

LIGHTWEIGHT BACKSHELLS

Have a Connector? We've Got Your Back!



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Backshells	BML1AS	Alumalight - Strain Relief EMI/RFI	90	W, N	10



COMPOSITE STRAIN RELIEF

Ideal Where Lightweight Connector Support Is Needed

- Ideal for commercial air applications
- Offering composite strain relief backshells & split shield rings
  - M85049/91 - Straight unfinished backshell
  - M85049/92 - 90° unfinished backshell
  - M85049/93 - Unfinished split shield ring (used with M85049/88)

STRAIGHT; 90°

MIL-DTL-38999 Series III & IV

M85049	/91	-	09	FINISH
SERIES	SLASH SHEET	DASH NUMBER	ACCESSORY SHELL SIZE	
	91: Straight 92: 90°	-: Detented	Table A	T: Unplated

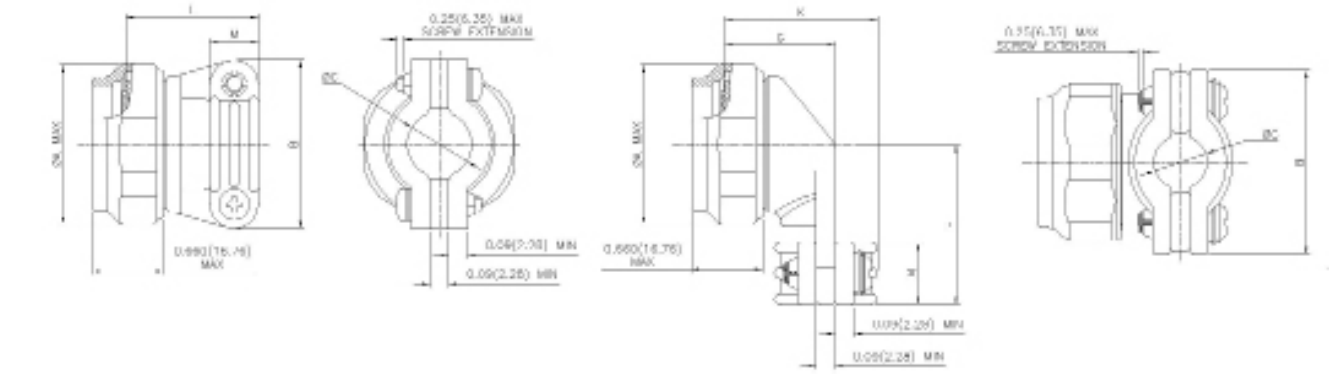


TABLE-A

Accessory Shell Size	Screw Size	A Ø Max.		B Ø Max.		C Max.		L Max.		H		K Max.		M		G Max.	
		inch	mm	inch	mm	0.031 inch	0.78 mm	inch	mm	0.062 inch	1.57 mm	inch	mm	0.031 inch	0.78 mm	inch	mm
9	4-40	0.858	21.79	0.980	24.89	0.219	5.56	0.840	21.34	0.875	22.23	1.060	26.92	0.375	9.53	0.769	19.53
11	4-40	0.984	24.99	1.050	26.67	0.264	6.71	0.960	24.38	0.937	23.80	1.100	27.94	0.375	9.53	0.792	20.12
13	6-32	1.157	29.39	1.200	30.48	0.344	8.74	1.100	27.94	1.031	26.19	1.180	29.97	0.406	10.31	0.847	21.51
15	6-32	1.280	32.51	1.300	33.02	0.460	11.68	1.100	27.94	1.125	28.58	1.300	33.02	0.406	10.31	0.890	22.61
17	6-32	1.406	35.71	1.420	36.07	0.545	13.84	1.230	31.24	1.312	33.32	1.380	35.05	0.406	10.31	0.941	23.90
19	6-32	1.516	38.51	1.520	38.61	0.615	15.62	1.410	35.81	1.375	34.93	1.450	36.83	0.406	10.31	0.972	24.69
21	6-32	1.642	41.71	1.640	41.66	0.698	17.73	1.510	38.35	1.500	38.10	1.540	39.12	0.406	10.31	1.009	25.63
23	6-32	1.768	44.91	1.770	44.96	0.780	19.81	1.660	42.16	1.625	41.28	1.620	41.15	0.406	10.31	1.050	26.67
25	6-32	1.890	48.01	1.890	48.01	0.850	21.59	1.760	44.70	1.750	44.45	1.690	42.93	0.406	10.31	1.085	27.56

