TEST SYSTEMS, Inc. MIL-STD-1553B RT VALIDATION TEST REPORT By: TEST SYSTEMS, Inc.	BVL12.DAT
CUSTOMER:	TEST STARTED:
 Microsemi SOC Corp. 3870 N. First Street	Nov. 13, 2013
San Jose, CA 95134	TEST COMPLETED:
	Nov. 13, 2013

UNIT UNDER TEST IDENTIFICATION:

CORE1553BRT v4.0.004 running Verilog at 12 MHz (BVL12) Tested on SF2-CORE1553-DB (DVP-101-000404-001) Board REV-A and M2GL\M2S-EVAL-KIT REV-C (DVP-102-000402-001 RevC) using Aeroflex ACT 4453-001-5 Transceiver and Holt PM-DB2744 Transformers

SUMMARY OF TEST RESULT	S: A-Bus	B-Bus	
			įį
Electrical:	Passed	Passed	Ï
Required Protocol	: Passed	Passed	ji
Optional Protocol	: Passed	Passed	Ï
Noise Rejection:	Passed	Passed	Ï
			Ï

CERTIFICATE OF COMPLIANCE:

TEST SYSTEMS, Inc., certifies that this MIL-STD-1553B REMOTE TERMINAL VALIDATION TEST REPORT provides the results of the RT Validation Testing performed on November 13, 2013, in Phoenix, AZ, for Microsemi SOC. TEST SYSTEMS, Inc., further certifies that this testing was in accordance with the RT VALIDATION TEST PROCEDURE dated 06-03-96 and complies with the RT Validation Test Plan (MIL-HDBK-1553 Appendix A) with the exceptions noted on page 2.

Leroy Earhart Date

TEST SYSTEMS, Inc. 217 W. Palmaire Phoenix, AZ 85021 602/861-1010

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TEST	SYSTEMS, Inc.	MIL-STD-1553B	RT VALIDATION	TEST REPORT	BV	L12.DAT
By:	TEST SYSTEMS	, Inc.			11/18/13	(13:55:22)
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EXCEPTIONS TO THE RT VALIDATION TEST PLAN:

- 1. Step 6 of Reset remote terminal (5.2.1.5.3) is changed to repeat step 4 rather than step 5. (Error in Test Plan.)
- 2. Frequency Stability (5.1.1.10) and Terminal Fail-Safe (5.2.1.3.7) tests were not run.
- 3. Not all commands which cause the BUSY bit to be set are recorded for every test. This can be impractical in tests where 10,000 iterations are performed because of the volume of information that would be generated. Rather than recording each scenario in which the BUSY bit is set, this report provides a count of the messages in the scenarios which have the BUSY bit set.

||TEST COMMENTS:

Remote Terminal Address and Status bits were set using switches on the test board.

- 5.1.1.3 Zero Crossing An additional test was run off-line to measure the time of the first half sync from +3.0 volts to -3.0 volts. The nominal time is 1500 ns. Bus A 1514 ns; Bus B 1514 ns.
- 5.1.2.3 Input Impedance magnitude measurements recorded as 9999 ohms are actually 9999 ohms or greater.
- 5.3 Noise Rejection passed on Bus A with 165 mv of noise and passed on Bus B with 170 mv of noise (25 mv and 30 mv more than required).

Protocol in this report was run with the illegalization shown on pages 4 and 5 implemented external to the core. This illegalization was done to demonstrate external illegalization capability of the core. Protocol was rerun off-line with no illegalization and passed on both Buses.

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	TEST	SYSTEMS,	Inc.	MIL-STD	-1553B	RT	VALIDATION	TEST	REPORT	B7	/L12.DAT
	By:	TEST SY	STEMS	, Inc.						11/18/13	(13:55:22)
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NOTE:

Command words are expressed in four fields with 5 bits in the first, third and fourth fields and 1 bit in the second field. Status words are expressed in four fields with 5 bits in the first and fourth fields and 3 bits in the second and third fields. Each field is given in decimal.

||TEST PERSONNEL:

Leroy Earhart Eugene O'Rourke TSI Microsemi

EQUIPMENT LIST:

	MANUFACTURER	CALIBRATION
EQUIPMENT TYPE	MODEL NO./SERIAL NO.	Date Done Date Due
1553 BUS TESTER *	 TSI 122 / 8804111	N/A
Oscilloscope	 MSOX3054A/MY52010665	01/27/12 01/27/14
Differential Probe	AG N2791A / PH49270334	
True RMS Voltmeter	 HP 3400A / 1218A27635	04/08/13 04/08/15
Impedance Analyzer	 HP 4192A /2830J06227	04/08/13 04/08/15
Function Generator	 Tenma 72-5015/ 8981068	
Connection Panel	TSI 0100 / 900101	 N/A
	1	i

^{*} The 1553 BUS TESTER was modified by installing a single board computer and the following three TSI cards inside the chassis: PC/AT PARALLEL I/O CARD, MANCHESTER CARD & 1553 NOISE GENERATOR CARD

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	TIME:	15:55:52	3 of 26	Į
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TEST SYSTEMS, Inc. MIL-STD-1553B RT VALIDATION TEST REPORT BVL12.DAT 11/18/13 (13:55:22) TEST SYSTEMS, Inc. Ву: Valid, Legal Non-Broadcast Commands (if not marked by '-') Transmit (T/R=1) Word Count Field Receive (T/R=0) Word Count Field 111111111122222222233 111111111122222222233 SA 01234567890123456789012345678901 SA 01234567890123456789012345678901 0 -----0 -12345678-----6-89------1 01234567890123456789012345678901 1 01234567890123456789012345678901 2 01234567890123456789012345678901 2 01234567890123456789012345678901 3 01234567890123456789012345678901 3 01234567890123456789012345678901 4 01234567890123456789012345678901 4 01234567890123456789012345678901 5 01234567890123456789012345678901 5 01234567890123456789012345678901 6 01234567890123456789012345678901 6 01234567890123456789012345678901 7 01234567890123456789012345678901 7 01234567890123456789012345678901 8 01234567890123456789012345678901 8 01234567890123456789012345678901 9 01234567890123456789012345678901 9 01234567890123456789012345678901 10 01234567890123456789012345678901 10 01234567890123456789012345678901 11 01234567890123456789012345678901 11 01234567890123456789012345678901 12 01234567890123456789012345678901 12 01234567890123456789012345678901 13 01234567890123456789012345678901 13 01234567890123456789012345678901 14 01234567890123456789012345678901 14 01234567890123456789012345678901 15 01234567890123456789012345678901 15 01234567890123456789012345678901 16 01234567890123456789012345678901 16 01234567890123456789012345678901 17 01234567890123456789012345678901 17 01234567890123456789012345678901 18 01234567890123456789012345678901 18 01234567890123456789012345678901 19 01234567890123456789012345678901 19 01234567890123456789012345678901 20 01234567890123456789012345678901 20 01234567890123456789012345678901 21 01234567890123456789012345678901 21 01234567890123456789012345678901 22 01234567890123456789012345678901 22 01234567890123456789012345678901 23 01234567890123456789012345678901 23 01234567890123456789012345678901 24 01234567890123456789012345678901 24 01234567890123456789012345678901 25 01234567890123456789012345678901 26 01234567890123456789012345678901 26 -----27 01234567890-----**2**7 ----567890123456**---**----28 01234567890123456789012345678901 28 01234567890123456789012345678901 29 01234567890123456789012345678901 29 01234567890123456789012345678901 30 01234567890123456789012345678901 30 01234567890123456789012345678901 31 -----31 -12345678-----6-89-----Illegal Command Detection Implemented: Broadcast Implemented: Data Wrap-Around Receive SA: 30 Transmit SA: 30 Terminal Address Used: Coupling Used: Transformer Implemented Status bits: ME SRB BCR BUSY SF TF Implemented Non-Broadcast Mode Codes: 1,2,3,4,5,6,7,8,16,17,18,19 Implemented Broadcast Mode Codes: None. SUBTITLE: Configuration Used DATE: 18 Nov 2013 | Page: Non-Broadcast Commands TIME: 15:55:52 4 of 26

TEST By:	SYSTEMS, Inc. MIL-ST	rD-1553B RT VA	LIDATION	TEST	REPORT	!	VL12.DAT (13:55:22)
		Commondo (if		مما لم	- 1 1	, ,	
Vċ	ilid, Legal Broadcast	Commands (II	not mark	rea b	7 '-')		
	Receive (T/R=0) Word	Count Field	Tra	nsmi	T/R=1) Word Co	unt Field
	1111111111	2222222233			1111:	111111222	22222233
SA	01234567890123456789	012345678901	SA 01	2345	57890123	456789012	345678901
-0			0	-3			
1	01234567890123456789	012345678901	1				
2	01234567890123456789	012345678901	2		.		
3	01234567890123456789	012345678901	3				
4	01234567890123456789	012345678901	4				
5	01234567890123456789	012345678901	5				
6	01234567890123456789	012345678901	6				
7	01234567890123456789	012345678901	7				
8	01234567890123456789	012345678901	8	· · · · ·			
9	01234567890123456789	012345678901	9				
10	01234567890123456789	012345678901	10				
11	01234567890123456789	012345678901	11				
12	01234567890123456789		12				
	01234567890123456789		13				
	01234567890123456789		1.4				
	01234567890123456789		15				
	01234567890123456789		16				
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	01234567890123456789		19				
	01234567890123456789		20				·
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22							
			. 22				
23	01234567890123456789		23				
24	01234567890123456789	01143456/8901	24				
25	0100456900010045690	010345670004	25				
	01234567890123456789		26 -				
	01234567890						
	01234567890123456789						
	01234567890123456789						
	01234567890123456789						
31			31 -	3			
Te	st STAT abbreviation	definitions:					
	RT: Test Aborted	BCR: Broadca	st Recei	ved	BRTF: B	rdest Rev	d+TermFlag
BU.	SY: Busy Bit	CS: Clear S	tatus	-	DBA: D	ynamic Bu	is Accepted
]	DC: Don't Care	EF: Error F	ound				nhibited
IN	VL: Invalid Test	MBR: Msg Err	+Brdcst	Rcvd	MBRT: M	E+TF+BCR	
1	ME: Message Error	MTF: MsgErr+	TermFlag	į	NR: N	o Respons	se.
NR	un: Not Run	RIF: Respond	In Form	ĺ	SF: S	ubsystem	Flag
	SR: Service Request	TF: Termina	ıl Flag	j		imed Out	_
	VR: Valid Response	İ	_	i			
SUB	TITLE: Configuration	n Used		DATE	 . 18 N	lov 2013	Page:
	Broadcast Commands			TIME		55:52	5 of 26

