Reliability Test Report

For 1×8 MEMS Optical Switch

(MFSW-1×8-SM-025-10-00)

File No	Version	Drafted By	Audit	Approval
C06.08.00 004	**1.0**	Deng Wei	Gu Song	Kevin Meng
		2017.12.27	2017.12.27	2017.12.27

Document History

Numbering	Revised Time	Revised Items	Author

Overview:

The Switch is based on MEMS technology, and it has high reliability and widely range of use. The report is to describe qualification results of HC 1×8 MEMS Optical Switch based on Telcordia GR-1073-CORE.

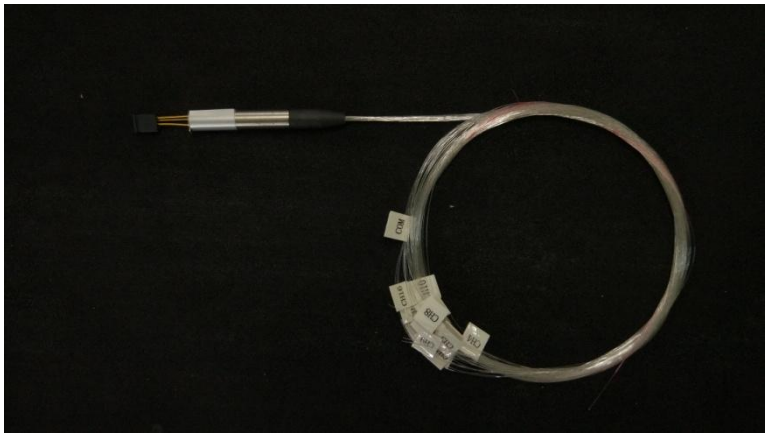

Figure 1 1×8 switch MEMS

Table 1: Test sample

Group No.	Sample Size	Sample SN
Group 1#	11	1100001, 1100002, 1100003, 1100004, 1100005, 1100006, 1100007, 1100008, 1100009, 1100010, 1100011,
Group 2#	11	1100012,1100013, 1100014, 1100015, 1100016, 1100017, 1100018, 1100019, 1100020, 1100021, 1100022,
Group 3#	11	1100023,1100024, 1100025, 1100026, 1100027, 1100028, 1100029, 1100030, 1100031, 1100032, 1100033
Group 4#	11	1100034,1100035, 1100036, 1100037, 1100038, 1100039, 1100040, 1100041, 1100042, 1100043, 1100044
Group 5#	11	1100045,1100046, 1100047, 1100048, 1100049, 1100050, 1100051, 1100052, 1100053, 1100054, 1100055
Group 6#	11	1100056,1100057, 1100058, 1100059, 1100060, 1100061, 1100062, 1100063, 1100064, 1100065, 1100066
Group 7#	11	1100067, 1100068, 1100069, 1100070, 1100071, 1100072, 1100073, 1100074, 1100075, 1100076, 1100077
Group 8#	11	1100078, 1100079, 1100080, 1100081, 1100082, 1100083, 1100084, 1100085, 1100086, 1100087, 1100088
Group 9#	11	1100089, 1100090, 1100091, 1100092, 1100093, 1100094, 1100095, 1100096, 1100097, 1100098, 1100099
Group 10#	11	1100100,1100101,1100102,1100103,1100104, 1100105, 1100106, 1100107, 1100108, 1100109, 1100110
Group 11#	11	1100111,1100112,1100113,1100114, 1100115, 1100116, 1100117, 1100118, 1100119, 1100120, 1100121

Table 2: Test Conditions

Sample	Test Item	description	Test Condition	Reference	Page	Other comment
Group 1	TC	Temperature Cycling	-40°C to 85°C(±2°C), Dwell time≥15min, 500pass/fail	GR-1073 6.6.2.4	6-7	/
Group 2	HC	Humidity Cycling	85-95% at 75°C; uncontrolled at 25°C and -40°C, Dwell time: 3 to 16 Hours, 5 complete cycles (each complete cycle has 5 sub-cycles)	GR-1073 6.6.2.5	6-7	/
Group 3	Damp	High Temperature Storage (Damp)	75°C(±2°C),90%(±5%)RH, 2000hrs	GR-1073 6.6.2.1	6-5	/
Group 4	VIB	Vibration	20G,20~2000Hz min/cy,4min/cy,4cy/axis	GR-1073 6.6.1.1	6-4	/
	MS	Mechanical Shock	5times/direction, 6directions,500G ,1ms	GR-1073 6.6.1.2	6-4	/
Group 5	DT	Durability Test	10^{11} effective switching cycles	GR-1073 5.2.4	5-15	/
Group 6	LTS	Low Temperature Storage	-40°C (±5°C) or the minimum storage. Temperature, uncontrolled. Humidity, 2000hrs	GR-1073 6.6.2.3	6-6	/
Group 7	HTS	High Temperature Storage (Dry)	85°C (±2°C) or the maximum storage temperature, RH<40%, 2000hrs	GR-1073 6.6.2.2	6-6	/
Group 8	SP	Side Pull	0.45kg, 90°, 5 s, 2 directions	GR-1073 5.2.2.3	5-9	/
	CR	Cable Retention (Straight Pull)	1.0 kg, 5 s, 3 consecutive times	GR-1073 5.2.2.4	5-9	/
Group 9	LTR (Dry)	The Dry Heat Test of Long term Qualification Reliability Requirements	85°C (±2°C) or the maximum storage temperature, RH<40%,all samples are fully measured at the initial and final 2000 hour points, but only some samples are switched at the interim measurement instants(168,500, and 1000 hours)	GR-1073 6.6.2.6	6-8	/

Sample	Test Item	description	Test Condition	Reference	Page	Other comment
Group 10	LTR (Damp)	The Damp Heat Test of Long term Qualification Reliability Requirements	75°C(±2°C),90%(±5%)RH, All samples are fully measured at the initial and final 2000 hour points, but only some samples are switched at the interim measurement instants(168,500, and 1000 hours)	GR-1073 6.6.2.6	6-8	/
Group 11	LTR (LTS)	The Low Temperature Storage Test of Long term Qualification Reliability Requirements	-40°C (±5°C) or the minimum storage. Temperature, uncontrolled. Humidity, all samples are fully measured at the initial and final 2000 hour points, but only some samples are switched at the interim measurement instants(168,500, and 1000 hours)	GR-1073 6.6.2.6	6-8	/

Table3: Pass and Fail Criteria

Parameters	Max. / Min. Allowable Value	Max change value	Reference
Optical Wavelength	1525nm to1570nm	/	/
Insertion Loss	≤ 1.5dB	≤ 0.5dB	GR-1073-CORE 4.2.1.2.3 GR-1221-CORE O6-4

Table 4: Reliability Test Results

Test Item		Date Started	Date Completed	Results (SS/Rej)	Observation
Group 1	Temperature Cycling	2017/9/1	2017/9/29	11/0	Pass.
Group 2	Humidity Cycling	2017/9/5	2017/11/28	11/0	Pass
Group 3	High Temperature Storage (Damp)	2017/9/3	2017/12/26	11/0	Pass
Group 4	Vibration	2017/9/15	2017/9/18	11/0	Pass
	Mechanical Shock	2017/9/16	2017/9/19	11/0	Pass
Group 5	Durability Test	2017/9/1	2017/12/25	11/0	Pass

Test Item		Date Started	Date Completed	Results (SS/Rej)	Observation
Group 6	Low Temperature Storage	2017/9/15	2017/12/15	11/0	Pass
Group 7	High Temperature Storage (Dry)	2017/9/20	2017/12/25	11/0	Pass
Group 8	Side Pull	2017/9/20	2017/9/25	11/0	Pass.
	Cable Retention (Straight Pull)	2017/9/20	2017/9/25	11/0	Pass.
Group 9	The Dry Heat Test of Long term Qualification Reliability Requirements	2017/9/15	2017/12/20	11/0	Pass.
Group 10	The Damp Heat Test of Long term Qualification Reliability Requirements	2017/9/15	2017/12/20	11/0	Pass.
Group 11	The Low Temperature Storage Test of Long term Qualification Reliability Requirements	2017/9/15	2017/12/20	11/0	Pass.