COMPOSITE SPLIT SHIELD RING

Used with M85049/88 band lock adapters

M85049	/93	-10
SERIES	SLASH SHEET	ACCESSORY SHELL SIZE
		Table A

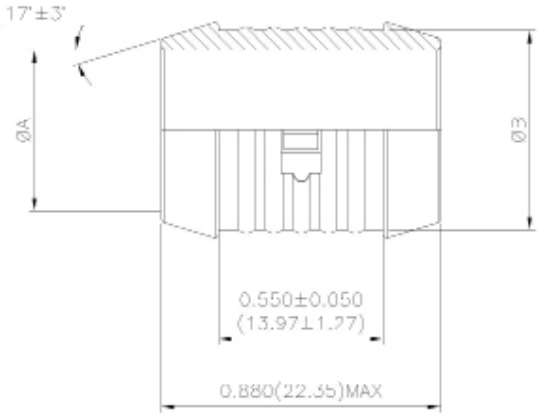


TABLE A

Accessory Shell Size	A Ø Max.		B Max.	
	inch	mm	inch	mm
04	0.250	6.35	0.390	9.9
06	0.375	9.53	0.515	13.1
08	0.500	12.70	0.640	16.3
10	0.625	15.88	0.770	19.6
12	0.750	19.05	0.903	22.9
14	0.875	22.23	1.094	27.8
16	1.000	25.40	1.173	29.8
18	1.125	28.58	1.310	33.3
20	1.250	31.75	1.447	36.8
22	1.375	34.93	1.578	40.1
24	1.500	38.10	1.703	43.3
26	1.625	41.28	1.828	46.4
28	1.750	44.45	1.953	49.6



ALUMALIGHT

Ideal Where Lightweight Connector Support Is Needed

- Commercial lightweight metal backshells
- Comparable in weight, performance & price to composite
- Meets or exceeds MIL AS85049 standard functionality
- Available in the following backshell families
  - Environmental
  - EMI/RFI Strain Relief
  - EMI/RFI Band Lock

	Metal	Composites	AlumaLight
Mil-Standards & Performance	X	X	X
Strength & Durability	X		X
Reliability	X		X
Lightweight		X	X
EMI Shielding	X		X
Environmental	X		X
Strain Relief	X	X	X

Environmental

BEL1	S	S	L	10	03	3	C	W
BASIC PART #	ANGLE	COUPLING	CONNECTOR GROUP	SHELL SIZE	ENTRY SIZE	STANDARD LENGTH & FIGURE	C: Clamp N:Nut	MATERIAL & FINISH
	S: Straight	S:Self Lock	K: MIL-DTL-38999 Series I & II L: MIL-DTL-38999 Series III & IV	Table A	Table A			Table B

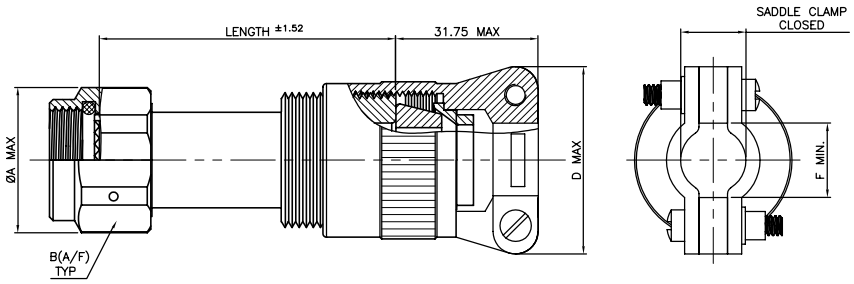


TABLE-A

Shell Size	Length Code	ØA MAX.	B HEX	MAX. Entry Size
8	1	20.40	16.99/17.42	02
	2			
10	1	21.79	18.69/19.05	03
	2			
12	1	24.99	21.84/22.23	04
	2			
14	1	29.39	24.89/25.40	05
	2			
	3			
16	1	32.51	28.58/27.94	06
	2			
	3			
18	1	35.71	31.09/31.75	07
	2			
	3			
20	1	38.51	34.24/34.93	07
	2			
	3			
22	1	41.51	37.31/38.20	08
	2			
	3			
24	1	44.91	40.16/41.28	10
	2			
	3			

TABLE-A (Con.)

