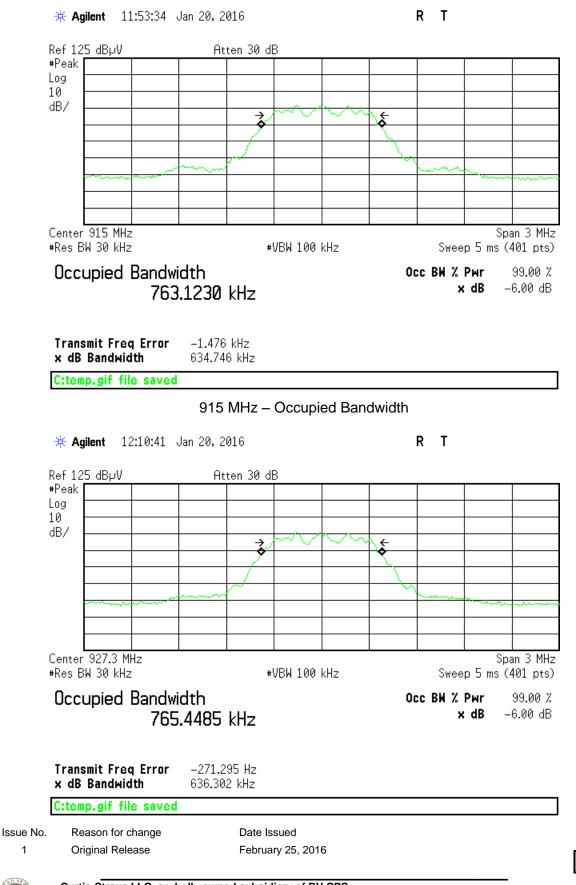


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927.3 MHz - Occupied Bandwidth

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Measurement Uncertainty

The listed uncertainties are the worst case uncertainty for the entire range of measurement. Please note that the uncertainty values are provided for informational purposes only and are not used in determining the PASS/FAIL results.

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Measurement	Expanded Uncertainty k=2	Maximum allowable uncertainty
Radiated Emissions (30-1000MHz) NIST	5.6dB	N/A 5.2dD (Ulaisan)
CISPR Radiated Emissions (1-26.5GHz)	4.6dB 4.6dB	5.2dB (Ucispr) N/A
Radiated Emissions (above 26.5GHz)	4.9dB	N/A
Magnetic Radiated Emissions	5.6dB	N/A
Conducted Emissions NIST	3.9dB	N/A
CISPR Telco Conducted Emissions (Current)	3.6dB 2.9dB	3.6dB (Ucispr) N/A
Telco Conducted Emissions (Voltage)	4.4dB	N/A
Electrostatic Discharge	11.5%	N/A
Radiated RF Immunity (Uniform Field)	1.6dB	N/A
Electrical Fast Transients	23.1%	N/A
Surge	23.1%	N/A
Conducted RF Immunity	3dB	N/A
Magnetic Immunity	12.8%	N/A
Dips and Interrupts	2.3V	N/A
Harmonics	3.5%	N/A
Flicker	3.5%	N/A
Radio frequency (@ 2.4GHz)	3.23 x 10 ⁻⁸	1 x 10 ⁻⁷
RF power, conducted	0.40dB	0.75dB
Maximum frequency deviation: • Within 300Hz and 6kHz of audio frequency / Within 6kHz and 25kHz of audio frequency	3.4% 0.3dB	5% 3dB
Adjacent channel power	1.9dB	3dB
Conducted spurious emission of transmitter, valid up to 12.75GHz	2.39dB	3dB
Conducted emission of receivers	1.3dB	3dB
Radiated emission of transmitter, valid up to 26.5GHz	3.9dB	6dB
Radiated emission of transmitter, valid up to 80GHz	3.3dB	6dB
Radiated emission of receiver, valid up to 26.5GHz	3.9dB	6dB
Radiated emission of receiver, valid up to 80GHz	3.3dB	6dB
Humidity	2.37%	5%
Temperature	0.7°C	1.0°C
Time	4.1%	10%
RF Power Density, Conducted	0.4dB	3dB
DC and low frequency voltages	1.3%	3%
Voltage (AC, <10kHz)	1.3%	2%
Voltage (DC)	0.62%	1%
The above reflects a 95% confidence level		

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Conditions Of Testing

[Bureau Veritas Consumer Products Services, Inc., a Massachusetts corporation], and/or its affiliates (collectively, the "Company") will conduct, at the request of the Submitter ("Client"), the tests specified on the submitted Test Request Form or equivalent in accordance with, and subject to, the following terms and conditions (collectively, "Conditions"):