Table 5:Reliability Test Data

Group 1.						Group 2.				
		Temperature Cycling					Humidity Cycling			
SN	Port	Initial	Af 500cyc	Δ (dB)	Conc lusion	SN	Initial	Af 1000hrs	Δ (dB)	Conc lusion
1100001	IN→P1	0.64	0.62	-0.02	pass	1100012	0.63	0.60	-0.03	pass
	IN→P2	0.90	0.80	-0.10	pass		0.82	0.73	-0.09	pass
	IN→P3	0.76	0.79	0.03	pass		0.79	0.80	0.01	pass
	IN→P4	0.80	0.85	0.05	pass		0.85	0.88	0.03	pass
	IN→P5	0.61	0.69	0.08	pass		0.68	0.71	0.03	pass
	IN→P6	0.51	0.63	0.12	pass		0.63	0.63	0.00	pass
	IN→P7	0.66	0.76	0.10	pass		0.76	0.78	0.02	pass
	IN→P8	0.78	0.68	-0.10	pass		0.68	0.62	-0.06	pass
1100002	IN→P1	0.88	0.85	-0.03	pass	1100013	0.85	0.85	0.00	pass
	IN→P2	0.63	0.74	0.11	pass		0.74	0.72	-0.02	pass
	IN→P3	0.83	0.99	0.16	pass		0.99	1.00	0.01	pass
	IN→P4	0.69	0.69	0.00	pass		0.68	0.73	0.05	pass
	IN→P5	0.56	0.48	-0.08	pass		0.48	0.42	-0.06	pass
	IN→P6	0.58	0.47	-0.11	pass		0.47	0.48	0.01	pass
	IN→P7	0.67	0.75	0.08	pass		0.75	0.74	-0.01	pass
	IN→P8	0.68	0.80	0.12	pass		0.80	0.74	-0.06	pass
1100003	IN→P1	0.73	0.81	0.08	pass	1100014	0.81	0.83	0.02	pass
	IN→P2	0.67	0.71	0.04	pass		0.71	0.73	0.02	pass
	IN→P3	0.79	0.85	0.06	pass		0.85	0.97	0.12	pass
	IN→P4	0.81	0.78	-0.03	pass		0.78	0.79	0.01	pass
	IN→P5	0.74	0.84	0.10	pass		0.84	0.79	-0.05	pass
	IN→P6	0.77	0.83	0.06	pass		0.83	0.71	-0.12	pass
	IN→P7	0.81	0.89	0.08	pass		0.89	0.80	-0.09	pass
	IN→P8	0.62	0.66	0.04	pass		0.66	0.61	-0.05	pass
1100004	IN→P1	0.84	0.78	-0.06	pass	1100015	0.78	0.74	-0.04	pass
	IN→P2	0.88	0.88	0	pass		0.88	0.81	-0.07	pass
	IN→P3	0.84	0.81	-0.03	pass		0.81	0.97	0.16	pass
	IN→P4	0.85	0.9	0.05	pass		0.9	1.02	0.12	pass
	IN→P5	0.68	0.77	0.09	pass		0.77	0.89	0.12	pass
	IN→P6	0.63	0.73	0.1	pass		0.73	0.65	-0.08	pass
	IN→P7	0.57	0.52	-0.05	pass		0.52	0.48	-0.04	pass
	IN→P8	0.69	0.81	0.12	pass		0.81	0.82	0.01	pass

1100005	IN→P1	0.57	0.67	0.10	pass	1100016	0.67	0.57	-0.10	pass
	IN→P2	0.65	0.61	-0.04	pass		0.61	0.57	-0.04	pass
	IN→P3	0.89	0.78	-0.11	pass		0.78	0.73	-0.05	pass
	IN→P4	0.65	0.70	0.05	pass		0.70	0.67	-0.03	pass
	IN→P5	0.51	0.42	-0.09	pass		0.42	0.47	0.05	pass
	IN→P6	0.75	0.70	-0.05	pass		0.70	0.69	-0.01	pass
	IN→P7	0.64	0.57	-0.07	pass		0.57	0.67	0.10	pass
	IN→P8	0.76	0.90	0.14	pass		0.90	0.88	-0.02	pass
1100006	IN→P1	0.78	0.77	-0.01	pass	1100017	0.77	0.68	-0.09	pass
	IN→P2	0.59	0.61	0.02	pass		0.61	0.55	-0.06	pass
	IN→P3	0.51	0.54	0.03	pass		0.54	0.49	-0.05	pass
	IN→P4	0.74	0.8	0.06	pass		0.8	0.73	-0.07	pass
	IN→P5	0.8	0.85	0.05	pass		0.85	0.75	-0.1	pass
	IN→P6	0.82	0.84	0.02	pass		0.84	0.75	-0.09	pass
	IN→P7	0.48	0.42	-0.06	pass		0.42	0.39	-0.03	pass
	IN→P8	0.52	0.52	0	pass		0.52	0.53	0.01	pass
1100007	IN→P1	0.51	0.46	-0.05	pass	1100018	0.46	0.54	0.08	pass
	IN→P2	0.66	0.80	0.14	pass		0.80	0.94	0.14	pass
	IN→P3	0.76	0.67	-0.09	pass		0.67	0.70	0.03	pass
	IN→P4	0.62	0.54	-0.08	pass		0.54	0.54	0.00	pass
	IN→P5	0.72	0.76	0.04	pass		0.76	0.77	0.01	pass
	IN→P6	0.63	0.75	0.12	pass		0.75	0.89	0.14	pass
	IN→P7	0.59	0.64	0.05	pass		0.64	0.54	-0.10	pass
	IN→P8	0.59	0.69	0.1	pass		0.69	0.72	0.03	pass
1100008	IN→P1	0.72	0.74	0.02	pass	1100019	0.74	0.74	0.00	pass
	IN→P2	0.82	0.79	-0.03	pass		0.79	0.89	0.10	pass
	IN→P3	0.84	0.77	-0.07	pass		0.77	0.71	-0.06	pass
	IN→P4	0.53	0.70	0.17	pass		0.70	0.75	0.05	pass
	IN→P5	0.64	0.70	0.06	pass		0.70	0.67	-0.03	pass
	IN→P6	0.51	0.64	0.13	pass		0.64	0.76	0.12	pass
	IN→P7	0.86	0.85	-0.01	pass		0.85	0.77	-0.08	pass
	IN→P8	0.88	0.90	0.02	pass		0.90	0.92	0.02	pass
1100009	IN→P1	0.53	0.55	0.02	pass	1100020	0.55	0.50	-0.05	pass
	IN→P2	0.60	0.62	0.02	pass		0.62	0.77	0.15	pass
	IN→P3	0.35	0.47	0.12	pass		0.47	0.56	0.09	pass
	IN→P4	0.73	0.74	0.01	pass		0.74	0.81	0.07	pass
	IN→P5	0.85	0.80	-0.05	pass		0.80	0.79	-0.01	pass
	IN→P6	0.78	0.86	0.08	pass		0.86	0.89	0.03	pass
	IN→P7	0.72	0.75	0.03	pass		0.75	0.73	-0.02	pass
	IN→P8	0.84	0.88	0.04	pass		0.88	0.94	0.06	pass
1100010	IN→P1	0.79	0.78	-0.01	pass	1100021	0.78	0.86	0.08	pass

	IN→P2	0.78	0.76	-0.02	pass		0.76	0.72	-0.04	pass
	IN→P3	0.81	0.78	-0.03	pass		0.78	0.72	-0.06	pass
	IN→P4	0.72	0.84	0.12	pass		0.84	0.94	0.1	pass
	IN→P5	0.61	0.67	0.06	pass		0.67	0.71	0.04	pass
	IN→P6	0.49	0.63	0.14	pass		0.63	0.60	-0.03	pass
	IN→P7	0.73	0.70	-0.03	pass		0.70	0.75	0.05	pass
	IN→P8	0.66	0.68	0.02	pass		0.68	0.80	0.12	pass
1100011	IN→P1	0.68	0.59	-0.09	pass	1100022	0.59	0.53	-0.06	pass
	IN→P2	0.60	0.54	-0.06	pass		0.54	0.50	-0.04	pass
	IN→P3	0.75	0.71	-0.04	pass		0.71	0.73	0.02	pass
	IN→P4	0.86	0.94	0.08	pass		0.94	0.91	-0.03	pass
	IN→P5	0.80	0.85	0.05	pass		0.85	0.95	0.10	pass
	IN→P6	0.68	0.73	0.05	pass		0.73	0.81	0.08	pass
	IN→P7	0.58	0.67	0.09	pass		0.67	0.71	0.04	pass
	IN→P8	0.58	0.71	0.13	pass		0.71	0.69	-0.02	pass
	IL Max=0.99(dB) △ Max=0.16(dB)					**IL Max=1.02(dB) △ Max=0.16(dB)**				