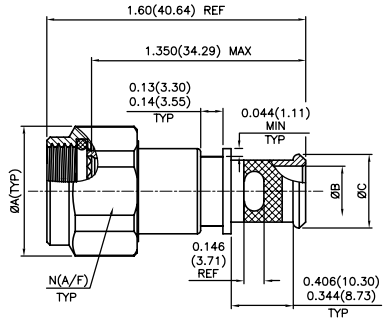
Entry Size	Cable Range		Sadle Clamp Closed ± 0.78	D MAX.	F MIN.
	Inch	mm			
02	3.18	6.35	6.70	23.90	6.90
03	6.35	9.53	8.70	28.40	9.53
04	7.92	12.70	11.70	30.20	12.70
05	11.1	15.88	15.70	39.60	15.88
06	14.27	19.05	17.70	42.90	19.05
07	17.45	22.23	19.80	44.50	22.23
08	20.62	25.40	21.60	47.80	25.40
09	23.80	28.58	25.30	63.50	28.58
10	26.97	31.75	31.00	68.10	31.75

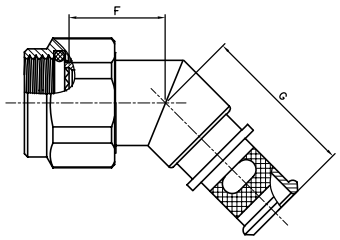
TABLE-B

Finish Code	Material & Finish
W	Aluminum Alloy. Cadmium Olive Drab
N	Aluminum Alloy/ Electroleess Nickel

Band Lock EMI/RFI

BEL1	S	S	L	10	03	3	C	W	S
BASIC PART #	ANGLE	COUPLING	CONNECTOR GROUP	SHELL SIZE	ENTRY SIZE	STANDARD LENGTH & FIGURE	B:W/ Band X: W/O Band	MATERIAL & FINISH	SLOT
	S:Straight A:90 B:45	S:Self Lock	K: MIL-DTL-38999 Series I & II L: MIL-DTL-38999 Series III & IV	Table A	Table A			Table B	(Omit for none)





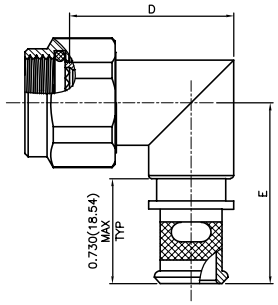


TABLE-A

Shell Size	ØA MAX.		N HEX		B				C REF.				D MAX.	
					02		03		02		03			
	Inch	mm	Inch	mm	Inch + 0.025 − 0.010	mm + 0.635 − 0.254	Inch + 0.025 − 0.010	mm + 0.635 − 0.254	Inch	mm	Inch	mm	Inch	mm
8	0.803	20.40	0.668/ 0/686	16.99/17.42	-	-	0.250	6.40	--	--	0.395	10.0	1.375	34.93
10	0.858	21.79	0.736/ 0.750	18.69/ 19.05	-	-	0.312	7.90	--	--	0.457	11.60	1.437	36.50
12	0.984	24.99	0.860/ 0.875	21.84/ 22.23	0.312	7.90	0.438	11.10	0.457	11.60	0.583	14.80	1.562	39.67
14	1.157	29.39	0.980/ 1.000	24.89/ 25.40	0.438	11.10	0.562	14.30	0.583	14.80	0.707	18.00	1.687	42.85
16	1.280	32.51	1.100/ 1.125	25.58/ 27.94	0.500	12.70	0.625	15.90	0.645	16.40	0.770	19.60	1.750	44.45
18	1.406	35.71	1.224/ 1.250	31.09/ 31.75	0.625	15.90	0.750	19.10	0.770	19.60	0.895	22.70	1.875	47.63
20	1.516	38.51	1.348/ 1.375	34.24/ 34.93	0.625	15.90	0.812	20.60	0.770	19.60	0.957	24.30	1.938	49.23
22	1.642	41.51	1.469/ 1.500	37.31/ 38.10	0.688	17.50	0.938	23.80	0.829	21.10	1.083	27.50	2.062	52.37
24	1.768	44.91	1.581/ 1.625	40.16/ 41.28	0.750	19.10	1.000	25.40	0.895	22.70	1.145	29.10	2.125	53.98

TABLE-A (Con.)