Ref. Section	Test Description (Xformr Coupled)	Limits	Units	B U S Meas.	A STAT	B U S Meas.	B STA
5.1.1	OUTPUT CHARACTERISTICS		1 1				
5.1.1.1	OUTPUT AMPLITUDE Max	18.0-27.0	Vpp	19.81	Pass	19.88	Pas.
	Min	18.0-27.0	Vpp	19.56	Pass	19.56	Pas
5.1.1.2	OUTPUT RISE TIME-Sync	100- 300	ns	204	Pass	201	Pas
5.1.1.2	OUTPUT RISE TIME-Data	100- 300	ns	204	Pass	201	Pas
5.1.1.2	OUTPUT FALL TIME-Sync	100- 300	ns	204	Pass	195	Pas
5.1.1.2	OUTPUT FALL TIME-Data	100- 300	ns	205	Pass	200	Pas
5.1.1.3	ZERO CROSSING STAB.						
	500ns Tzcp	475- 525	ns	498	Pass	494	Pas
	1000ns Tzcp	975-1025	ns	1003	Pass	1004	Pas
	1500ns Tzcp	1475-1525	ns	1496	Pass	1497	Pas
	2000ns Tzcp	1975-2025	ns	1997	Pass	1997	Pas
	500ns Tzcn	475- 525	ns	502	Pass	496	Pas
	1000ns Tzcn	975-1025	ns	1005	Pass	1006	Pas
	1500ns Tzcn	1475-1525	ns	1507	Pass	1507	Pas
	2000ns Tzcn	1975-2025	ns	2005	Pass	2005	Pas
5.1.1.4	DISTORTION, OVERSHOOT AND RINGING	! ≤ ± 900	mVp	50	 Pass	50	 Pas
	İ		į " į		j i		İ
5.1.1.5	OUTPUT SYMMETRY						
	(0000)	≤ ± 250	mVp	-53	Pass	9	Pas
	(5555)	≤ <u>+</u> 250	mVp	-53	Pass	10	Pas
	(7FFF)	≤ ± 250	mVp	-31	Pass	20	Pas
	(8000)	≤ ± 250	mVp	-39	Pass	13	Pas
	(AAAA)	≤ ± 250	qVm	-46	Pass	11	Pas
	(FFFF)	≤ ± 250	mVp	-32	Pass	18	Pas
5.1.1.6	OUTPUT NOISE						
	with power on	s 14	mVrms	8	Pass	8	Pas
	with power off	≤ 14 	mVrms	1	Pass	1	Pas
5.1.1.7	OUTPUT ISOLATION	 ≥ 45	db	72	 Pass	72	 Pas
	Active Bus	18.0-27.0	Vpp	19.81	Pass	19.88	Pas
	Inactive Bus	 	mVpp	5	Pass	5	Pas
5.1.1.8.1	POWER ON/OFF NOISE	! !					
	Power Up Amplitude	≤ ± 250	mVp		Pass	200	Pas
	Pulse Width	•	us	.1	[i	.1	
	Power Down Amplitude Pulse Width	•	mVp us	 .1	Pass	50 .1	Pas
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5.1.1.8.2	POWER ON RESPONSE	protocol			Pass	 	Pas

ef. Section	Test Description (Xformr Coupled)	Limits	Units	B U S Meas.	A STAT	B U S Meas.	B STA
.1.1.9	TERMINAL RESPONSE TIME						
. 1 . 1 . 3	Transmit	4.0-12.0	l us	6 48	Pass	6,47	l Das
	Receive	4.0-12.0	us		Pass		!
	RT-UUT	4.0-12.0	us		Pass	6.30	
	Mode Command	4.0-12.0	us		Pass	6.41	
.1.1.10	 FREQUENCY STABILITY		1 		 		
	Min. Frequency		kHz		i i		į
	Max. Frequency		kHz		i i		
	Avg. Frequency		kHz		į į		
.1.2	INPUT CHARACTERISTICS				[
.1.2.1.1	ZERO CROSSING				1 1		
	DISTORTION						1
	Min. Deviation	≤ -150	ns	-179	Pass	-178	Рa
	Max. Deviation	≥ 150	ns	167	Pass	173	Pa
	Plus 150 nsec	protocol			Pass		Pa
	Minus 150 nsec	protocol	'	<u> </u> 	Pass		Pa
.1.2.1.2	AMPLITUDE VARIATIONS			 .			İ
	1st CS threshold	200- 860	mVpp	605	Pass	580	Pa
	1st NR threshold	200- 860	mVpp	605 	Pass	580 I	Pa
.1.2.1.3	RISE AND FALL TIME]	!		
1.2.1.3.1	TRAPEZOIDAL	protocol			Pass		Рa
.1.2.1.3.2	SINUSOIDAL	protocol		 	Pass		Pa
.1.2.2	COMMON MODE REJECTION	_					
	+10 volt	protocol		,	Pass	!	Pa
	-10 volt	protocol			Pass		Pa
	±10 volt	protocol			Pass	 	Pa
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Ref. Section	Test Description (Xformr Coupled)	Limits	Units 	B U S Meas.	A STAT	B U S Meas.	B STAT
5.1.2.3	INPUT IMPEDANCE	<u> </u>					
	75 kHz Power ON Phase Angle	 ≥ 1000 	ohms degs	9999 4 6	 Pass 	9999 42	 Pass
	100 kHz Power ON Phase Angle	 ≥ 1000 	ohms degs	9999 18	Pass	9999 9	 Pass
	250 kHz Power ON Phase Angle	≥ 1000	ohms degs	8155 -62	Pass	7435 -66	 Pass
	500 kHz Power ON Phase Angle	 ≥ 1000	ohms degs	3753 -77	 Pass 	3432 -79	 Pas:
	1.0 MHz Power ON Phase Angle	 ≥ 1000 	ohms	1846 -83	Pass	1690 -84	 Pas:
	75 kHz Power OFF Phase Angle	 ≥ 1000	ohms degs	9999 38	Pass		 Pas:
	100 kHz Power OFF Phase Angle	 ≥ 1000	ohms degs	9999 5	Pass		 Pas:
	250 kHz Power OFF Phase Angle	 ≥ 1000	ohms degs	7018 -65	 Pass 		 Pas:
	500 kHz Power OFF Phase Angle	≥ 1000	ohms degs	3280 -78	 Pass 		 Pas;
	1.0 MHz Power OFF Phase Angle	1 ≥ 1000 	ohms degs	1616 -84	 Pass 		 Pas:

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Reference Section	Test De	_		cmt)	BU Command	JSA Response	STAT	BU Command	ISB Response	STA
		_		<u>.</u>						
5.2.1.1 5.2.1.1.1	Response to RT Response Non-Bro	ase to	Comm	ands				 		
	 Valid,	Legal	Comm	ands] 3-0-01-00	3.0.0 00	l CS	3-0-01-00	3-0-0 00	i CS
	A: (1815/	0/	0)	3-0-01-00	3-0-0-00	CS	3-0-01-00	3-0-0-00	CS
	B: (1815/	0/	0)	3-1-00-18	3-0-0-00	CS 	3-1-00-18	3-0-0-00	CS
	Valid,	Illeg	al Co	mmands	3-0-01-00	3-0-0-00	 cs	3-0-01 00	3-0-0-00	lcs
	A: (105/	0/	0)	3.0.25-00		ME	3-0 25-00		ME
	₿:(105/	0/	0)	3-1-00-18		ME	3.1-00-18		ME
	Invali	d Comm	ands		3-0-01-00	3-0-0-00	 cs	3-0-01-00	3-0-9-00	cs
	A: (61440/	0/	C)	0.0.00.00		NR	0.0.00.00		NR
	B: (61440/	0/	0)	3-1-00-18	3-0-0-00	CS	: :	3-0-0-00	
	Legal	Mode C	Ćπmari	đe	2 0 01 00	3.0 0.00	cs	3-0-01-00		l CS
	A: (16/	0/	0)	:	3-0-0-00	CS	3-0-02-00		CS
	B: (16/	0/	0)	;	3-0-0 00	CS ·	3-1-00-15		CS
	Illega	l Mode	Comm	ands	3-0-01-00	30-0-00	cs	3-0-01-00	3-0-0-00	cs
	A: (6/	0/	0)	3-0-00-20	3-4-0-00	ME	1 :	3-4-0-00	ME
	B: (6/	0/	0)	3-1-00-18	:	ME	1	3-4-0-00	ME
	Undefi	ned Mo	de Co	mmands	3-0-01-00	3.0-0-00	CS	3-0-01-00	3-0-0-00	cs
	A: (98/	0/	0)	3-0-00-00	;	ME	3-0-00-00	3-4-0-00	ME
	B: (98/	0/	0)	:	!	ME	3-1-00-18	!	ME
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||TEST SYSTEMS, Inc. MIL-STD-1553B RT VALIDATION TEST REPORT BVL12.DAT TEST SYSTEMS, Inc. 11/18/13 (13:55:22) By: BUS A B U S B Reference Test Description Command Response STAT Command Response STAT Section Bus: (rum cnt/ errors/ busy cnt) Response to Command Words ||5.2.1.1|RT Response to Commands 5.2.1.1.1 Broadcast Commands Valid, Legal Commands 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS A: (907/ 0/ 0) 31-0-01-00 --- NR |31-0-01-00| - - - | NR 3-1-00-18 3-0-0-16 BCR B: (907/ 0/ 3-1-00-18 3-0-0-16 BCR Valid, Illegal Commands | 3.0-01-00 | 3.0.0 00 | CS 3-0-01-00 3-0-0-00 CS A: (1013/ 0/ 0) 31.-0-25-00 NR 31-0-25-00 3-1-00-18 3-4-0-16 MBR 3-1-00-18 | 3-4-0-16 | MBR || B: (1.01.3/ 0/ Invalid Commands N/AN/A∥ N/AN/A N/A N/A|| Legal Mode Commands N/A N/A|| N/A N/A|| N/A N/A| Illegal Mode Commands 3-0-01-00 3-0-0-00 CS 3-0-01-00 | 3 0.0-00 | CS A: (0/ 31-0-00-17 - - -NR 31-0-00-17 - · · NRBr (28/ 0/ 0) 3-1-00-18 3-4-0-16 MBR 3-1-00-18 3-4-0-16 MBR Undefined Mode Commands 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS A: (98/ C) 31-0-00-00 - - - -NR NR 31-0-00-00 - - -B: (98/ 3-1-00-18 3-4-0-16 MBR 3-1-00-18 3-4-0-16 MBR

SUBTITLE: Required Protocol Tests DATE: 18 Nov 2013 Page:

5.2.1.1. Response to Command Words | TIME: 15:55:52 | 10 of 26

TEST SYSTEMS, Inc. MIL-STD-1553B RT VALIDATION TEST REPORT BVL12.DAT TEST SYSTEMS, Inc. 11/18/13 (13:55:22) By: Reference Test Description BUSA BUSB Section Command Response STAT Bus: (run cnt/ errors/ busy cnt) Command Response STAT ||5.2.1.1 Response to Command Words RT-RT Response to ||5.2.1.1.2 Command Words Non-Broadcast Receive Commands Valid, Legal Commands 3.0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS A: (907/ 3.0.01.01 3.0-0-00 CS 0) 3-0-01-01 3-0-0-00 cs B: (907/ 4:1 01:01 4-0-0-00 CS 4-1-01-01 4 0:0:00 CS 3-1-00-18 3-0-0-00 CS 3-1,-00-18 3-0-0-00 CS Valid, Illegal Commands 3-0-01-00 3-C-0-00 CS 3-0-01-00 3-0-0-00 CS 53/ 0/ 3-0-25-01 3-4-0-00 ME 3-0-25-01 3-4-0-00 ME B: (53/ 0) 4-1-01-01 4-0-0-08 CS 4-1-01-01 4-0-0 00 CS 3-1-00-18 3-4-0-00 ME 3 1.00-18 3-4-0-00 ME Invalid Commands 3-0-01-00 3.0.0.00 CS 3-0-01-00 3-0-0-00 CS A: (30720/ 0-0-00-00 - - -NR 0-0-00-00 Bi(30720/ 0/ 2-1-01-00 2-0-0-00 CS 2-1-01-00 2-0 0 0 CS D) 3-1-00-18 3-0-0-00 CS 3-1-00-18 3-0-0 00 CS Legal Mode Commands 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-c-0-00 CS 2/ 0/ 3-0-00-17 3-0-0-00 CS 3-0-00-17 3-0-0-00 CS B: (2/ 4-1-01-01 4-0-0-00 CS 0/ 00 4-1-01-01 4-0-0-00 CS 3-1-00-18 3-0-0-00 CS 3-1-00 18 3-0-0-00 CS Illegal Mode Commands 3 0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS A: (4/ 0/ 3-0-00-20 3-4-0-00 ME 3-0-00-20 3-4-0 CO ME 0) B: (4/ 0/ 0) 4-1-01-01 4-0-0-00 CS 4-1-01-01 4-0:0:00 CS 3-1-00-18 3-4-0-00 ME 3-1-00-18 3-4-0-00 ME Undefined Mode Commands 3-0-01-00 3.0-0-00 CS 3-0-01 00 3-0-0-00 CS A: (58/ 0/ 0) 3-0-00-00 3-4-0 00 ME 3-0-00-00 3.4-0-00 ME B: (58/ 4-1-01-00 4-0-0-00 CS 4-1-01-00 4-0-0-00 CS 3-1-00-18 3-4 0-00 ME 3-1-co-18 3-4-c-90 ME SUBTITLE: Required Protocol Tests DATE: 18 Nov 2013 | Page: 5.2.1.1. Response to Command Words TIME: 15:55:52 11 of 26

TEST SYSTEMS, Inc. MIL-STD-1553B RT VALIDATION TEST REPORT BVL12.DAT TEST SYSTEMS, Inc. 11/18/13 (13:55:22) || Reference Test Description BUSA B U S B Section Bus: (run cnt/ errors/ busy cnt) Command Response STAT Command Response STAT 5.2.1.1 Response to Command Words 5.2.1.1.2 RT-RT Response to Command Words Non-Broadcast Transmit Commands Valid, Legal Commands 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS 908/ A: (0/ o١ 4-0-01-01 - - -NR 4-0-01-01 - - -NR B: (908/ 3-1-01-01 3-0-0-00 CS 3-1-01-01 3-0-0-00 CS 3-1-00-18 3-0-0-00 CS 3-1-00-18 3-0-0-00 CS Valid, Illegal Commands 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS 4-0-01-01 - - - -A: (52/ 0/ NR 4-0-01-01 - . NR B: (52/ 0/ 0) 3-1-26-01 3-4-0-00 ME 3-1-26-01 3-4-0 co ME 3-1-00-18 3-4-0-00 ME 3-1-00-18 3-4-0-00 ME Invalid Commands 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0 00 CS A: (30720/ 0/ 2 · 0 · 01 - 00 | - - -NR 0) 2-0-01-00 - -NR B: (30720/ 0.1.00-00 - - -0/ NR 0-1-00-00 - - -NR 3-1-00-18 3-0-0-00 CS 3-1-00-18 3-0-0-00 CS Legal Mode Commands 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS A: (0/ 1.4/ 4-0-01-00 - - -NR4-0-01-00 NR B: (14/ 0/ 0) 3-1-00-01 3-0-0-00 CS 3-1-00-01 3-0-0-00 CS 3-1-00-18 3-0-0 00 CS 3-1-00-18 3-0-0-00 CS Illegal Mode Commands 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0 00 CS Az (2/ 4.0.01.00 - - -NR 4-0-01-00 - - -INR 3-1-00-00 3-4-0-00 ME В:(2/ 3-1-00-00 3-4-0-00 ME 0/ 0) 3-1-00-18 3-4-0-00 ME 3 1.00-18 3-4-0-00 ME Undefined Mode Commands 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS A: (40/ 0/ 0) 4-0-01-00 NR 4-0-01-00 - - -NR B:(40/ 3-1-00-09 3-4-0-00 ME 0/ 0) 3-1-00-09 3-4-0-00 ME 3-1-00-18 3-4-0-00 ME 3-1-00-18 3-4-0-00 ME SUBTITLE: Required Protocol Tests DATE: 18 Nov 2013 | Page: 5.2.1.1. Response to Command Words TIME: 15:55:52 12 of 26