Group 3.					
		High Temperature Storage(Damp)			
SN	Port	Initial	Af 2000hr	△ (dB)	Conclusion
1100023	IN→P1	0.63	0.80	0.17	pass
	IN→P2	0.55	0.62	0.07	pass
	IN→P3	0.45	0.62	0.17	pass
	IN→P4	0.48	0.64	0.16	pass
	IN→P5	0.62	0.78	0.16	pass
	IN→P6	0.67	0.81	0.14	pass
	IN→P7	0.55	0.64	0.09	pass
	IN→P8	0.48	0.65	0.17	pass
1100024	IN→P1	0.62	0.80	0.18	pass
	IN→P2	0.66	0.81	0.15	pass
	IN→P3	0.62	0.75	0.13	pass
	IN→P4	0.58	0.69	0.11	pass
	IN→P5	0.55	0.75	0.2	pass
	IN→P6	0.66	0.70	0.04	pass
	IN→P7	0.79	0.99	0.2	pass
	IN→P8	0.55	0.74	0.19	pass
1100025	IN→P1	0.76	0.92	0.16	pass
	IN→P2	0.37	0.56	0.19	pass
	IN→P3	0.39	0.61	0.23	pass
	IN→P4	0.50	0.62	0.12	pass
	IN→P5	0.58	0.70	0.12	pass

	IN→P6	0.72	0.85	0.13	pass
	IN→P7	0.67	0.87	0.2	pass
	IN→P8	0.63	0.84	0.21	pass
1100026	IN→P1	0.50	0.52	0.02	pass
	IN→P2	0.62	0.75	0.13	pass
	IN→P3	0.48	0.52	0.04	pass
	IN→P4	0.46	0.67	0.21	pass
	IN→P5	0.45	0.63	0.18	pass
	IN→P6	0.50	0.56	0.06	pass
	IN→P7	0.64	0.83	0.19	pass
	IN→P8	0.49	0.44	-0.05	pass
1100027	IN→P1	0.67	0.83	0.16	pass
	IN→P2	0.70	0.85	0.15	pass
	IN→P3	0.87	1.00	0.13	pass
	IN→P4	0.84	1.02	0.18	pass
	IN→P5	0.77	0.96	0.19	pass
	IN→P6	0.81	0.96	0.15	pass
	IN→P7	0.77	0.94	0.17	pass
	IN→P8	0.87	1.05	0.18	pass
1100028	IN→P1	0.79	0.93	0.14	pass
	IN→P2	0.71	0.82	0.11	pass
	IN→P3	0.77	0.97	0.2	pass
	IN→P4	0.85	1.05	0.2	pass
	IN→P5	0.69	0.86	0.17	pass
	IN→P6	0.57	0.72	0.15	pass
	IN→P7	0.60	0.72	0.12	pass
	IN→P8	0.60	0.69	0.09	pass
1100029	IN→P1	0.88	1.06	0.18	pass
	IN→P2	0.73	0.76	0.03	pass
	IN→P3	0.71	0.88	0.17	pass
	IN→P4	0.53	0.70	0.17	pass
	IN→P5	0.86	1.06	0.20	pass
	IN→P6	0.85	0.93	0.08	pass
	IN→P7	0.79	0.95	0.16	pass
	IN→P8	0.87	1.04	0.17	pass
1100030	IN→P1	0.63	0.77	0.14	pass
	IN→P2	0.74	0.90	0.16	pass
	IN→P3	0.73	0.92	0.19	pass
	IN→P4	0.61	0.80	0.19	pass
	IN→P5	0.81	1.01	0.20	pass
	IN→P6	0.87	0.99	0.12	pass

	IN→P7	0.80	0.99	0.19	pass
	IN→P8	0.50	0.58	0.08	pass
1100031	IN→P1	0.63	0.82	0.19	pass
	IN→P2	0.64	0.83	0.19	pass
	IN→P3	0.88	0.99	0.11	pass
	IN→P4	0.57	0.67	0.1	pass
	IN→P5	0.90	1.10	0.20	pass
	IN→P6	0.55	0.66	0.11	pass
	IN→P7	0.56	0.74	0.18	pass
	IN→P8	0.82	0.96	0.14	pass
1100032	IN→P1	0.73	0.92	0.19	pass
	IN→P2	0.51	0.66	0.15	pass
	IN→P3	0.75	0.95	0.20	pass
	IN→P4	0.65	0.79	0.14	pass
	IN→P5	0.59	0.80	0.21	pass
	IN→P6	0.88	1.06	0.18	pass
	IN→P7	0.90	1.07	0.17	pass
	IN→P8	0.56	0.66	0.10	pass
1100033	IN→P1	0.50	0.66	0.16	pass
	IN→P2	0.53	0.69	0.16	pass
	IN→P3	0.51	0.58	0.07	pass
	IN→P4	0.65	0.82	0.17	pass
	IN→P5	0.78	0.95	0.17	pass
	IN→P6	0.56	0.66	0.1	pass
	IN→P7	0.59	0.69	0.1	pass
	IN→P8	0.68	0.86	0.18	pass
Af HTS(damp) IL Max=1.10(dB) △ Max=0.23(dB)					

Group 4.									
		Vibration				Mechanical Shock			
SN	Port	Initial IL	Af VIB IL	Δ (dB)	Conc lusion	Initial IL	Af MS IL	Δ (dB)	Conc lusion
1100034	IN→P1	0.68	0.75	0.07	pass	0.75	0.86	0.11	pass
	IN→P2	0.55	0.62	0.07	pass	0.62	0.68	0.06	pass
	IN→P3	0.49	0.56	0.07	pass	0.56	0.55	-0.01	pass
	IN→P4	0.73	0.79	0.06	pass	0.79	0.90	0.11	pass
	IN→P5	0.75	0.81	0.06	pass	0.81	0.91	0.1	pass
	IN→P6	0.75	0.78	0.03	pass	0.78	0.69	-0.09	pass
	IN→P7	0.39	0.47	0.08	pass	0.47	0.50	0.03	pass
	IN→P8	0.53	0.56	0.03	pass	0.56	0.56	0.00	pass