Shell Size	E MAX.		F MAX.		G MAX.		S (No of Slots)	
	Inch	mm	Inch	mm	Inch	mm	Inch	mm
8	1.417	35.90	1.01	25.07	1.16	29.50	0.170	4.31
10	1.480	37.59	1.03	26.20	1.19	30.20	0.170	4.31
12	1.553	39.45	1.06	26.90	1.21	30.70	0.170	4.31
14	1.614	41.00	1.08	27.40	1.24	31.50	0.250	6.35
16	1.678	42.62	1.11	28.20	1.26	32.00	0.250	6.35
18	1.773	45.03	1.12	28.40	1.27	32.30	0.500	12.70
20	1.796	45.62	1.15	29.20	1.30	33.00	0.500	12.70
22	1.859	47.22	1.17	29.70	1.33	33.80	0.500	12.70
24	1.919	48.74	1.20	30.50	1.35	34.30	0.500	12.70

TABLE-B

Finish Code	Material & Finish
W	Aluminum Alloy. Cadmium Olive Drab
N	Aluminum Alloy/ Electroleess Nickel

Strain Relief EMI/RFI

BML1	S	S	K	10	W
BASIC PART #	ANGLE	COUPLING	CONNECTOR GROUP	SHELL SIZE	MATERIAL & FINISH
	S:Straight A: 90	S:Self Lock	K: MIL-DTL-38999 Series I & II L: MIL-DTL-38999 Series III & IV	Table A	Table A