All orders for tests are subject to acceptance by the Company, and no order will constitute a binding commitment of the Company unless and until such order is accepted by it, as evidenced by the issuance of a written report ("Test Report") by the Company. The Test Report is issued solely by the Company, is intended for the exclusive use of Client and shall not be published, used for advertising purposes, copied or replicated for distribution to any other person or entity or otherwise publicly disclosed without the prior written consent of the Company. By submitting a request for services to the Company, Client consents to the disclosure to accreditation bodies of those records of Client relevant to the accreditation body's assessment of the Company's competence and compliance with relevant accreditation criteria. The Company shall not be liable for any loss or damage whatsoever resulting from the failure of the Company to provide its services within any time period for completion estimated by the Company. If Client anticipates using the Test Report in any legal proceeding, arbitration, dispute resolution forum or other proceeding, it shall so notify the Company prior to submitting the Test Report in such proceeding. The Company has no obligation to provide a fact or expert witness at such proceeding unless the Company agrees in advance to do so for a separate and additional fee.

2. The Test Report will set forth the findings of the Company solely with respect to the test samples identified therein. Unless specifically and expressly indicated in the Test Report, the results set forth in such Test Report are not intended to be indicative or representative of the quality or characteristics of the lot from which a test sample is taken, and Client shall not rely upon the Test Report as being so indicative or representative of the lot or of the tested product in general. The Test Report will reflect the findings of the Company at the time of testing only, and the Company shall have no obligation to update the Test Report after its issuance. The Test Report will set forth the results of the tests performed by the Company based upon the written information provided to the Company. The Test Report will be based solely on the samples and written information submitted to the Company by Client, and the Company shall not be obligated to conduct any independent investigation or inquiry with respect thereto.

3. The Company may, in its sole discretion, destroy samples which have been furnished to the Company for testing and which have not been destroyed in the course of testing. The Company may delegate the performance of all or a portion of the services contemplated hereunder to an affiliate, agent or subcontractor of the Company, and Client consents to such delegation.

4. These Conditions and the Test Report represent the entire understanding of the parties hereto with respect to the subject matter hereof and of the Test Report, and no modification, variance or extrapolation with respect thereto shall be permitted without the prior written consent of the Company.

5. The names, service marks, trademarks and copyrights of the Company and its affiliates, including the names "BUREAU VERITAS," "BUREAU VERITAS CONSUMER PRODUCTS SERVICES," "BVCPS", "MTL", "ACTS", "MTL-ACTS" and CURTIS-STRAUS (collectively, the "Marks") are and shall remain the sole property of the Company or its affiliates and shall not be used by Client except solely to the extent that Client obtains the prior written approval of the Company and then only in the manner prescribed by the Company. Client shall not contest the validity of the Marks or take any action that might impair the value or goodwill associated with the Marks or the image or reputation of the Company or its affiliates.

6. Payment in full shall be due 30 days after the date of invoice. Interest shall be due on overdue amounts from the due date until paid at an interest rate of 1.5% per month or, if less, the maximum rate permitted by law. The Company reserves the right, at any time and from time to time, to revoke any credit extended to Client. Client shall reimburse the Company for any costs it incurs in collecting past due amounts, including court costs and fees and expenses of attorneys and collection agencies. The Test Report may not be used or relied upon by Client if and for so long as Client fails to pay when due any invoice issued by the Company or any affiliate of it to Client or any affiliate or subsidiary of Client together with interest and penalties, if any, accrued thereon.

The Company disclaims any and all responsibility or liability arising out of or in connection with e-mail transmissions of such information. Client understands and agrees that the Company is neither an insurer nor a guarantor, that the Company does not take the place of Client 8 or any designer, manufacturer, agent, buyer, distributor or transportation or shipping company, and that the Company disclaims all liability in such capacities. Client further understands that if it seeks assurance against loss or damage, it should obtain appropriate insurance.

9. Client agrees that the Company, by providing the services, does not take the place of Client nor any third party, nor does the Company release them from any of their obligations, nor does the Company otherwise assume, abridge, abrogate or undertake to discharge any duty of any third party to Client or any duty of Client or any third party to any other third party, and Client will not release any third party from its obligations and duties with respect to the tested goods.

10. Client shall, on a timely basis, (a) provide adequate instructions to the Company in order to enable the Company to perform properly its services, (b) provide, or cause Client's suppliers and contractors to provide, the Company with all documents necessary to enable the Company to perform its services. (c) furnish the Company with all relevant information regarding Client's intended use and purposes of the tested goods, (d) advise the Company of essential dates and deadlines relevant to the tested goods and (e) fully exercise all rights and remedies available to Client against third parties in respect of the tested goods.