1100035	IN→P1	0.74	0.67	-0.07	pass	0.67	0.63	-0.04	pass
	IN→P2	0.81	0.81	0.00	pass	0.81	0.78	-0.03	pass
	IN→P3	0.97	0.92	-0.05	pass	0.92	0.98	0.06	pass
	IN→P4	1.02	0.96	-0.06	pass	0.96	0.99	0.03	pass
	IN→P5	0.89	0.93	0.04	pass	0.93	0.99	0.06	pass
	IN→P6	0.65	0.67	0.02	pass	0.67	0.84	0.17	pass
	IN→P7	0.48	0.51	0.03	pass	0.51	0.57	0.06	pass
	IN→P8	0.82	0.83	0.01	pass	0.83	0.87	0.04	pass
1100036	IN→P1	0.83	0.80	-0.03	pass	0.80	0.83	0.03	pass
	IN→P2	0.73	0.74	0.01	pass	0.74	0.88	0.14	pass
	IN→P3	0.97	0.95	-0.02	pass	0.95	0.90	-0.05	pass
	IN→P4	0.79	0.84	0.05	pass	0.84	0.75	-0.09	pass
	IN→P5	0.79	0.73	-0.06	pass	0.73	0.65	-0.08	pass
	IN→P6	0.71	0.69	-0.02	pass	0.69	0.80	0.11	pass
	IN→P7	0.80	0.76	-0.04	pass	0.76	0.87	0.11	pass
	IN→P8	0.61	0.50	-0.11	pass	0.50	0.57	0.07	pass
1100037	IN→P1	0.60	0.63	0.03	pass	0.63	0.74	0.11	pass
	IN→P2	0.73	0.66	-0.07	pass	0.66	0.74	0.08	pass
	IN→P3	0.80	0.90	0.10	pass	0.90	1.00	0.10	pass
	IN→P4	0.88	0.93	0.05	pass	0.93	0.98	0.05	pass
	IN→P5	0.71	0.75	0.04	pass	0.75	0.74	-0.01	pass
	IN→P6	0.63	0.70	0.07	pass	0.70	0.69	-0.01	pass
	IN→P7	0.78	0.68	-0.10	pass	0.68	0.67	-0.01	pass
	IN→P8	0.62	0.77	0.15	pass	0.77	0.90	0.13	pass
1100038	IN→P1	0.57	0.57	0.00	pass	0.57	0.57	0.00	pass
	IN→P2	0.57	0.58	0.01	pass	0.58	0.67	0.09	pass
	IN→P3	0.73	0.87	0.14	pass	0.87	0.77	-0.10	pass
	IN→P4	0.67	0.57	-0.10	pass	0.57	0.62	0.05	pass
	IN→P5	0.47	0.39	-0.08	pass	0.39	0.56	0.17	pass
	IN→P6	0.69	0.84	0.15	pass	0.84	0.74	-0.10	pass
	IN→P7	0.67	0.88	0.21	pass	0.88	0.98	0.10	pass
	IN→P8	0.88	0.88	0.00	pass	0.88	0.88	0.00	pass
1100039	IN→P1	0.85	0.74	-0.11	pass	0.74	0.8	0.06	pass
	IN→P2	0.72	0.86	0.14	pass	0.86	0.85	-0.01	pass
	IN→P3	1.00	0.91	-0.09	pass	0.91	0.97	0.06	pass
	IN→P4	0.73	0.82	0.09	pass	0.82	0.84	0.02	pass
	IN→P5	0.42	0.49	0.07	pass	0.49	0.38	-0.11	pass
	IN→P6	0.48	0.48	0.00	pass	0.48	0.60	0.12	pass
	IN→P7	0.74	0.67	-0.07	pass	0.67	0.68	0.01	pass
	IN→P8	0.74	0.73	-0.01	pass	0.73	0.67	-0.06	pass
1100040	IN→P1	0.54	0.44	-0.1	pass	0.44	0.46	0.02	pass

	IN→P2	0.94	0.84	-0.1	pass	0.84	0.87	0.03	pass
	IN→P3	0.70	0.72	0.02	pass	0.72	0.73	0.01	pass
	IN→P4	0.54	0.71	0.17	pass	0.71	0.69	-0.02	pass
	IN→P5	0.77	0.78	0.01	pass	0.78	0.71	-0.07	pass
	IN→P6	0.89	0.83	-0.06	pass	0.83	0.84	0.01	pass
	IN→P7	0.54	0.52	-0.02	pass	0.52	0.55	0.03	pass
	IN→P8	0.72	0.86	0.14	pass	0.86	1.00	0.14	pass
1100041	IN→P1	0.74	0.84	0.10	pass	0.84	0.73	-0.11	pass
	IN→P2	0.89	0.79	-0.10	pass	0.79	0.79	0.00	pass
	IN→P3	0.71	0.88	0.17	pass	0.88	0.96	0.08	pass
	IN→P4	0.75	0.72	-0.03	pass	0.72	0.65	-0.07	pass
	IN→P5	0.67	0.78	0.11	pass	0.78	0.88	0.10	pass
	IN→P6	0.76	0.83	0.07	pass	0.83	0.86	0.03	pass
	IN→P7	0.77	0.81	0.04	pass	0.81	0.96	0.15	pass
	IN→P8	0.92	1.01	0.09	pass	1.01	0.91	-0.10	pass
1100042	IN→P1	0.50	0.67	0.17	pass	0.67	0.85	0.18	pass
	IN→P2	0.77	0.66	-0.11	pass	0.66	0.64	-0.02	pass
	IN→P3	0.56	0.52	-0.04	pass	0.52	0.53	0.01	pass
	IN→P4	0.81	0.79	-0.02	pass	0.79	0.82	0.03	pass
	IN→P5	0.79	0.81	0.02	pass	0.81	0.96	0.15	pass
	IN→P6	0.89	0.95	0.06	pass	0.95	0.98	0.03	pass
	IN→P7	0.73	0.70	-0.03	pass	0.70	0.80	0.10	pass
	IN→P8	0.94	0.99	0.05	pass	0.99	1.05	0.06	pass
1100043	IN→P1	0.86	0.88	0.02	pass	0.88	0.86	-0.02	pass
	IN→P2	0.72	0.73	0.01	pass	0.73	0.68	-0.05	pass
	IN→P3	0.72	0.80	0.08	pass	0.80	0.89	0.09	pass
	IN→P4	0.94	0.88	-0.06	pass	0.88	0.86	-0.02	pass
	IN→P5	0.71	0.68	-0.03	pass	0.68	0.73	0.05	pass
	IN→P6	0.60	0.65	0.05	pass	0.65	0.77	0.12	pass
	IN→P7	0.75	0.69	-0.06	pass	0.69	0.66	-0.03	pass
	IN→P8	0.80	0.84	0.04	pass	0.84	0.82	-0.02	pass
1100044	IN→P1	0.53	0.50	-0.03	pass	0.50	0.39	-0.11	pass
	IN→P2	0.50	0.38	-0.12	pass	0.38	0.30	-0.08	pass
	IN→P3	0.73	0.63	-0.1	pass	0.63	0.71	0.08	pass
	IN→P4	0.91	0.87	-0.04	pass	0.87	0.81	-0.06	pass
	IN→P5	0.95	0.90	-0.05	pass	0.90	1.03	0.13	pass
	IN→P6	0.81	0.80	-0.01	pass	0.80	0.69	-0.11	pass
	IN→P7	0.71	0.72	0.01	pass	0.72	0.79	0.07	pass
	IN→P8	0.69	0.69	0.00	pass	0.69	0.73	0.04	pass
Af Vibration & MS IL Max=1.05(dB)　　△ Max=0.17(dB)									

Group 5.					
		Durability Test			
SN	Port	Initial IL	Af IL	Δ (dB)	Conclusion
1100045	IN→P1	0.90	0.85	-0.05	pass
	IN→P2	0.74	0.76	0.02	pass
	IN→P3	0.74	0.87	0.13	pass
	IN→P4	0.87	0.95	0.18	pass
	IN→P5	0.82	0.79	-0.03	pass
	IN→P6	0.60	0.77	0.17	pass
	IN→P7	0.65	0.77	0.12	pass
	IN→P8	0.85	0.90	0.05	pass
1100046	IN→P1	0.62	0.78	0.16	pass
	IN→P2	0.66	0.81	0.15	pass
	IN→P3	0.62	0.85	0.23	pass
	IN→P4	0.58	0.77	0.19	pass
	IN→P5	0.55	0.73	0.18	pass
	IN→P6	0.66	0.70	0.04	pass
	IN→P7	0.79	1.01	0.22	pass
	IN→P8	0.55	0.76	0.21	pass
1100047	IN→P1	0.76	0.92	0.16	pass
	IN→P2	0.47	0.64	0.17	pass
	IN→P3	0.39	0.60	0.21	pass
	IN→P4	0.50	0.62	0.12	pass
	IN→P5	0.58	0.80	0.22	pass
	IN→P6	0.72	0.96	0.24	pass
	IN→P7	0.67	0.85	0.18	pass
	IN→P8	0.63	0.83	0.20	pass
1100048	IN→P1	0.50	0.56	0.06	pass
	IN→P2	0.62	0.74	0.12	pass
	IN→P3	0.48	0.52	0.04	pass
	IN→P4	0.46	0.55	0.09	pass
	IN→P5	0.45	0.66	0.21	pass
	IN→P6	0.50	0.59	0.09	pass
	IN→P7	0.64	0.81	0.15	pass
	IN→P8	0.49	0.48	-0.01	pass
1100049	IN→P1	0.67	0.85	0.18	pass
	IN→P2	0.70	0.85	0.15	pass
	IN→P3	0.87	1.00	0.13	pass
	IN→P4	0.84	1.02	0.18	pass
	IN→P5	0.77	0.96	0.19	pass