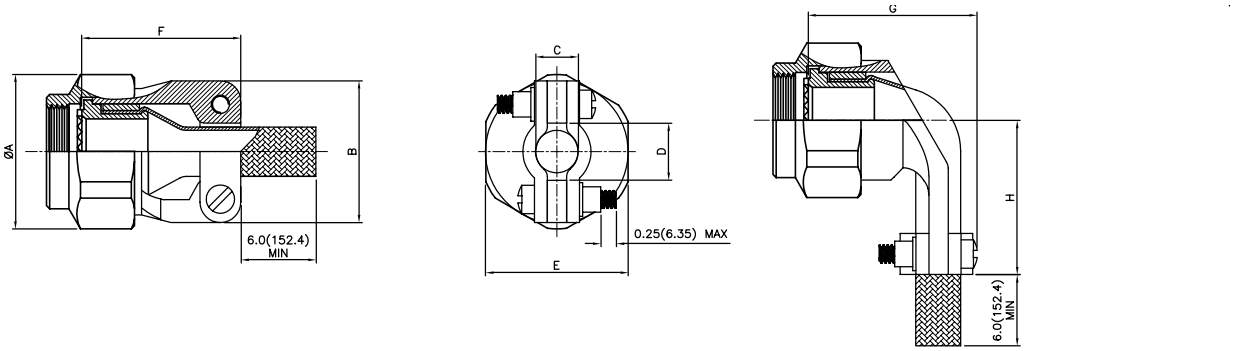


TABLE-A

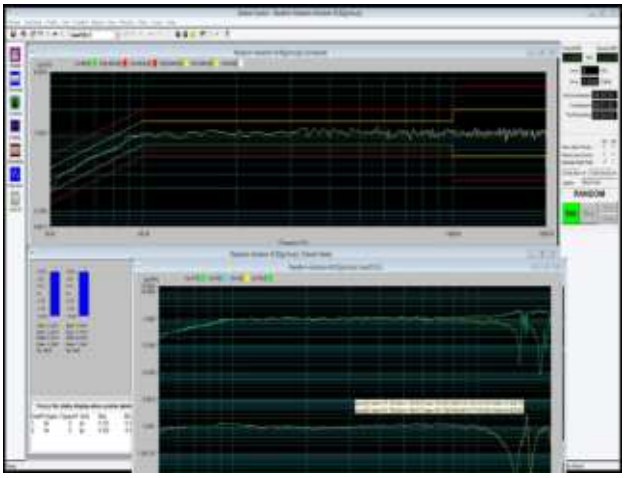
Size Number	ØA MAX.		B MAX.		C		D MIN.		E HEX		F		G MAX.		H MAX.	
					0.031	0.78										
	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm
8	0.858	21.79	0.880	22.40	0.219	5.60	0.220	5.60	0.750/0.736	19.05/18.69	0.780/0.939	19.81/23.85	1.128	28.65	0.940	23.88
10	0.984	24.99	0.940	23.90	0.264	6.70	0.270	6.90	0.875/0.860	22.23/21.84	0.860/1.059	21.84/26.90	1.168	29.67	1.000	25.40
12	1.157	29.39	1.120	28.40	0.344	8.70	0.350	8.90	1.000/0.980	25.40/24.89	0.950/1.199	24.10/30.45	1.248	31.70	1.120	27.69
14	1.280	32.51	1.190	30.20	0.435	11.05	0.470	11.90	1.125/1.100	28.58/27.94	0.950/1.199	24.13/30.45	1.368	34.75	1.190	30.23