Reference	Test De	_			BUSA Command Response STAT			BUSB		
Section	Bus: (rum	mt/error	s/ busy	ent)	Command	Response	STAT	Connand	Response	
5.2.1.1	 Response to	n Comm	and W	lords						
5.2.1.1.2	RT-RT Res			.or ab						
	Command	_			j j		İ			
	Broadca		ceive	:						
	Comma	ands								
	Valid,	Legal	Comm	ands	3-0-01-00	3-0-0-00	CS	3-0-01-0C	 3-0-0-00	
	A: (907/	0/	0)	31-0-01-01		NR	31-0-01-01	,	
	B: (907/	0/	0)	! !	0.0.0.00		0-1-01-01	:	
	 				3-1-00-18	3-0-0-16	BCR 	3 ·1-·00-18	3-0-0-16 	
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	Valid,	_			3-0-01-00		:	3-0-01-00	!	
	A: (B: (53/ 53/	0/ C/	0) 0)	31.0.25.01	 0-0 0-00	NR CS	31-0-25-01	!	
	1	22)	۵,	0,	!	3-4-0 16	!	3-1-00-18	!	
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	 Invali	d Comm	ands				N/A	 	<u> </u> 	
	j				1		N/A	1		
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	Legal 1	Mode C	ommar	nas		 	N/A N/A	•		
						l 	N/A	•	! 	
							N/A	•	 	
]	[1	
	Illega				3-0-0100	1	CS	3-0-01-00		
	A: (6/	0/	0)	31-0-00-17	1	NR	31-0-00-17	1	
	3:(6/	0/	0)	0-1-01-01	:	:	0-1-01-01	1	
					3-1-00-18	3-4-0-16	Lubk	3-1-00-1,5	4.0-1 د 	
	 Undefi	ned Mo	de C	ommands	3-0-01-00	3-0-0-00	 cs	3-0-01-00	3-0-0-0	
	A: (58/	0/	0)	31-0-00-00	4	NR	31-0-00-00	1	
	В: (58/	0/	0)	!	0-0-0-00		0-1-01-00	1	
					3-1-00-18	3-4-0-16	MBR	3-1-00-18	3-4-0-1	
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	S, Inc. MIL-STD-1553B RT VALID. SYSTEMS, Inc.	ATION T	EST REP		BVL12.DAT 11/18/13 (13:55:22)			
Reference Section	Test Description Bus: (rum cnt/ errors/ busy cnt)	B N	3 U S A		B (STA	
5.2.1.1 5.2.1.1.2	Response to Command Words RT-RT Response to Command Words Broadcast Transmit Commands							
	Valid, Legal Commands 			N/A N/A N/A N/A	. j . j		N/ N/ N/ N/	
	Valid, Illegal Commands A: (960/ 0/ 0) B: (960/ 0/ 0)	0-0-01-01 31-1-01-01		CS NR NR NR MBR	3.0-01-00 0.0 01-01 31-1-01-01 3-1-00-18		 CS NR NR MBR	
	Invalid Commands	 		N/A N/A N/A N/A	λ 		 N/ N/ N/ N/	
	Legal Mode Commands			N/F N/F N/F N/F			N/ N/ N/ N/	
	Illegal Mode Commands A: (22/ 0/ 0) B: (22/ 0/ 0)	3-0-01-00 0-0-01-00 31-1-00-00 3-1-00-18		CS NR NR NR MBR	3-0-01-00 0-0-01-00 31-1-00-00 3-1-00-18		CS NR NR NR MBF	
	Undefined Mode Commands A: (40/ 0/ 0) B: (40/ 0/ 0)	3-0-01.000 0-0-01-00 31-1-00-09 3-1-00-18		CS NR NR MBR	3.0-01-00 0.0-01-00 31-1 00-09 3-1-00-18		CS NR NR MBF	
SUBTITLE:	Required Protocol Tests Response to Command Word		ATE:	18 No	ov 2013	 Page:		

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TEST SYSTEMS, Inc. MIL-STD-1553B RT VALIDATION TEST REPORT BVL12.DAT TEST SYSTEMS, Inc. By: 11/18/13 (13:55:22) Reference Test Description BUSA BUSB Section Bus: (run cnt/ errors/ busy cnt) Response | STAT | Command Response STAT Conmand ||5.2.1.2 Intermessage Gap 5.2.1.2.1 Minimum Time BC-UUT Transfer 3-0-05-00 3-0-0 00 CS 3-0-05-00 3-0-0-00 CS A: (1000/ 0/ 3-0-01-00 3-0-0.00 ICS 3-0-01-00 3-0-0-00 CS 1000/ 07 B; (0) UUT-BC Transfer 3-1-02-00 3-0-0-00 CS 3-1-02-00 3-0-0-00 CS A: (1000/ 07 3.0-01-00 3-0-0-00 CS 1cs 3-0 01 00 3-0-0-00 0) B: (1000/ 0/ UUT/RT Transfer 3-0-21:00 3:0:0:00 CS 3-0-21-00 3 0 0 0 00 CS 1000/ 4-1-01-00 4-0-0-00 CS 4-1-01-00 4-0-0-00 CS 3-0-01-00 3-0-0-00 CS B: (1000/ 0/ 0) 3-0-01-00 3-0-0-00 CS RT/UUT Transfer 25-0-01-00 25-0-0-00 DC 4-9-01-00 4-0-0-00 DC A; (|CS 1.000/ 0/ 3-1-24-00 3-0-0-00 3-1-24-00 3-0-0-00 Ics 3-0-01-00 3-0-0-00 CS B: (1000/ 0/ 3-0-01-00 3-0-0-00 CS Mode Command w/o data 3-1-00 01 3-0-0-00 CS 3-1-00-01 3-0-0-00 CS A: (3-0-01-00 3.0.0.00 CS 3-0-01-00 3-0-0-00 CS B. (1000/ Mode Command, CS 3-1-00-16 3-0-0-00 3-1-00-16 3-0-0-00 CS Transmit w/Data CS 3-0-01-00 3-0-0-00 3-0-01-00 3-0-0 00 A1 (1000/ 0/ Bt (1000/ 0/ Mode Command, 3.0.00-17 3-0-0-00 CS 3-0-00-17 3-0-0-00 CS Receive w/Data 3-0-01-00 3-0-0-00 CS 3-0-01:00 3-0-0-00 l Ç\$ A: (1000/ 0/ B: (1000/ 0/ Broadcast BC-UUT 31-0-00-00 NR NR 31-0-00-00 A: (1000/ 3-0-01-00 3-0-0-00 ÇŞ 3-0-01-00 3-0-0 00 cs B: (1000/ 07 0) Broadcast RT/UUT 31-0-01-30 . . -NR 31-0-01-30 NR A: (1000/ 3-1-30-30 3-0-0-00 CS 0/ C\$ 0) 3-1-30 30 3-0-0-00 B: (1000/ 3-0-01-00 3-0-000 CS 3-0-01-00 3-0-0-00 CS Broadcast UUT/RT 31-0-00-17 NR31-0-01-00 NR A: (1000/ 07 0-1-01-01 0-0-0-00 CS 2) 0 1-01-00 0-0-0-00 CS B: (1000/ 0/ 3-0-0-00 ÇŞ 3-0-01-00 3-0-01-00 3-0-0 00 CS Broadcast Mode Cmnd 31-1-00-01 NR 31-1-00-03 NR w/o data 3 0.01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS A: (1000/ B: / 1000/ 0) 0/ Broadcast Mode Cmnd 31-0-00-17 NR 31-1-00-01 NT. w/data 3-0-01-00 3-0 0-00 CS 3-0-01 00 3-0-0-00 CS A: (1000/ e) 0/ B: (1000/ 0/ 0) SUBTITLE: Required Protocol Tests DATE: 18 Nov 2013 Page: 5.2.1,2. Intermessage Gap TIME: 15:55:52 15 of 26