	IN→P6	0.81	1.04	0.23	pass
	IN→P7	0.77	1.00	0.23	pass
	IN→P8	0.87	1.09	0.22	pass
1100050	IN→P1	0.79	1.03	0.24	pass
	IN→P2	0.71	0.77	0.06	pass
	IN→P3	0.77	0.96	0.19	pass
	IN→P4	0.85	1.02	0.17	pass
	IN→P5	0.69	0.83	0.14	pass
	IN→P6	0.57	0.69	0.12	pass
	IN→P7	0.60	0.72	0.12	pass
	IN→P8	0.60	0.65	0.05	pass
1100051	IN→P1	0.88	1.06	0.18	pass
	IN→P2	0.73	0.77	0.04	pass
	IN→P3	0.71	0.93	0.22	pass
	IN→P4	0.53	0.69	0.16	pass
	IN→P5	0.86	1.06	0.20	pass
	IN→P6	0.85	0.91	0.06	pass
	IN→P7	0.79	1.01	0.22	pass
	IN→P8	0.87	1.00	0.13	pass
1100052	IN→P1	0.63	0.78	0.15	pass
	IN→P2	0.74	0.90	0.16	pass
	IN→P3	0.73	0.91	0.18	pass
	IN→P4	0.61	0.80	0.19	pass
	IN→P5	0.81	1.01	0.20	pass
	IN→P6	0.87	1.00	0.13	pass
	IN→P7	0.80	0.99	0.19	pass
	IN→P8	0.50	0.59	0.09	pass
1100053	IN→P1	0.63	0.81	0.18	pass
	IN→P2	0.64	0.82	0.18	pass
	IN→P3	0.88	0.99	0.11	pass
	IN→P4	0.57	0.67	0.1	pass
	IN→P5	0.90	1.12	0.22	pass
	IN→P6	0.55	0.66	0.11	pass
	IN→P7	0.56	0.83	0.27	pass
	IN→P8	0.82	1.04	0.22	pass
1100054	IN→P1	0.73	0.90	0.17	pass
	IN→P2	0.51	0.74	0.23	pass
	IN→P3	0.75	0.91	0.16	pass
	IN→P4	0.65	0.78	0.13	pass
	IN→P5	0.59	0.78	0.19	pass
	IN→P6	0.68	0.85	0.17	pass

	IN→P7	0.90	1.07	0.17	pass
	IN→P8	0.56	0.68	0.12	pass
1100055	IN→P1	0.50	0.66	0.16	pass
	IN→P2	0.53	0.69	0.16	pass
	IN→P3	0.51	0.59	0.08	pass
	IN→P4	0.65	0.82	0.17	pass
	IN→P5	0.78	0.93	0.15	pass
	IN→P6	0.56	0.66	0.1	pass
	IN→P7	0.59	0.68	0.09	pass
	IN→P8	0.68	0.86	0.18	pass
Af Durability IL Max=1.12(dB) △ Max=0.24(dB)					

Group 6.					
		Low Temperature Storage			
SN	Port	Initial IL	Af 2000hrs IL	△ (dB)	Conclusion
1100056	IN→P1	0.73	0.89	0.16	pass
	IN→P2	0.65	0.74	0.09	pass
	IN→P3	0.45	0.68	0.23	pass
	IN→P4	0.48	0.66	0.18	pass
	IN→P5	0.72	0.79	0.07	pass
	IN→P6	0.67	0.80	0.13	pass
	IN→P7	0.55	0.66	0.11	pass
	IN→P8	0.48	0.66	0.18	pass
1100057	IN→P1	0.62	0.78	0.16	pass
	IN→P2	0.66	0.82	0.16	pass
	IN→P3	0.62	0.85	0.23	pass
	IN→P4	0.58	0.78	0.2	pass
	IN→P5	0.55	0.74	0.19	pass
	IN→P6	0.66	0.71	0.05	pass
	IN→P7	0.89	1.10	0.21	pass
	IN→P8	0.55	0.76	0.21	pass
1100058	IN→P1	0.76	1.02	0.26	pass
	IN→P2	0.57	0.76	0.19	pass
	IN→P3	0.59	0.71	0.12	pass
	IN→P4	0.50	0.64	0.14	pass
	IN→P5	0.58	0.80	0.22	pass
	IN→P6	0.72	0.95	0.23	pass
	IN→P7	0.67	0.85	0.18	pass
	IN→P8	0.63	0.83	0.20	pass

1100059	IN→P1	0.50	0.56	0.06	pass
	IN→P2	0.62	0.73	0.11	pass
	IN→P3	0.48	0.50	0.02	pass
	IN→P4	0.56	0.73	0.17	pass
	IN→P5	0.45	0.69	0.24	pass
	IN→P6	0.50	0.56	0.06	pass
	IN→P7	0.74	0.90	0.16	pass
	IN→P8	0.49	0.44	-0.05	pass
1100060	IN→P1	0.67	0.83	0.16	pass
	IN→P2	0.70	0.85	0.15	pass
	IN→P3	0.87	1.01	0.14	pass
	IN→P4	0.84	1.02	0.18	pass
	IN→P5	0.77	0.94	0.17	pass
	IN→P6	0.81	1.04	0.23	pass
	IN→P7	0.77	1.02	0.25	pass
	IN→P8	0.87	1.09	0.22	pass
1100061	IN→P1	0.79	1.03	0.24	pass
	IN→P2	0.71	0.77	0.06	pass
	IN→P3	0.77	0.96	0.19	pass
	IN→P4	0.85	1.02	0.17	pass
	IN→P5	0.69	0.81	0.12	pass
	IN→P6	0.57	0.68	0.11	pass
	IN→P7	0.60	0.71	0.11	pass
	IN→P8	0.60	0.65	0.05	pass
1100062	IN→P1	0.88	1.06	0.18	pass
	IN→P2	0.73	0.76	0.03	pass
	IN→P3	0.71	0.83	0.12	pass
	IN→P4	0.53	0.68	0.15	pass
	IN→P5	0.86	1.06	0.20	pass
	IN→P6	0.85	0.93	0.08	pass
	IN→P7	0.89	1.05	0.16	pass
	IN→P8	0.87	1.04	0.17	pass
1100063	IN→P1	0.63	0.78	0.15	pass
	IN→P2	0.74	0.89	0.15	pass
	IN→P3	0.83	1.01	0.18	pass
	IN→P4	0.71	0.90	0.19	pass
	IN→P5	0.81	1.01	0.20	pass
	IN→P6	0.87	1.0	0.13	pass
	IN→P7	0.80	0.99	0.19	pass
	IN→P8	0.50	0.59	0.09	pass
1100064	IN→P1	0.63	0.81	0.18	pass

	IN→P2	0.64	0.82	0.18	pass
	IN→P3	0.88	1	0.12	pass
	IN→P4	0.57	0.66	0.09	pass
	IN→P5	0.90	1.12	0.22	pass
	IN→P6	0.55	0.66	0.11	pass
	IN→P7	0.56	0.73	0.17	pass
	IN→P8	0.82	1.04	0.22	pass
1100065	IN→P1	0.73	0.91	0.18	pass
	IN→P2	0.51	0.74	0.23	pass
	IN→P3	0.85	1.01	0.16	pass
	IN→P4	0.65	0.79	0.14	pass
	IN→P5	0.59	0.78	0.19	pass
	IN→P6	0.79	1.05	0.26	pass
	IN→P7	0.90	1.07	0.17	pass
	IN→P8	0.56	0.68	0.12	pass
1100066	IN→P1	0.50	0.76	0.26	pass
	IN→P2	0.53	0.69	0.16	pass
	IN→P3	0.51	0.6	0.09	pass
	IN→P4	0.75	0.93	0.17	pass
	IN→P5	0.78	0.93	0.15	pass
	IN→P6	0.56	0.65	0.09	pass
	IN→P7	0.59	0.68	0.09	pass
	IN→P8	0.68	0.86	0.18	pass
Af LTS IL Max=1.12(dB) △ Max=0.26(dB)					