16	1.406	35.71	1.440	36.60	0.540	13.72	0.550	14.00	1.250/1.224	31.75/31.09	1.080/1.329	27.43/33.75	1.448	36.78	1.370	34.89
18	1.516	38.51	1.560	39.60	0.620	15.75	0.620	15.70	1.438/1.407	36.52/35.73	1.140/1.509	28.90/38.33	1.528	38.61	1.440	36.58
20	1.642	41.51	1.690	42.90	0.695	17.65	0.700	17.80	1.500/1.469	38.10/37.31	1.200/1.609	30.50/40.87	1.648	41.86	1.560	39.67
22	1.768	44.91	1.750	44.50	0.770	19.56	0.780	19.80	1.625/1.581	41.28/40.16	1.330/1.759	33.80/44.68	1.688	42.88	1.690	42.85
24	1.890	48.01	1.880	47.80	0.820	20.83	0.850	21.60	1.750/1.690	44.45/42.93	1.450/1.859	36.80/47.22	1.758	44.65	1.810	46.02

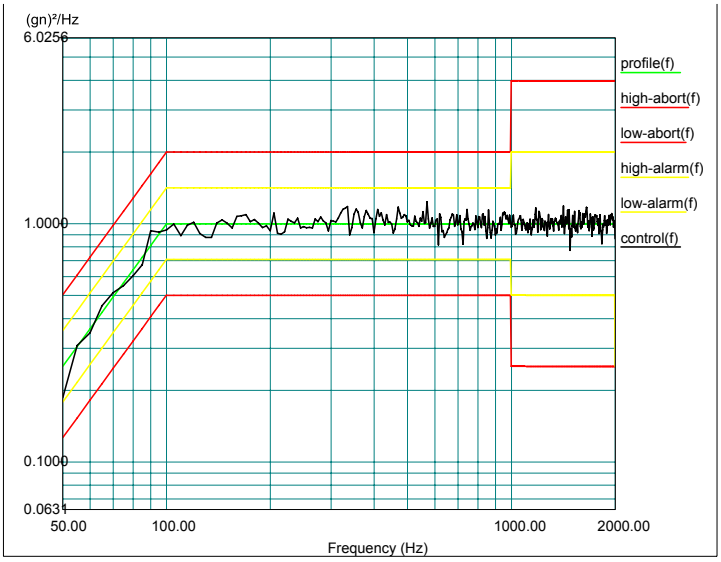
TABLE-B

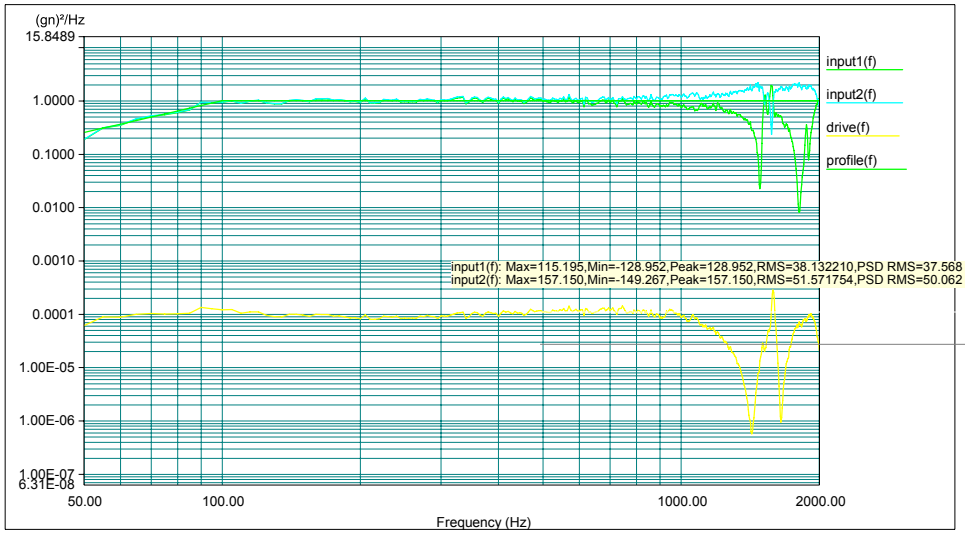
Finish Code	Material & Finish
W	Aluminum Alloy. Cadmium Olive Drab
N	Aluminum Alloy/ Electroleess Nickel