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Reference	Test Description	BUSA			ВТ		
Section	Bus: (nun cnt/ errors/ busy cnt)	Command	Response	STAT	Command	Response	STA
5.2.1.2	Intermessage Gap						1
5.2.1.2.2	Transmission Rate						: ∤
	Transmit-Transmit	3-1-06-00	3-0-0-00	CS	3-1-01-00	3-0-0-00	cs
	A: (19338/ 0/ 0)	: !	3-0-0-00		3-1-01-00		cs
į	B: (19318/ 0/ 0)	! !		cs	3-1 01-00		cs
į	, , , , , , , , , , , , , , , , , , , ,	: :	3-0-0-00	cs	3-1-01-00		cs
	Busy (usec)		0			0	
	Receive-Receive	3-0-10-00	3-0-0-00	CS	3-0-10-90	3-0-0-00	l les
i	A: (19330/ 0/ 0)	! !	3-0-0-00	l	! !	3-0-0-00	1
i	R: (19306/ 0/ 0)	!	3-0-0-00		!!!	3-0-0-00	!
i	3. (*2550)	3-0-11-00		cs	3-0-11-00		cs
İ	Busy (usec)	3 0 00	0		2 0 22 00	0	
					<u> </u>		İ
	Transmit-Receive	3-1-20-00	3-0-0-00	CS	3-1-20-00	3-0-0-00	CS
	A:(19314/ 0/ 0)	3-0-21-00	3-0-0-00	CS	3-0-21-00	3-0-0-00	CS
	B:(19338/ 0/ 0)		3-0-0-00		3-1-20-00	3-0-0-00	CS
		3-0-21-00	3-0-0-00	CS	3-0-21-00	3-0-0-00	CS
[Busy (usec)	<u> </u>	0	 	 	0	
5.2.1.3 [:	Error Injection	į	:	j 			ļ
5.2.1.3.1	Parity	1		 	1		
5.2.1.3.1.1	Transmit Command	1 2002 00 1	3-0-0-00	l Ics			l ac
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		1	3-0-0-00	!	3 -1 -06 -00		l CS
		3-1-00-02	3-0-0-00	0.5	3-1-60-62	3-6-8-00	-
5.2.1.3.1.2	Receive Command	3-0-01-00	3-0-0:00	cs	3-0-01-00	3-0-0-00	CS
		3-0-05-00		NR	3-0-05-00		NR
ļ		3-1-00-02	3-0-0-00	CS	3-1-00-02	3-0-0-00	CS
 	Receive Data Words	3-0-01-00	3-0-0-00	l cs	3.0.01-00	3-0-0-00	 as
	A: (32/ 0/ 0)	3-0-05-00	!	NR	3-0-05-00	·	NE
i	B: (32/ 0/ 0)		3-4-0-00	ME	-		ME
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TEST SYSTEMS, Inc. MIL-STD-1553B RT VALIDATION TEST REPORT BVL12.DAT TEST SYSTEMS, Inc. 11/18/13 (13:55:22) By: BUSA BUS B Reference Test Description Section Bus: (run ent/ errors/ busy ent) Command Response STAT Command Response | STAT | 5.2.1.3.2 Word Length CS 5.2.1.3.2.1 Transmit Command 3.0.01.00 3 0.0.00 3-0-01-00 3-0-0-00 cs A: (2/ 0/ 3 -1 06-00 NR 3-1-06-00 - - -NR 0) CS lcs B: (2/ 0/ 3 -1 -00 - 02 | 3 - 0 - 0 - 00 3-1-00-02 3-0-0-00 Receive Command [5,2,1,3,2,2] Short Receive commands 3-0-01-00 3-0-0-00 CS 3-0-01 00 3-0-0-00 CS 3-0-05-00 INR 3-0-05-00 NR 3-1-00-02 3-0 0 00 CS B: (2/ αZ 0) 3-1-00-02 3-0-0-00 C\$ Receive commands Long CS CS 3-0-01-00 3-0-0-00 3.0.01-00 3-0-0-00 NR A: (2/ 0/ 3-0-05-00 - - -3 -0 - 05 - 00 - - -NR B: (2/ 0/ 0) 3-1-00-02 3-4-0-00 ME 3-1-00-02 3-4-0-00 ME 5.2.1.3.2.3 Receive Data Words 3-0-01-00 3-0-0-00 CS 3-9-91-00 3-0-0-00 CS A: (126/ 3-0-05-00 - - -NR 3 -0 -05 -00 - - l NR 0) ME B:(126/ 0/ 0) 3-1-00-02 3-4-0-00 3-1-00 02 3-4-0-00 ME Bi-Phase Encoding 5.2.1.3.3 5.2.1.3.3.1 Transmit Command 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS A: (34/ 3-1-06-00 NR 3-1-06-00 - - .. NR B: (CS 34/ 07 0) 3-1-00-02 3-0-0-00 3-1-00-02 3-0-0-00 CS 5.2.1.3.3.2 Receive Command cs 3-0-01-00 3-0-0-00 3-0-01-00 3-0-0-00 CS A: (3-0-05-00¹ NR NR 34/ 3-0-05-00 В: (34/ 0/ 3-1-00-02 3-0-0-00 CS 3-1-00-02 3-0-0-00 CS ||5.2.1.3.3.3|Receive Data Words 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS A: (1088/ 3-0-05-00 NR 0) 3-0-05-00 NR B: (1088/ 0/ c) 3-1-00-02 3-4-0-00 ME 3-1-00-02 3-4 0 00 ME Sync Encoding 5.2.1.3.4 5.2.1.3.4.1 Transmit Command 3-0-01-00 3.0.0.00 CS 3-0-01-00 3-0-0 00 CS NR A: (5/ C/ 0) 3-1-06-00 3-1-06-00 - . . B: (5/ 0/ 3-1-00-02 3-0-0-00 CS 3-1-00-02 3-0-0-00 CS n) 15.2.1.3.4.2 Receive Command 3-0-01-00 3-0-0-00 lcs cs 3-0-01-00 3-0-0-00 3-0-05-00 - -.-NR NR A: (5/ 3-0-05 00 3-1-00-02 3-0-0-00 CS cs B: (5/ 0/ 0) 3-1-00-02 3 0.0.00 5.2.1.3.4.3 Receive Data Words CS CS 3-0-07-00 3-0 0-00 3-0-01-00 3-0-0-00 NR A: (160/ 0/ 3-0-05-00 _ _ . 3-0-05-00 ΝR 0) B: (160/ 0/ 0) 3-1-00-02 3-4-0 00 ME 3-1-00-02 3-4-0-00 ME SUBTITLE: Required Protocol Tests DATE: 18 Nov 2013 Page: 5.2.1.3.2. Word Length TIME: 17 of 26 15:55:52

	y: TEST SYSTEMS, Inc.						11/18/13 (13:55:22			
Reference	Test Description			BUSA			BUSB			
Section	Bus: (run cnt/ erro	rs/busy	cnt)	Command	Response	STAT	Command	Response	STAT	
İ										
5.2.1.3.5	Message Length						1			
5.2.1.3.5.1	Transmit Com	mand		3-0-07-00		CS	3-0-01-00		CS	
				3-1-06-00		NR	3 -1 -0600		NR	
				3-1-00-02	3-4-0-00	ME	3-1-00-02	3 4.0-00	ME	
ا 5.2.1.3.5.2	Receive Comm	and		3.0.01.00	3-0-0-00	l cs	3-0-01-00	3 0.0.00	 CS	
	A: (33/	0/	0)	3-0-05-00	1	NR	3-0-05-00		NR	
	B: (33/	0/	0)	3-1-00-02	!	ME	: :	3-4-0-00	1	
]	,		-,							
5.2.1.3.5.3	Receive Mode	Com	mand	3-0-01-00	3-0-0-00	cs	3-0-01-00	3-0-0-00	CS	
	A: (2/	0/	0) .	3 -0-00-17		NR	3-0-00-17		NR	
ļ	B: (2/	0/	0)	3-1-00-02	3-4-0-00	ME	3-1-00-02	3 -4-0-00	ME	
	Transmit Mod	le Coi	mmand	1 2 2 22 20	3-0-0-00	 CS	1 2 0 01 00	2 0 0 02	 cs	
<u> </u> 	A: (1/	0/	0)	3-0-01-30	1	NR	3-0-01-00	3 0 0-00	NR	
	B: (1/	0/	0)	-	3-4-0-00	ME	3-1-00-02		!	
	ь.(ц	0,	0)	3.1.00.02	3-4-0-00	1-1-1-1	3-1,-00 02	3-4-0-00	 Inte	
5.2.1.3.5.4	RT-RT Word (ount:	Error	3-0-01-00	3-0-0-00	cs	3-0-01-00	3 -0 -0-00	cs	
İ	A: (2/	0/	0)	4-1-01-00	4-0-0 00	cs	4-1-01-00		:	
İ	B: (2/	0/	0)	3-0-08-00	i .	NR	3-0-08-00		NR	
				4-1-01-00	4-0-0-00	CS	4-1-01-00	4-0-0-00	CS	
ļ				3-1-00-02	3-4-0 00	ME	3-1-00-02	3-4-0-00	ME	
5.2.1.3.6	Contiguous Dat	- 3		2 0 01 00	3-0 0-00	 CS	2 0 01 40		 cs	
J.Z.I.J.U	A: (32/	.a. 0/	0)	3-0-05-00	1	NR	3-0-01-00	3 0-0-00	NR	
	B: (32/	0/	0)	!	3-4-0:00	ME	3-1-00-02		1	
	2. (55)	0,	0,	3-1-00-02	3-4-0.00		3-1-00-02	3"4.0.00	[PIE	
5.2.1.3.7	Terminal Fail	Safe		į	ļ	ļ				
5.2.1.4	Superseding Com	nands			<u> </u>	1	ļ			
	part A			3-0-01-00		NR	3-0-01-00		NR	
				3-1-01-00	3-0-0-00	cs	3-1-01-00	3-0-00	cs	
				3-1-00-02	3.0.0.00	CS	3-1-00-02	3 0-0-00	CS	
	mant D					LATE		 		
	part B			3 0-01-00	:	NR ME	3-0-01:00	:	NR	
				•	3-4-0-00	ME	ļ	3-4-0-00	ME	
				3 1 00 -02	3-4-0-00		3-4-00 02	3-4-C-00	ME	
	part C			3-0-01-00		NR	3-0-01-00	 	NR	
				:	3-0-0 00	cs	:	3-0-0-00	!	
				3-1-00-02	i	cs	3-1-00-02	i		
	l nart D			1		 			1	
	part D			3-0-01-00	:	NR	3-0-01-00		NR	
	[]			i	3-0-0-00	CS	;	3-0-0-50		
	 			3-1-00-02] 30-0-00 .L	CS	3-1-00-02	3-0-0 CO 	CS	
SUBTITLE:	Required Protoco	l Taa	1+ 61	10	ATE:	10 M	ov 2013	Dage	•	
	acquercu rrococo.		, , ,	10.		TO 140	~ ~ ~ _ _ \	Page:	of 26	