Group 7.					
		High Temperature Storage(Dry)			
SN	Port	Initial IL	Af 2000hrs IL	△ (dB)	Conclusion
1100067	IN→P1	0.66	0.79	0.13	pass
	IN→P2	0.82	0.81	-0.01	pass
	IN→P3	0.76	0.85	0.09	pass
	IN→P4	0.67	0.9	0.23	pass
	IN→P5	0.7	0.86	0.16	pass
	IN→P6	0.87	0.96	0.09	pass
	IN→P7	0.84	0.83	-0.01	pass
	IN→P8	0.87	0.85	-0.02	pass
1100068	IN→P1	0.85	0.94	0.09	pass
	IN→P2	0.77	0.91	0.14	pass
	IN→P3	0.74	0.75	0.01	pass
	IN→P4	0.79	0.89	0.1	pass

	IN→P5	0.71	0.79	0.08	pass
	IN→P6	0.77	0.91	0.14	pass
	IN→P7	0.85	0.80	-0.05	pass
	IN→P8	0.69	0.85	0.16	pass
1100069	IN→P1	0.54	0.66	0.12	pass
	IN→P2	0.78	0.72	-0.06	pass
	IN→P3	0.82	0.91	0.09	pass
	IN→P4	0.88	0.92	0.04	pass
	IN→P5	0.80	0.84	0.04	pass
	IN→P6	0.71	0.79	0.08	pass
	IN→P7	0.53	0.64	0.11	pass
	IN→P8	0.86	0.93	0.07	pass
1100070	IN→P1	0.54	0.66	0.12	pass
	IN→P2	0.78	0.72	-0.06	pass
	IN→P3	0.82	0.92	0.1	pass
	IN→P4	0.88	0.94	0.06	pass
	IN→P5	0.73	0.84	0.11	pass
	IN→P6	0.76	0.79	0.03	pass
	IN→P7	0.53	0.62	0.09	pass
	IN→P8	0.86	0.92	0.06	pass
1100071	IN→P1	0.55	0.59	0.04	pass
	IN→P2	0.87	0.90	0.03	pass
	IN→P3	0.66	0.75	0.09	pass
	IN→P4	0.63	0.74	0.11	pass
	IN→P5	0.74	0.78	0.04	pass
	IN→P6	0.73	0.79	0.06	pass
	IN→P7	0.61	0.79	0.18	pass
	IN→P8	0.81	0.85	0.04	pass
1100072	IN→P1	0.79	0.88	0.09	pass
	IN→P2	0.52	0.64	0.12	pass
	IN→P3	0.76	0.84	0.08	pass
	IN→P4	0.63	0.69	0.06	pass
	IN→P5	0.74	0.75	0.01	pass
	IN→P6	0.88	0.99	0.11	pass
	IN→P7	0.57	0.66	0.09	pass
	IN→P8	0.9	1.05	0.15	pass
1100073	IN→P1	0.84	0.95	0.11	pass
	IN→P2	0.69	0.78	0.09	pass
	IN→P3	0.56	0.62	0.06	pass
	IN→P4	0.84	0.95	0.11	pass
	IN→P5	0.51	0.64	0.13	pass

	IN→P6	0.78	0.89	0.11	pass
	IN→P7	0.72	0.87	0.15	pass
	IN→P8	0.65	0.74	0.09	pass
1100074	IN→P1	0.66	0.74	0.08	pass
	IN→P2	0.63	0.79	0.16	pass
	IN→P3	0.74	0.72	-0.02	pass
	IN→P4	0.73	0.81	0.08	pass
	IN→P5	0.61	0.8	0.19	pass
	IN→P6	0.81	0.89	0.08	pass
	IN→P7	0.87	0.84	-0.03	pass
	IN→P8	0.8	0.92	0.12	pass
1100075	IN→P1	0.76	0.85	0.09	pass
	IN→P2	0.78	0.89	0.11	pass
	IN→P3	0.55	0.68	0.13	pass
	IN→P4	0.65	0.79	0.14	pass
	IN→P5	0.70	0.91	0.21	pass
	IN→P6	0.8	0.82	0.02	pass
	IN→P7	0.6	0.62	0.02	pass
	IN→P8	0.53	0.64	0.11	pass
1100076	IN→P1	0.66	0.79	0.13	pass
	IN→P2	0.53	0.62	0.09	pass
	IN→P3	0.67	0.79	0.12	pass
	IN→P4	0.58	0.71	0.13	pass
	IN→P5	0.86	0.99	0.13	pass
	IN→P6	0.68	0.82	0.14	pass
	IN→P7	0.6	0.78	0.18	pass
	IN→P8	0.75	0.79	0.04	pass
1100077	IN→P1	0.72	0.89	0.17	pass
	IN→P2	0.55	0.66	0.11	pass
	IN→P3	0.74	0.82	0.08	pass
	IN→P4	0.9	0.96	0.06	pass
	IN→P5	0.75	0.88	0.13	pass
	IN→P6	0.58	0.63	0.05	pass
	IN→P7	0.61	0.68	0.07	pass
	IN→P8	0.74	0.84	0.1	pass
Af HTS(dry) IL Max=1.05(dB) △ Max=0.21(dB)					

Group 8.									
		Side Pull				Cable Retention			
SN	Port	Initial IL	Af SP IL	Δ (dB)	Conclusion	Initial IL	Af CR IL	Δ (dB)	Conclusion
1100078	IN→P1	0.65	0.76	0.11	pass	0.76	0.70	-0.06	pass
	IN→P2	0.66	0.63	-0.03	pass	0.63	0.51	-0.12	pass
	IN→P3	0.75	0.86	0.11	pass	0.86	1.01	0.15	pass
	IN→P4	0.53	0.58	0.05	pass	0.58	0.57	-0.01	pass
	IN→P5	0.74	0.91	0.17	pass	0.91	0.98	0.07	pass
	IN→P6	0.81	0.88	0.07	pass	0.88	1.00	0.12	pass
	IN→P7	0.89	0.87	-0.02	pass	0.87	1.03	0.16	pass
	IN→P8	0.65	0.60	-0.05	pass	0.60	0.69	0.09	pass
1100079	IN→P1	0.85	0.99	0.14	pass	0.99	1.08	0.09	pass
	IN→P2	0.91	0.99	0.08	pass	0.99	1.08	0.09	pass
	IN→P3	0.55	0.45	-0.10	pass	0.45	0.51	0.06	pass
	IN→P4	0.63	0.54	-0.09	pass	0.54	0.66	0.12	pass
	IN→P5	0.79	0.69	-0.10	pass	0.69	0.81	0.12	pass
	IN→P6	0.86	0.98	0.12	pass	0.98	1.21	0.23	pass
	IN→P7	0.71	0.55	-0.16	pass	0.55	0.65	0.10	pass
	IN→P8	0.88	0.96	0.08	pass	0.96	1.02	0.06	pass
1100080	IN→P1	0.80	0.97	0.17	pass	0.97	0.89	-0.08	pass
	IN→P2	0.61	0.78	0.17	pass	0.78	0.74	-0.04	pass
	IN→P3	0.64	0.82	0.18	pass	0.82	0.76	-0.06	pass
	IN→P4	0.84	0.99	0.15	pass	0.99	1.09	0.10	pass
	IN→P5	0.77	0.87	0.10	pass	0.87	0.96	0.09	pass
	IN→P6	0.57	0.59	0.02	pass	0.59	0.52	-0.07	pass
	IN→P7	0.78	0.91	0.13	pass	0.91	1.11	0.20	pass
	IN→P8	0.66	0.74	0.08	pass	0.74	0.68	-0.06	pass
1100081	IN→P1	0.58	0.49	-0.09	pass	0.49	0.57	0.08	pass
	IN→P2	0.85	0.87	0.02	pass	0.87	0.88	0.01	pass
	IN→P3	0.59	0.56	-0.03	pass	0.56	0.66	0.10	pass
	IN→P4	0.71	0.75	0.04	pass	0.75	0.73	-0.02	pass
	IN→P5	0.58	0.58	0.00	pass	0.58	0.70	0.12	pass
	IN→P6	0.75	0.71	-0.04	pass	0.71	0.84	0.13	pass
	IN→P7	0.56	0.66	0.10	pass	0.66	0.70	0.04	pass
	IN→P8	0.91	0.86	-0.05	pass	0.86	1.01	0.15	pass
1100082	IN→P1	0.88	0.80	-0.08	pass	0.80	0.87	0.07	pass
	IN→P2	0.82	0.86	0.04	pass	0.86	0.95	0.09	pass