11. The Company shall undertake due care and ordinary skill in the performance of its services to Client, and the Company shall accept responsibility only were such skill has not been exercised and, even in such event, only to the extent of the limitation of liability set forth herein

12. If Client desires to assert a claim arising from or relating to (i) the performance, purported performance or non-performance of any services by the Company or (ii) the sale, resale, manufacture, distribution or use of any tested goods, it must submit that claim to the Company in a writing that sets forth with particularity the basis for such claim within 60 days from discovery of the potential claim and not more than six months after the date of issuance of the Test Report to Client. Client waives any and all such claims including, without limitation, claims that the Test Report is inaccurate, incomplete or misleading or that additional or different testing is required, unless and then only to the extent that Client submits a written claim to the Company within both such time periods.

13. CLIENT SHALL, EXCEPT TO THE EXTENT OF COMPANY'S LIABILITY TO CLIENT HEREUNDER (WHICH IN NO EVENT SHALL EXCEED THE LIMITATION OF LIABILITY HEREIN), HOLD HARMLESS AND INDEMNIFY THE COMPANY, ITS AFFILIATES AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, AGENTS AND SUBCONTRACTORS AGAINST ALL ACTUAL OR ALLEGED THIRD PARTY CLAIMS FOR LOSS, DAMAGE OR EXPENSE OF WHATSOEVER NATURE AND HOWSOEVER ARISING FROM OR

Issue No.

Reason for change

Date Issued

1 **Original Release** February 25, 2016



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RELATING TO (i) THE PERFORMANCE, PURPORTED PERFORMANCE OR NON-PERFORMANCE OF ANY SERVICES BY THE COMPANY OR (ii) THE SALE, RESALE, MANUFACTURE, DISTRIBUTION OR USE OF ANY TESTED GOODS.

14. EXCEPT AS MAY OTHERWISE BE EXPRESSLY AGREED TO IN WRITING BY THE COMPANY AND NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN OR IN ANY TEST REPORT, NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, IS MADE. 15. (A) IN NO EVENT WHATSOEVER SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL, INCIDENTAL, EXEMPLARY OR PUNITIVE DAMAGES IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE TEST REPORT OR THE SERVICES PROVIDED BY THE COMPANY HEREUNDER, INCLUDING WITHOUT LIMITATION LOSS OF OR DAMAGE TO PROPERTY; LOSS OF INCOME, PROFIT OR USE; OR ANY CLAIMS OR DEMANDS MADE AGAINST CLIENT OR ANY OTHER PERSON BY ANY THIRD PARTY IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE SERVICES PROVIDED BY THE COMPANY HEREUNDER, INCLUDING WITHOUT FILL OR ANY OTHER PERSON BY ANY THIRD PARTY IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE SERVICES PROVIDED BY THE COMPANY HEREUNDER.

(B)NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN, AND IN RECOGNITION OF THE RELATIVE RISKS AND BENEFITS TO CLIENT AND THE COMPANY ASSOCIATED WITH THE TESTING SERVICES CONTEMPLATED HEREBY, THE RISKS HAVE BEEN ALLOCATED SUCH THAT UNDER NO CIRCUMSTANCES WHATSOEVER SHALL THE LIABILITY OF THE COMPANY TO CLIENT OR ANY THIRD PARTY IN RESPECT OF ANY CLAIM FOR LOSS, DAMAGE OR EXPENSE, OF WHATSOEVER NATURE OR MAGNITUDE, AND HOWSOEVER ARISING, EXCEED AN AMOUNT EQUAL TO FIVE (5) TIMES THE AMOUNT OF THE FEES PAID TO THE COMPANY FOR THE SPECIFIC SERVICES WHICH GAVE RISE TO SUCH CLAIM OR U.S.\$10,000, WHICHEVER IS THE LESSER AMOUNT.

16. The Company shall not be liable for any loss or damage resulting from any delay or failure in performance of its obligations hereunder resulting directly or indirectly from any event of force majeure or any event outside the control of the Company. If any such event occurs, the Company may immediately cancel or suspend its performance hereunder without incurring any liability whatsoever to Client.

17. Company's services, including these Conditions, shall be governed by, and construed in accordance with, the local laws of the country where the Company performs the tests or, in the case of tests performed in the United States of America, the laws of Massachusetts without regard to conflicts of laws principles. If any aspect(s) of these Conditions is found to be illegal or unenforceable, the validity, legality and enforceability of all remaining aspects of these Conditions shall not in any way be affected or impaired thereby. Any proceeding related to the subject matter hereof shall be brought, if at all, in the courts of the country where the Company performs the tests or, in the case of tests performed in the United States of America, in the courts of Massachusetts. Client waives the right to interpose any counterclaim or setoffs of any nature in any litigation arising hereunder.

The complete list of the Approved Subcontractors Curtis-Straus may use to delegate the performance of work can be provided upon request. Rev.160009121(2)_#684340 v14CS

Issue No. 1 Reason for change Original Release Date Issued February 25, 2016



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