TEST SYSTEMS, Inc. MIL-STD-1553B RT VALIDATION TEST REPORT BVL12.DAT TEST SYSTEMS, Inc. 11/18/13 (13:55:22) By: Reference Test Description B U S A BUSB Command | Response | STAT Section Bus: (run cnt/ errors/ busy cnt) Command Response STAT 5.2.1.5 Required Mode Commands **[5,2.1.5.1**] Transmit Status 3-0-02-00 3-0-0-00 CS | 3-0-01-00 | 3-0-0-00 | CS A: (2/ 0/ 0) 3-1-00-02 3-0-0-00 CS 3-1-00 02 3-0-0-00 CS 13: (2/ 0/ 3-0-01-00 3-0-0-00 CS 3.0.01-00 3-0-0-00 CS 3-1-00-02 3-0-0-00 CS 3 ·1 ·00 · 02 | 3 - 0 - 0 - 00 | CS - - -NR 3--0-01-08 - - -3-0-01-00 NR 3-1-00-02 3-4-0-00 ME 3-1-00-02 3 4-0 00 ME ME 3-1-00-02 3-4-0-00 3-1-00-02 3-4-0-00 ME 3-1-00-02 3 4-0-00 ME | 3-1-00-02 | 3-4-0-00 | ME 3-0-01-00 3-0 0-00 CS 3-0-01-00 3-0-0-00 CS 3-1-00-02 3-0-0-00 CS 3-1-00-02 3-0-0-00 CS 3-1-00-02 3-0-0-00 CS 3-1-00-02 3-0-0-00 CS Xmtr Shutdown/Override 5.2.1.5.2 3-0-01-00 3-0-0-00 CS 3-0 01-00 3-0-0-00 CS A: (4/ 0/ 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS 3-1-00-04 3-0-0-00 CS 3-1-00-04 3-0-0-00 CS 3-0-01-00 - - -NR 3-0-01-00 - - -NR CS 3-0-01-00 3-0-0-00 3-0-61-00 3-0-0-00 CS NR 3-1-00-05 - - -3-1-00-05 NR 3-0-01-00 NR 3-0-01-00 - - -NR 3-1-00-05 3-0-0-00 CS 3-1-00-05 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS 5.2.1.5.3 Reset Remote Terminal Delay to Stable Response 3-1-00-08 3-0-0 00 CS 3-1-00-08 3-0-0-00 CS 1764/ 0/ 0) 3-1-01-00 3-0-0 00 CS 3-1-01-00 3-0 0-00 CS B: (1764/ $(T \le 5000us)$ 4 4 Shutdown 3-1-00-04 3-0-0-00 CS 3-1-00-04 3-0-0-00 CS A: (3-1-01-00 - - -NR3-1 01-00 - - -NR 2/ 0/ 0) B: (2/ 0/ 3-1-00-08 3-0-0-00 CS 3-1-00-08 3-0-0-00 CS 3-1-01-00 3-0-0-00 CS 3-1-01-00 3:0-0-00 CS S.2.1.6 Data Wrap-around cs 3-0-30-00 3-0-0-00 3-0-30 00 3-0-0-00 CS A: (10000/ 3-1-30-00 3-0-0-00 CS 3 1 30-00 | 3-0-0-00 | CS 0/ B: (3.0000/ 0/ ||5.2.1.7 RT-RT Timeout Delay Time to first NR 3-0-01-00 NR 3-0-01-00 INR 4-1-01-00 4-0-0:00 4-1-01-00 4-0-0 00 CS 3-1-00-02 3-4-0-00 ME 3-1-00-02 3-4-0-00 ME $(54us \le T \le 60us)$ 57.5 57.5 Time to first CS 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS 4-1-01-00 4-0-0-00 CS 4-1-01-00 4-0-0-00 CS 3-1-00-02 3-0-0:00 CS 3-1-00-02 3-0-0-00 CS $(54us \le T \le 60us)$ 57.0 57.0 SUBTITLE: Required Protocol Tests DATE: 18 Nov 2013 | Page: 5.2.1.5. Required Mode Commands TIME: 15:55:52 19 of 26

TEST SYSTEMS, Inc. MIL-STD-1553B RT VALIDATION TEST REPORT BVL12.DAT TEST SYSTEMS, Inc. 11/18/13 (13:55:22) By: Reference Test Description BUS A BUSB Section Command | Response | STAT | Command | Response | STAT | Bus: (run cnt/ errors/ busy cnt) ||5.2.1.8 Bus Switching RT Transmitting Valid, Legal Command 3-1-02-00 - - NR 3 1 02-00 - - -NR A: (10945/ 0/ 3-1-05-00 3-0-0-00 CS 3 ·1 ·05 - 00 | 3 - 0 - 0 - 00 | CS 0) B:(10945/ 0/ 3-1-00-02 3-0-0-00 CS 3-1-00-02 3-0-0-00 CS 0) Command w/Parity Error 3-1-02-00 3-0-0-00 CS 3-1-02-00 3-0-0-00 CS A: (10945/ 0/ 3-1-05-00 - - -NR 3-1-05-00 NR B: (10945/ 0/ 0) 3-1-00-02 3-0-0-00 CS 3-1-00-02 3-0-0-00 CS Command to another RT 3-1-02-00 3-0-0-00 CS 3-1-02-00 3-0-0-00 CS A: (10945/ 0/ 0) 4-1-05-00 - - - NR 4-1-05-00 - - -NR B:(10945/ 3-1-00-02 3-0-0-00 CS 3-1-00-02 3-0-0-00 CS RT Receiving Valid, Legal Command 3-0-01-00 --- NR 3-0-01-00 - -NR

4-1-05-00 4-0-0-00 CS

3-1-05-00 3-0-0-00 CS

3-3-00-02 3-0-0-00 CS

3-0-01-00 3-0-0-00 CS

4-1-05-00 4-0-0-00 CS

| 3-1-05-00 | - - - | NR

3-1-00-02 3-0-0-00 CS

3-0-01-00 3-0-0-00 CS

4-1-05-00 4-0-0-00 CS

3-1-00-02 3-0-0-00 CS

NR

4-1-05-00 - - -

4-1-05-00 4-0-0-00 CS

3-1-05-00 3-0-0-00 CS

3-1-00-02 3-0-0-00 CS

3-0-01-00 3-0-0-00 CS

4-1-05-00 4-0-0-00 CS

3-1-05-00 - - | NR

3-1-00-02 3-0-0:00 CS

3 -0 01 -00 3 -0 - C O CS

4-2-05-00 4-0-0-00 CS

4-1-05-00 · · · - NR

3-1-00-02 3-0-0-00 CS

A: (11649/

B:(11649/

A: (11649/

B: (11649/

A: (1.1.649/

B: (11649/

0/

0/

0/

0/

0/ 0)

0/ 0)

Command w/Parity Error

Command to another RT

0)

0)

0)

| SUBTITLE: Required Protocol Tests | DATE: 18 Nov 2013 | Page: | 5.2.1.8. Bus Switching | TIME: 15:55:52 | 20 of 26

	EST SYSTEMS, Inc. MIL-STD-1553B RT VALIDATION TEST TEST SYSTEMS, Inc.					VL12.DAT (13:55:22		
Reference	Test Description	<i>)</i>	BUSA			BUSB		
Section	Bus: (run cnt/ errors/ busy cnt)	Command	Response	STAT	Command	Kesponse	STA	
5.2.1.9	Unique UUT Address			 				
	part A UUT Adr 0	1	 	laa Laa	1		lac	
	UUT Adr 1	0-0-05-00	}	CS	0-0-05-00		CS	
	UUT Adr 2	1-0-05-00	}	CS	1 1	1-0-0-00	CS	
	UUT Adr 3	2-0-05-00	}	CS	;		CS	
	UUT Adr 4	3-0-05-00	1	CS ac	3.0 05-00		CS	
	!	1	4-0-0-00	CS	4 · 0 · 05 - 00		CS	
	UUT Adr 5 UUT Adr 6	:	5-0-0-00	CS	5.0.05-00		CS	
	UUT Adr 5	:	6-0-0-00	CS	6-0-05-00		CS	
		1	7-0-0-00	CS	7-0-05-00	i	CS	
	UUT Adr 8	1	:	CS	8-0-05-00		CS	
	UUT Adr 9	1	:	CS	9-0-05-00		CS	
	UUT Adr 10 (0A)	10-0-05-00	:	cs	10-0-95-00	10-0-0-00	CS	
	UUT Adr 11 (OB)	11-0-05-00	11-0-0-00	CS	11-0-05-00	11-0-0-00	cs	
	UUT Adr 12 (0C)	12-0-05-00	•	CS	12-0-05-00	12-0-0-00	CS	
	UUT Adr 13 (OD)	13-0-05-00	13-0-0-00	CS	13-0-05-00		1	
	UUT Adr 14 (0E)	14 0-05-00	14-0-0-00	CS	14 0:05-00	14-0-0-00	CS	
	UUT Adr 15 (0F)	15 0.05-00	15-0-0-00	CS	15-0-05-00	15-0-0-00	CS	
	UUT Adr 16 (10)	16-0-05 00	16-0-0-00	CS	16-0 05-00	16-0-0-00	CS	
	UUT Adr 17 (11)	17-0-05-00	17 0-0-00	CS	17-0-05 00	17-0-0-00	CS	
	UUT Adr 18 (12)	18-0-05-00	18-0-0-00	CS	18-0-05-00	18 0-0-00	CS	
	UUT Adr 19 (13)	19-0-05-00	19-0-0-00	CS	19-0-05-00	19-0-0-00	[cs	
	UUT Adr 20 (14)	20-0-05-00	20-0-0-00	CS	20 0-05-00	20-0-0-00	cs	
	UUT Adr 21 (15)	21-0-05-00	21-0-0-00	CS	21-0-05-00	21-0-0-00	cs	
	UUT Adr 22 (16)	22-0-05-00	22-0-0-00	cs	22-0 05-00	i	İcs	
	UUT Adr 23 (17)	23-0-05-00	23-0-0-00	cs	23-0-05-00		cs	
	UUT Adr 24 (18)	24: 0: 05::00	24-0-0-00	cs	24-0-05-00	:	Cs	
	UUT Adr 25 (19)	25-0-05-00	25-0-0-00	!	25 0-05-00		cs	
	UUT Adr 26 (1A)	:	26-0-0-00	!	26-0-05-00	!		
	UUT Adr 27 (1B)	27-0-05-00	1	1	27-0-05-00			
	UUT Adr 28 (1C)	;	28-0-0-00	:	28-0-05-00	:	•	
	UUT Adr 29 (1D)		29-0-0-00	•	29-0-05-00	•	CS	
	UUT Adr 30 (1E)	:	30-0-0-00	:	30-0-05-00	:	cs	
	UUT Adr 31 (1F)	31-0-05-00		NR	31-0-05-00	!	NR	
	part B	31.0-05-00	 	 NR	31-0-05-00		 NR	
	part B	31.0-05-00	 	NR 	31-0-05-00		N] 	
SUBTITLE:	Required Protocol Tests 9. Unique UUT Address	:	ATE: IME:		v 2013 55:52	 Page: 21 c	of 2	

of the office of the Artist Control of the transfer of the Artist Control of the Artist