	IN→P3	0.54	0.63	0.09	pass	0.63	0.67	0.04	pass
	IN→P4	0.61	0.60	-0.01	pass	0.60	0.60	0.00	pass
	IN→P5	0.88	0.71	-0.17	pass	0.71	0.80	0.09	pass
	IN→P6	0.60	0.81	0.21	pass	0.81	0.92	0.11	pass
	IN→P7	0.82	0.81	-0.01	pass	0.81	0.77	-0.04	pass
	IN→P8	0.62	0.59	-0.03	pass	0.59	0.56	-0.03	pass
1100083	IN→P1	0.66	0.76	0.10	pass	0.76	0.88	0.12	pass
	IN→P2	0.89	0.91	0.02	pass	0.91	1.05	0.14	pass
	IN→P3	0.74	0.85	0.11	pass	0.85	0.97	0.12	pass
	IN→P4	0.66	0.79	0.13	pass	0.79	0.84	0.05	pass
	IN→P5	0.91	1.00	0.09	pass	1.00	1.25	0.25	pass
	IN→P6	0.71	0.76	0.05	pass	0.76	0.93	0.17	pass
	IN→P7	0.58	0.84	0.26	pass	0.84	0.89	0.05	pass
	IN→P8	0.82	0.90	0.08	pass	0.90	1.13	0.23	pass
1100084	IN→P1	0.90	1.03	0.13	pass	1.03	1.02	-0.01	pass
	IN→P2	0.78	1.03	0.25	pass	1.03	0.99	-0.04	pass
	IN→P3	0.56	0.50	-0.06	pass	0.50	0.50	0.00	pass
	IN→P4	0.79	0.67	-0.12	pass	0.67	0.71	0.04	pass
	IN→P5	0.87	0.94	0.07	pass	0.94	1.01	0.07	pass
	IN→P6	0.83	0.82	-0.01	pass	0.82	0.85	0.03	pass
	IN→P7	0.92	0.99	0.07	pass	0.99	1.04	0.05	pass
	IN→P8	0.90	0.96	0.06	pass	0.96	1.00	0.04	pass
1100085	IN→P1	0.87	0.94	0.07	pass	0.94	0.96	0.02	pass
	IN→P2	0.60	0.55	-0.05	pass	0.55	0.59	0.04	pass
	IN→P3	0.63	0.72	0.09	pass	0.72	0.75	0.03	pass
	IN→P4	0.85	0.94	0.09	pass	0.94	1.00	0.06	pass
	IN→P5	0.62	0.68	0.06	pass	0.68	0.73	0.05	pass
	IN→P6	0.55	0.67	0.12	pass	0.67	0.70	0.03	pass
	IN→P7	0.90	1.02	0.12	pass	1.02	1.08	0.06	pass
	IN→P8	0.55	0.78	0.23	pass	0.78	0.86	0.08	pass
1100086	IN→P1	0.64	0.60	-0.04	pass	0.60	0.69	0.09	pass
	IN→P2	0.59	0.72	0.13	pass	0.72	0.83	0.11	pass
	IN→P3	0.58	0.50	-0.08	pass	0.50	0.53	0.03	pass
	IN→P4	0.75	0.71	-0.04	pass	0.71	0.80	0.09	pass
	IN→P5	0.87	0.81	-0.06	pass	0.81	0.83	0.02	pass
	IN→P6	0.78	0.88	0.10	pass	0.88	0.82	-0.06	pass
	IN→P7	0.76	0.85	0.09	pass	0.85	0.93	0.08	pass
	IN→P8	0.78	0.71	-0.07	pass	0.71	0.66	-0.05	pass
1100087	IN→P1	0.77	0.81	0.04	pass	0.81	0.79	-0.02	pass
	IN→P2	0.59	0.80	0.21	pass	0.80	0.81	0.01	pass
	IN→P3	0.73	0.81	0.08	pass	0.81	0.79	-0.02	pass

	IN→P4	0.77	0.78	0.01	pass	0.78	0.82	0.04	pass
	IN→P5	0.80	0.83	0.03	pass	0.83	0.89	0.06	pass
	IN→P6	0.57	0.55	-0.02	pass	0.55	0.48	-0.07	pass
	IN→P7	0.83	0.95	0.12	pass	0.95	1.06	0.11	pass
	IN→P8	0.69	0.82	0.13	pass	0.82	0.77	-0.05	pass
1100088	IN→P1	0.63	0.68	0.05	pass	0.68	0.70	0.02	pass
	IN→P2	0.76	0.81	0.05	pass	0.81	0.84	0.03	pass
	IN→P3	0.72	0.79	0.07	pass	0.79	0.81	0.02	pass
	IN→P4	0.92	0.74	-0.18	pass	0.74	0.77	0.03	pass
	IN→P5	0.90	0.94	0.04	pass	0.94	0.94	0.00	pass
	IN→P6	0.80	0.80	0.00	pass	0.80	0.82	0.02	pass
	IN→P7	0.78	0.87	0.09	pass	0.87	0.91	0.04	pass
	IN→P8	0.85	0.96	0.11	pass	0.96	1.05	0.09	pass
Af SP&CR IL Max=1.25(dB)　　△ Max=0.26(dB)									

Group 9.								
	Dry Heat Test of Long term							
SN	Port	Initial IL	Af 168h	Af 500h	Af 1000h	Af 2000h	△ (dB)	Conclusion
1100089	IN→P1	0.73	0.79	0.81	0.82	0.83	0.10	pass
	IN→P2	0.65	0.72	0.70	0.70	0.71	0.09	pass
	IN→P3	0.55	0.68	0.71	0.73	0.75	0.20	pass
	IN→P4	0.58	0.64	0.68	0.69	0.72	0.14	pass
	IN→P5	0.62	0.77	0.75	0.77	0.77	0.15	pass
	IN→P6	0.67	0.80	0.78	0.79	0.80	0.13	pass
	IN→P7	0.55	0.64	0.60	0.65	0.67	0.12	pass
	IN→P8	0.58	0.66	0.71	0.71	0.72	0.14	pass
1100090	IN→P1	0.65	0.78	0.8	0.8	0.82	0.17	pass
	IN→P2	0.76	0.81	0.85	0.85	0.87	0.11	pass
	IN→P3	0.65	0.85	0.90	0.90	0.93	0.28	pass
	IN→P4	0.68	0.87	0.9	0.9	0.93	0.25	pass
	IN→P5	0.65	0.73	0.75	0.75	0.77	0.12	pass
	IN→P6	0.70	0.69	0.8	0.81	0.83	0.14	pass
	IN→P7	0.89	1.10	1.12	1.14	1.17	0.28	pass
	IN→P8	0.65	0.76	0.8	0.81	0.81	0.16	pass
1100091	IN→P1	0.76		1.02	1.02	1.02	0.26	pass
	IN→P2	0.57		0.74	0.75	0.75	0.18	pass
	IN→P3	0.39		0.59	0.59	0.59	0.20	pass
	IN→P4	0.50		0.62	0.63	0.63	0.13	pass
	IN→P5	0.58		0.80	0.80	0.81	0.23	pass
	IN→P6	0.72		0.95	0.95	0.96	0.24	pass