Vibration Test Graphs

DUT: Backshell
Serial Number: BML1SSK10W (3nos) OX Axis
Project File Name: Random vibration 43.92grms.prj
Profile Name: Default
Test Type: Random
Run Folder: .\RunFolder Apr 01, 2015 13-43-56
Level: 100 %
Control RMS: 44.258648 gn
Full Level Elapsed Time: 08:00:00
Lines: 400 Frame Time: 0.200000 Seconds
Demand RMS: 43.941341 gn
Remaining Time:00:00:00
DOF: 154 dF:5.000000 Hz
Data saved at 09:54:53 PM, Wednesday, April 01, 2015 Report created at 09:54:54 PM Wednesday, April 1, 2015

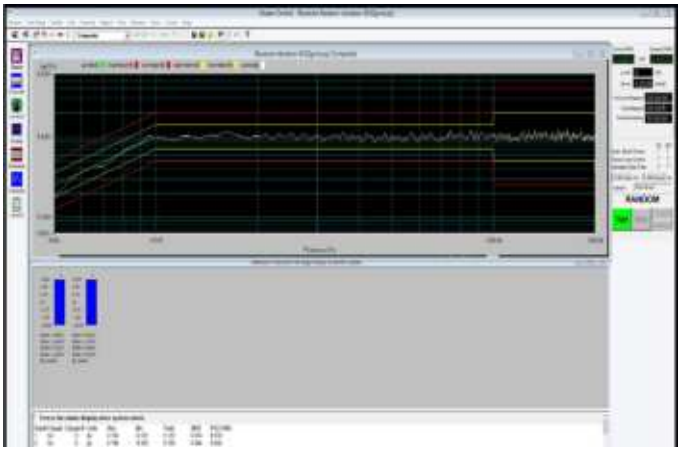


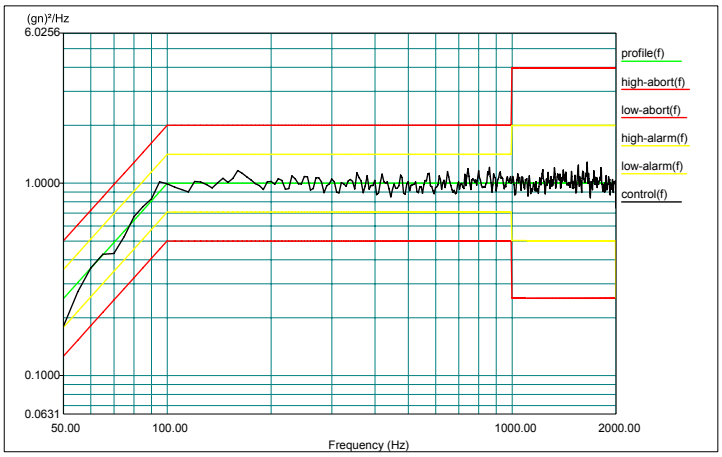


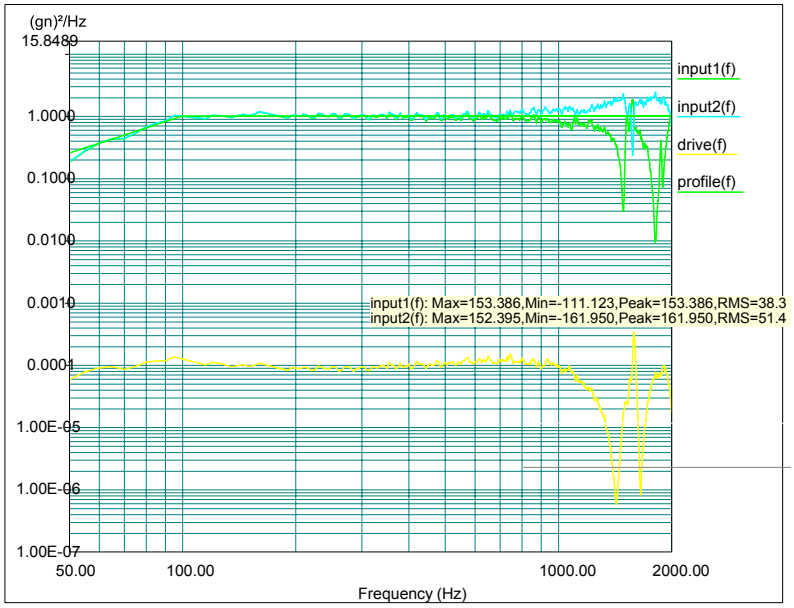


Vibration Test Graphs

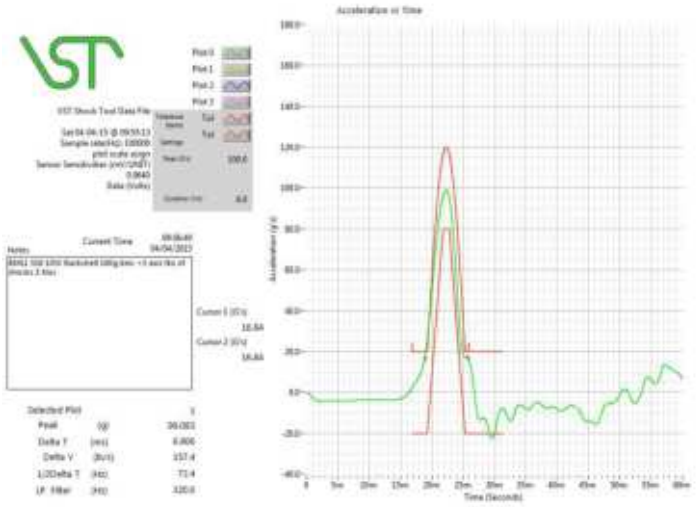
DUT: Backshell
Serial Number: BML1SSK10W (3nos) OY Axis
Project File Name: Random vibration 43.92grms.prj
Profile Name: Default Test Type: \RunFolder Apr 02, 2015 09-29-13
Level: 100 %
Control RMS: 44.156834 gn
Full Level Elapsed Time: 08:00:00 Lines: 400 Frame Time: 0.200000 Seconds
Demand RMS: 43.941341 gn
Remaining Time:00:00:00
DOF: 154 dF:5.000000 Hz
Data saved at 06:57:43 PM, Thursday, April 02, 2015 Report created at 06:57:44 PM, Thursday, April 2, 2015