	, Inc. MIL-STD-1553B RT VALIDA SYSTEMS, Inc.	ATION TEST F		BVL12.DAT 11/18/13 (13:55:22			
Reference	Test Description	B U S	A	BUSB			
Section	Bus: (run cnt/ errors/ busy cnt)	Command Respo	nse STAT	Command	Response	STAT	
5.2.2.1 5.2.2.1.1	Optional Protocol Dynamic Bus Control A:(2/ 0/ 0)	3-1-00-00 3-4-0	-00 ME	3-1-00-00	3-4-0-00	ME	
5.2.2.1.2 5.2.2.1.2.1	B:(2/ 0/ 0) Synchronize Synchronize without data	3-1-00-01 3-0-0	-00 CS	2-1-00-01	3 -0-0 00	 cs	
J . & . Z Z	A: (2/ 0/ 0) B: (2/ 0/ 0)			3-1-05-01	3.0.0.00		
5.2.2.1.2.2	Synchronize with data A:(2/ 0/ 0) B:(2/ 0/ 0)	3-0-00-17 3-0-0	-30 CS 	3-0-00-17	3-0-0:00	CS 	
	B:(2/ 0/ 0) SYNC Word		000]	0000		
5.2.2.1.3	Initiate Self-Test	3-1-00-03 3-0-0	-00 CS	3-1-00-03		:	
	A:(1964/ 0/ 0)	3-1-01-00 3-0-0	0-00 CS	3 - 1 - 01 - 00	3-0-0-00	CS	
	B:(1964/ 0/ 0) (T ≤ 100,000us)		4		4		
5.2.2.1.4	Transmit BIT word A:(2/ 0/ 0)	 3·1·00 19 3·0·(0-00 CS	3-1-00-19	3-0-0-00	CS	
	B: (2/ 0/ 0)	j j	Ì	j		į	
	BIT Word		2cd	ļ	824d		
5.2.2.1.5	Selective Xmtr Shutdown	3-0-01-00 3-0-0	1	-	3-0-0-00	CS	
	A:(4/ 0/ 0)	3-0-01-00 3-0-0	1	i	3-0-0-00	CS	
	B:(4/ 0/ 0)	3-0-00-20 3-4-0 3-0-01-00 3-0-0	1	i	3-4-0-00	ME	
		3-0-01-00 3-0-0		1	3-0-0-00	CS CS	
		3.0.00.21 3.4.0		3-0-00-21		ME	
		3.0.01.00 3.0.0	[3-0-01-00		CS	
		3-0-00-21 3-4 (00 ME	3-0-00-21	3-4-0-00	ME	
		3-0-01-00 3-0-0	0-00 CS	3-0-01-00	3-0 0 00	jcs	
		3-0-01-00 3-0-0	0-00 CS	3-0-01-00	3-0-0-00	CS	
		3 -0 -00 - 20 3 -4 -1		:	3 -4 -0 00	ME	
		3 0-01 00 3-0-4		:	3.0000	CS	
	 Alt Bus Selection Word	3-0-01-00 3-0-	:	3-0-01-00	3-0-0-00	;	
	Pri Bus Selection Word	0000			0000		
5.2.2.1.6	 Terminal Flag Bit Inhibit	3-0-01-00 3-0-	0-00 CS	3 0.01-00	 3-0-0-00	CS	
	A: (4/ 0/ C)	3-1-01-01 3-0-	-	- 1	3-0-0-01	!	
	B ₂ (4/ 0/ 0)	3-0-01-00 3 0	o or TF	3-0-01-00	3-0-0-01	TF	
		3-1-00-06 3-0-	0.00 CS	3-1-00-06	3-0-0-00	l CS	
		3-0-01-00 3-0-	1	1	3-0-0-00	CS	
		3-1-31-07 3-0-	1	:	3-0-0-01	TF	
	ļ •	3-0-01-00 3-0-	1	;	3-0-0-01	TF	
	<u> </u>	3-1-01-01 3-0-		3-0-01-00	<u> </u>		
SUBTITLE: 5.2.2.1	Optional Protocol Tests . Optional Protocol	DATE:	i 18 No	ov 2013 55:52	Page:	of 26	

TEST SYSTEMS, Inc. MIL-STD-1553B RT VALIDATION TEST REPORT BVL12.DAT |11/18/13 (13:55:22)| TEST SYSTEMS, Inc. By: Reference Test Description BUSA BUSB Command Response STAT Command Response STAT Section Bus: (run cnt/ errors/ busy cnt) ||5.2.2.1.7 |Transmit Vector Word 3-1-00-16 3-0-0-00 CS 3-1-00-16 3-0-0-00 CS A: (2/ B: (0/ VECTOR Word 00001 00001 Transmit Last Command 5.2.2.1.8 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS · A: (2/ 3-0-01-01 - - - NR 3-0-01-01 - - -NR 3-1-00-18 3-4-0 00 ME 3-1-00-18 3-4-0-00 ME 2/ B: (0/ 0) 3-1-00-02 3-4-0-00 ME 3-1-00-02 3-4-0-00 ME 3-1-00-18 3-4-0-00 ME 3-1-00-18 3-4-0-00 ME 3-1-00-18 3-4-0-00 ME 3-1-00-18 3-4-0-00 ME 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS 3-1-00-18 3-0-0-00 CS 3-1-00-18 3-0-0-00 CS 3-1-01-00 3 0 0 00 CS 3-1-01-00 3-0-0-00 CS 3-1-00-18 3-0-0-00 CS 3-1-00-18 3-0-0-00 CS 5.2.2.2 Status Word 5.2.2.2.1 Service Request 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0 00 CS 3-1-01-01 3-1-0-00 DC 3-1-01-01 3-1-0 00 DC 3-1-01-00 3-1 0 00 SR 3-1-01-00 | 3-1-0-00 | SR 3-1-01-00 | 3-1-0-00 | SR 3-1-01-00 3-1-0-00 SR 3-1-01-01 | 3 0-0-00 | DC 3-1-01-01 3-0-0 00 DC 3-0-01-00 3-0 0-00 CS | 3-0-01-00| 3-0-0-00 | CS 15.2.2.2.2 Broadcast Command Received 31-0-01-00 ---NR 31 -0 -01 - - -NR 3-1-00-18 3-0-0-16 BCR 3-1-00-18 3-0-0-16 BCR 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS 31-0-01-00 - - -NR 31-0-01-00 NR 3-1-01-01 3-0-0-00 CS 3-1-01-01 3-0 0 00 CS 31-0-01-00 NR 31-0-01-00 -NR 3-1-00-18 3-4-0-16 MBR | 3-1-00-18 3-4-0-16 MBR 15.2.2.2.3 Busy 3-1-01-01 3-0-0-08 DC 3-1-01-01 3-0-0-08 DC 3-1-02-00 3-0-0:08 BUSY 3-1-02-00 3-0-0:08 BUSY 3-1-01-01 3-0-0 00 DC 3-1-01-01 3-0-0 00 DC 3-1-01-01 3-0-0-00 CS 3-1-01-01 3-0-0-00 CS 15.2.2.2.4 Subsystem Flag 3-1-01-01 3-0-0-04 DC 3-1-01-01 3-0-0-04 DC 3-1-02-00 3-0-0-04 SF 3-1-02-00 3-C-0-04 SF 3-1-01-01 3-0-0-00 DC 3-1-01-01 3 0 0 00 DC 3-1-01-00 3-0 0-00 CS 3-1-01-00 3-0 0-00 CS 3-1-01-00 3-0-0 00 CS 3-1-01-00 3-0-0 00 CS 5.2.2.2.5 Terminal Flag 3-1-01-01 3-0-0-01 DC 3-1-01-01 | 3-0-0-01 | DC 3-0-01-00 3-0-0-01 TF 3.0.01.00 3-0-0-01 TF 3-1-01-01 3-0-0-00 DC 3-1-01-01 3-0-0-00 DC 3-1-01-00 3-0-0-00 CS 3 ·1 · 01 · 00 | 3 - 0 - 0 - 00 | CS 3-1-01-00 | 3-0-0-00 | CS 3-1-01 00 3-0-0-00 CS SUBTITLE: Optional Protocol Tests DATE: 18 Nov 2013 | Page: 5.2.2.1.7. Transmit Vector Word TIME: 23 of 26 15:55:52

By: TEST	SYSTEMS, Inc.		j		11/18/13 (13:55:2			
Reference	Test Description	Вт	JS A		ВТ	JS B		
Section	Bus: (run cnt/ errors/ busy cnt)	Command	Response	STAT	•		STAT	
						<u>-</u>	1	
5.2.2.3	 Illegal Command							
5.2.2.3	part A		 3-4-0-00	ME	3-0-25-00	3-4-0-00	 ME	
	part II	:	3-0-0-00	CS	3-1-02-00		cs	
		3-0-25-00		NR	3-0-25-00		NR	
		: :	3-4-0-00	ME	3-1-00-02		ł	
			3-0-0-00	cs	3.1-01-00		cs	
		3-0-25-00	1	NR	3.0.25-00		NR	
		3-1-00-18	1	cs	;	3-0-0-00	cs	
	1				3 1 00 11	10000		
	part B	3-1-26-00	3-4-0-00	ME	3-1 26-00	3-4-0-00	ME	
			3-0-0-00	CS	3-1-02-00	3-0-0-00	CS	
		3-0-25-00	ļ ·	NR	3 0 25-00		NR	
			3-4-0-00	ME	3-1-00-02	:	ME	
		1	3-0-0-00	CS	1	3-0-0-00	cs	
		3-0-25-00	i i	NR	3-0-25-00	:	NR	
]	3-1-00-18	3-0-0-00	CS	3-1-00-18	3-0-0-00	CS	
5.2.2.4	 Broadcast Mode Commands] 	}	
5.2.2.4.1	Synchronize without data	3-0-01 00	3-0-0-00	cs	3-0-01-00	3-0-0-00	cs	
	A: (2/ 0/ 0)	32-2-00-01	1	NR	31-1-00-01	:	NR	
	B: (2/ 0/ 0)	3-1-00-18	:	MBR	3-1-00-18	i	:	
		j	İ	į		į	j	
5.2.2.4.2	Synchronize with data	3-0-01-00	3-0-0-00	CS	3-0-01-00	3-0-0-00	CS	
	A: (2/ 0/ 0)	31-0-00-17	!	NR	31-0-00-17		NR	
	B: (2/ 0/ 0)	3-1-00-18	3-4-0-16	MBR	3-1-00-18	3-4-0-16	MBR	
	SYNC Word		0000			0000	1	
5.2.2.4.3	 Initiate Self-Test	31-1-00-03		I NR	31-1-00-03	 	NR	
	A: (1968/ 0/ 0)	:	3-0-0-00	CS		3.0.0-00		
	B:(1968/ 0/ 0)							
	(T ≤ 100,000us)	j	4	İ		4		
					İ			
5.2.2.4.4	Xmtr Shutdown/Override	3-0-01-00	i	CS	1	3-0-0-00		
	A: (4/ 0/ 0)	3.0.01 00	i	CS	4	3-0-0-00	!	
	B:(4/ 0/ 0)	31-1-00-04	1	NR	31-1 00-04	!	NR	
		3-1-00-18	1	MBR	3-1-00 -18	1		
		3-0-01-00	:	CS	3-0-01 00	1	:	
		3-0-01-00		CS	3-0-01-00	1	:	
	<u> </u>	31-1-00-05	:	NR	31-1-00-05	1	NR	
		3-0-01-00	1	CS	3-0-01-00	:	!	
		31-1-00-05	1	NR	31-1-00-05	;	NR	
		3-1-00 18	1	MBR	3-1 00 18	1	!	
		3 0.01 00	1	CS	3-0-01-00	1		
		3-0-01-00	3-0-0-00	CS	3.0-01-00	3-0-0-00]CS	
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TEST SYSTEMS, Inc. MIL-STD-1553B RT VALIDATION TEST REPORT BVL12.DAT 11/18/13 (13:55:22) TEST SYSTEMS, Inc. By: Reference Test Description BUS A BUSB Section Bus: (run cnt/ errors/ busy cnt) Command Response STAT Command Response STAT 15.2,2,4.5 Selective Xmtr Shutdown 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS A: (4/ 0/ 0) 31 0 00 20 NR 31-0-00-20 - - -NR B: (4/ 0/ 0) 3-1-00-18 3-4-0-16 MBR 3-1-00-18 3-4-0-16 MBR 3-0-01-00 3-0-0-00 CS | 3-0-01 co | 3-0-0 co | CS 3-0-01-00 3-0-0-00 CS 1 3-0-02-00 | 3-0 0-00 | CS 31-0-00-21 - - -NR NR 31-0-00-21 3-0-01-00 3-0-0-00 CS 3-0-01-00 3 0 0 00 CS NR 31-0-00-21 - - -31-0-00 21 - - -NR 3-1-00-18 3-4-0-16 MBR 3 1 00 18 3-4-0-16 MBR 3-0-01-00 3-0-0-00 CS 3 0 01 00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS 3 0 01 00 3-0-0-00 CS 31-0-00-20 - - - NR 31-0-00-20 ... 3-1-00-18 3-4-0-16 MBR 3-1-00-18 3-4-0-16 MBR 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS Alt Bus Selection Word 0000 0000 Pri Bus Selection Word 00001 00001 15.2.2.4.6 Terminal Flag Bit Inhibit 3-0-01-00 3-0 0-00 CS 3-0-01-00 3:0:0 00 CS 3-1-01-01 3-0-0-01 DC 4/ 0/ 0) 3-1-01-01 3-0-0-01 DC B: (4/ 0/ 0) 3-0-01-00 3-0-0-01 TF 3-0-01-00 3-0-0-01 TF 31-1-00-06 - - -NR 31-1-00-06 - - -NR 3-2-00-18 3-4-0-17 | MBRT | 3-1-00-18 | 3-4-0-17 | MBRT | 3-0-01-00 3-0-0-01 TF 3-0-01-00 3-0-0-01 TF 31-1-31-07 - - -NR 31 -1-31-07 - - -NR 3-1-00-18 3-4-0-17 MBRT 3-1-00-18 3-4-0-17 MBRT 3-0-01-00 3-0-0-01 TF 3-0-01 00 3-0-0-01 TF 3-1-01-01 3-0-0-00 DC 3-1-01-01 3-0-0-00 DC 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS 5.2.2.4.7 Reset Remote Terminal Delay to Stable Response 31-1-90-08 --- NR 31-1-00-08 NR A: (1768/ 0) 3-1-01-00 3-0-0-00 CS 3-1-01-00 3-0 0-00 CS B: (1768/ nΖ 0.1 $(T \leq 5000us)$ 4 Clear Xmtr Shutdown N/AN/A N/AN/AN/A $\|A\setminus K\|$ N/A N/A 5.2.2.4.8 Dynamic Bus Control 3-1-01-00 3-0-0-00 CS 3-1.01.00 3-0-0-00 CS A: (2/ - - -NR --- NR 0/ 31-1-00-00 31-1-00-00 0) B: (2/ 0) 3-1-00-02 3-4-0-16 MBR 3-1-00-02 3-4-0-16 MBR Optional Protocol Tests SUBTITLE: DATE: 18 Nov 2013 | Page: 5.2.2.4.5. Selective Xmtr Shutdown TIME: 15:55:52 25 of 26

TEST SYSTEMS, Inc. MIL-STD-1553B RT VALIDATION TEST REPORT BVL12.DAT TEST SYSTEMS, Inc. By: 11/18/13 (13:55:22) Reference Test Description BUS A BUSB Section Bus: (run cnt/ errors/ busy cnt) Command Response STAT Command Response STAT ||5.2.2.5 Error Injection -Broadcast Messages **||5.2.2.5.1** Parity: BC-RT Broadcast 5.2.2.5.1.1 Command w/Parity Error 31-0-01-01 - - -NR 31-0-01-01 - - -NR 3-1-00-18 3-0-0-16 BCR 3-1-00-18 3-0-0-16 BCR 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS 31-0-01-00 NR 31-0-01-00 . .. 3-1-00-18 3-0-0-00 CS 3-1-00-18 3-0 0-00 CS 3-0-01-00 3-0 0 00 CS 3-0-01-00 3 0.0 00 CS ||5.2.2.5.1.2| Data Word Error 31-0-01-01 NR 32-0-01/01 - - -NR A: (32/ 0/ 3-1-00-18 3-0-0 16 BCR 3-1-00-18 3-0-0-16 BCR 0) B: (32/ 0/ 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0 00 CS 31-0-01-00 - - - NR 31-0-01-00 NR 3-1-00 18 3-4-0-16 MBR 3 1 00-18 3-4-0-16 MBR 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0-00 CS 5.2.2.5.2 Message Length: BC-RT 31-0-01-01 - - -NR 31-9-91-01 - NR Broadcast 3-1-00-18 3-0-0-16 BCR 3-1-90-18 3-0 0-16 BCR A: (3-0-01-00 3-0-0-00 CS 33/ 0/ 0) 3-0-01-00 3-0-0-00 CS B: (33/ 31-0-01-00 --- NR 0/ 0) 31-0-01-00 - NR 3-1-00-18 3-4-0-16 MBR 3-1-00-18 3-4 0-16 MBR 3-0-01-00 3-0-0-00 CS 3-0-01-00 3-0-0 00 CS 5.2.3 Noise Rejection 3-0-30-00 EF 3-0-30-col - - - | EF Words Received 52,100,004 PASS 68,300,001 PASS Noise Level used (mV) 165 170 A: (1578788/ 1/ B:(2069697/ 3/ 18 Nov 2013 | Page: SUBTITLE: Optional Protocol Tests DATE: Error Injection TIME: 5.2.2.5. 15:55:52 26 of 26