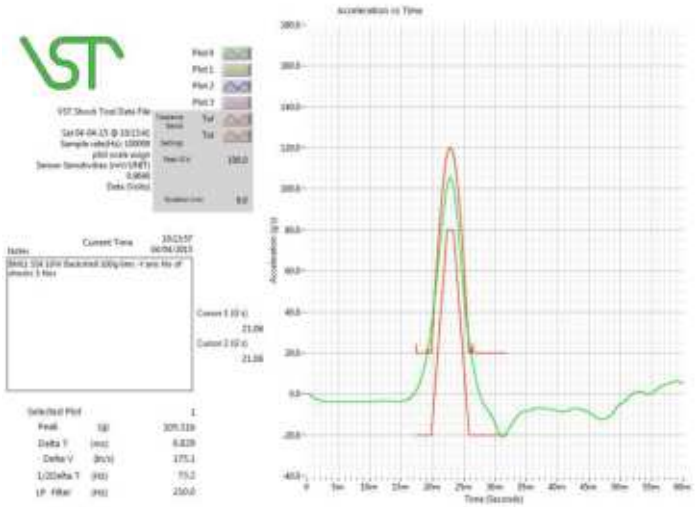


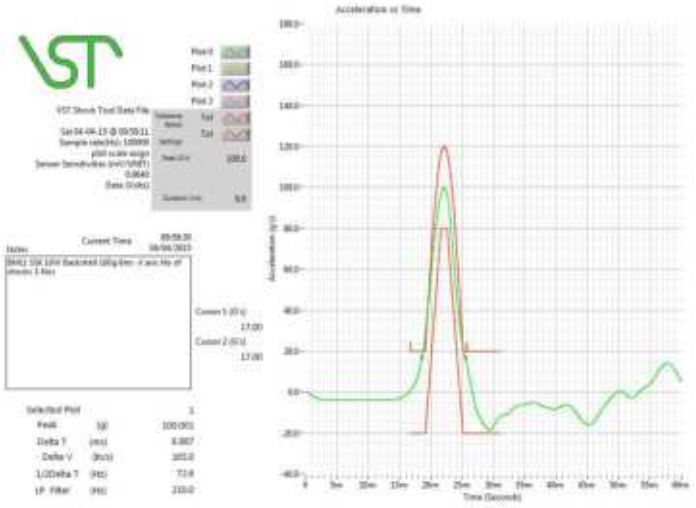


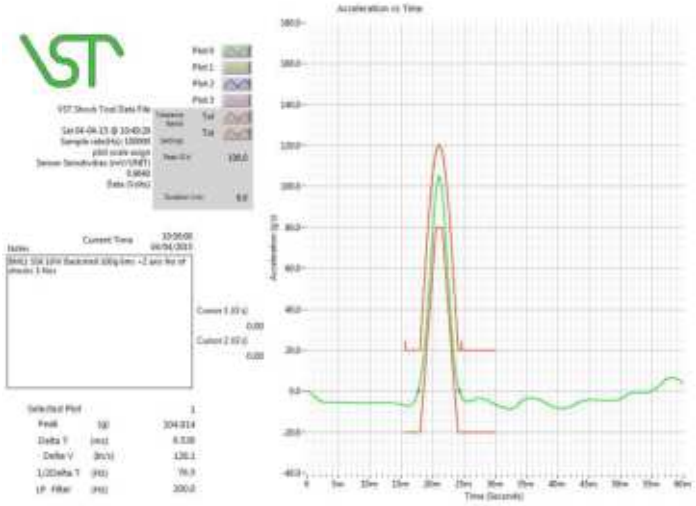


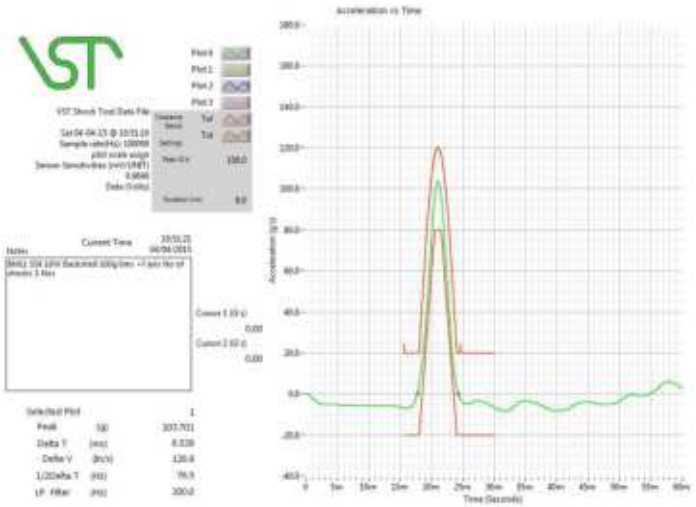
Vibration Test Graphs

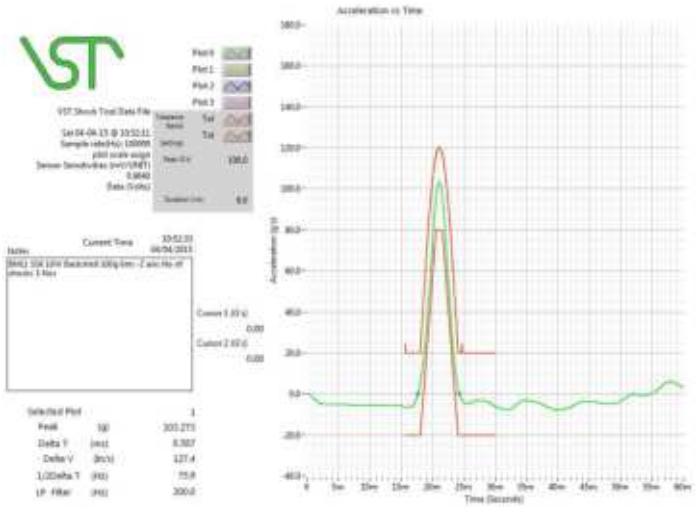












Amphenol Pcd

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