	IN→P7	0.67		0.85	0.86	0.87	0.20	pass
	IN→P8	0.63		0.83	0.83	0.83	0.20	pass
1100092	IN→P1	0.50		0.52	0.52	0.52	0.02	pass
	IN→P2	0.62		0.73	0.74	0.74	0.12	pass
	IN→P3	0.48		0.50	0.52	0.52	0.04	pass
	IN→P4	0.46		0.73	0.73	0.73	0.27	pass
	IN→P5	0.45		0.69	0.69	0.69	0.24	pass
	IN→P6	0.50		0.56	0.57	0.57	0.07	pass
	IN→P7	0.64		0.90	0.90	0.9	0.26	pass
	IN→P8	0.49		0.44	0.45	0.45	-0.05	pass
1100093	IN→P1	0.67			0.69	0.7	0.03	pass
	IN→P2	0.70			0.71	0.72	0.02	pass
	IN→P3	0.87			0.89	0.91	0.04	pass
	IN→P4	0.84			0.86	0.86	0.02	pass
	IN→P5	0.77			0.79	0.79	0.02	pass
	IN→P6	0.81			0.85	0.85	0.04	pass
	IN→P7	0.77			0.79	0.79	0.02	pass
	IN→P8	0.87			0.89	0.89	0.02	pass
1100094	IN→P1	0.79			0.83	0.83	0.04	pass
	IN→P2	0.71			0.79	0.79	0.08	pass
	IN→P3	0.77			0.85	0.85	0.08	pass
	IN→P4	0.85			0.94	0.94	0.09	pass
	IN→P5	0.69			0.76	0.76	0.07	pass
	IN→P6	0.57			0.68	0.68	0.11	pass
	IN→P7	0.60			0.73	0.73	0.13	pass
	IN→P8	0.60			0.66	0.66	0.06	pass
1100095	IN→P1	0.88				0.9	0.02	pass
	IN→P2	0.73				0.76	0.03	pass
	IN→P3	0.71				0.75	0.04	pass
	IN→P4	0.53				0.55	0.02	pass
	IN→P5	0.86				0.88	0.02	pass
	IN→P6	0.85				0.87	0.02	pass
	IN→P7	0.79				0.83	0.04	pass
	IN→P8	0.87				0.89	0.02	pass
1100096	IN→P1	0.63				0.79	0.16	pass
	IN→P2	0.74				0.88	0.14	pass
	IN→P3	0.73				0.87	0.14	pass
	IN→P4	0.61				0.79	0.18	pass
	IN→P5	0.81				0.97	0.16	pass
	IN→P6	0.87				1.07	0.2	pass
	IN→P7	0.80				1.03	0.23	pass

	IN→P8	0.50				0.76	0.26	pass
1100097	IN→P1	0.63				0.74	0.11	pass
	IN→P2	0.64				0.85	0.21	pass
	IN→P3	0.88				0.97	0.09	pass
	IN→P4	0.57				0.73	0.16	pass
	IN→P5	0.90				0.97	0.07	pass
	IN→P6	0.55				0.75	0.2	pass
	IN→P7	0.56				0.68	0.12	pass
	IN→P8	0.82				0.92	0.1	pass
1100098	IN→P1	0.73				0.95	0.22	pass
	IN→P2	0.51				0.79	0.28	pass
	IN→P3	0.75				0.80	0.05	pass
	IN→P4	0.65				0.87	0.22	pass
	IN→P5	0.59				0.79	0.2	pass
	IN→P6	0.68				0.89	0.21	pass
	IN→P7	0.90				0.99	0.09	pass
	IN→P8	0.56				0.79	0.23	pass
1100099	IN→P1	0.50				0.78	0.28	pass
	IN→P2	0.53				0.69	0.16	pass
	IN→P3	0.51				0.79	0.28	pass
	IN→P4	0.65				0.83	0.18	pass
	IN→P5	0.78				0.79	0.01	pass
	IN→P6	0.56				0.78	0.22	pass
	IN→P7	0.59				0.79	0.2	pass
	IN→P8	0.68				0.89	0.21	pass
	Af IL Max=1.17(dB) △ Max=0.28(dB)							

Group 10.								
	Damp Heat Test of Long term							
SN	Port	Initial IL	Af 168h	Af 500h	Af 1000h	Af 2000h	△ (dB)	Conclusion
1100100	IN→P1	0.85	0.82	0.93	0.94	0.99	0.17	pass
	IN→P2	0.77	0.74	0.80	0.82	0.82	0.08	pass
	IN→P3	0.70	0.79	0.90	0.93	0.93	0.23	pass
	IN→P4	0.77	0.76	0.72	0.72	0.72	0.05	pass
	IN→P5	0.81	0.99	0.97	0.98	0.98	0.18	pass
	IN→P6	0.80	0.85	0.74	0.76	0.79	0.11	pass
	IN→P7	0.75	0.78	0.92	0.93	0.93	0.18	pass
	IN→P8	0.74	0.74	0.95	0.96	0.96	0.22	pass
1100101	IN→P1	0.69	0.96	0.91	0.92	0.97	0.28	pass
	IN→P2	0.79	0.99	0.95	0.96	0.96	0.2	pass

	IN→P3	0.64	0.71	0.82	0.83	0.83	0.19	pass
	IN→P4	0.82	0.95	0.87	0.88	0.88	0.13	pass
	IN→P5	0.71	0.77	0.95	0.96	0.96	0.25	pass
	IN→P6	0.70	0.96	0.77	0.78	0.78	0.26	pass
	IN→P7	0.71	0.93	0.96	0.97	0.97	0.26	pass
	IN→P8	0.67	0.89	0.93	0.94	0.94	0.27	pass
1100102	IN→P1	0.87		0.74	0.75	0.75	0.13	pass
	IN→P2	0.71		0.82	0.83	0.83	0.12	pass
	IN→P3	0.83		0.86	0.87	0.87	0.04	pass
	IN→P4	0.69		0.82	0.83	0.83	0.14	pass
	IN→P5	0.78		0.94	0.95	0.95	0.17	pass
	IN→P6	0.64		0.79	0.8	0.85	0.21	pass
	IN→P7	0.69		0.74	0.75	0.78	0.09	pass
	IN→P8	0.72		0.90	0.91	0.91	0.19	pass
1100103	IN→P1	0.71		0.99	1.0	1.05	0.34	pass
	IN→P2	0.75		0.74	0.75	0.75	0.01	pass
	IN→P3	0.77		0.85	0.86	0.86	0.09	pass
	IN→P4	0.85		0.78	0.79	0.79	0.07	pass
	IN→P5	0.61		0.78	0.79	0.79	0.18	pass
	IN→P6	0.63		0.75	0.76	0.76	0.13	pass
	IN→P7	0.77		0.82	0.84	0.84	0.07	pass
	IN→P8	0.80		0.98	0.99	0.99	0.19	pass
1100104	IN→P1	0.86			0.96	0.96	0.1	pass
	IN→P2	0.83			0.95	0.95	0.12	pass
	IN→P3	0.75			0.9	0.9	0.15	pass
	IN→P4	0.62			0.74	0.74	0.12	pass
	IN→P5	0.60			0.76	0.76	0.16	pass
	IN→P6	0.62			0.78	0.78	0.16	pass
	IN→P7	0.80			0.96	0.96	0.16	pass
	IN→P8	0.77			0.93	0.93	0.16	pass
1100105	IN→P1	0.71			0.83	0.83	0.12	pass
	IN→P2	0.78			0.94	0.98	0.2	pass
	IN→P3	0.64			0.75	0.75	0.11	pass
	IN→P4	0.81			0.93	0.93	0.12	pass
	IN→P5	0.71			0.9	0.9	0.19	pass
	IN→P6	0.79			0.95	0.95	0.16	pass
	IN→P7	0.73			0.9	0.9	0.17	pass
	IN→P8	0.65			0.8	0.8	0.15	pass
1100106	IN→P1	0.65				0.92	0.27	pass
	IN→P2	0.68				0.99	0.31	pass
	IN→P3	0.74				0.84	0.1	pass

	IN→P4	0.88				0.96	0.08	pass
	IN→P5	0.88				1.08	0.2	pass
	IN→P6	0.84				0.96	0.12	pass
	IN→P7	0.74				0.99	0.22	pass
	IN→P8	0.76				0.83	0.07	pass
1100107	IN→P1	0.87				0.99	0.12	pass
	IN→P2	0.83				0.96	0.13	pass
	IN→P3	0.80				0.84	0.04	pass
	IN→P4	0.77				0.99	0.22	pass
	IN→P5	0.67				0.88	0.21	pass
	IN→P6	0.86				0.89	0.03	pass
	IN→P7	0.72				0.86	0.14	pass
	IN→P8	0.63				1.0	0.36	pass
1100108	IN→P1	0.86				0.87	0.01	pass
	IN→P2	0.61				0.69	0.08	pass
	IN→P3	0.62				0.84	0.22	pass
	IN→P4	0.73				0.99	0.26	pass
	IN→P5	0.67				0.70	0.03	pass
	IN→P6	0.66				0.78	0.12	pass
	IN→P7	0.73				0.89	0.16	pass
	IN→P8	0.76				0.79	0.03	pass
1100109	IN→P1	0.73				0.82	0.09	pass
	IN→P2	0.78				0.98	0.2	pass
	IN→P3	0.85				0.87	0.02	pass
	IN→P4	0.79				0.83	0.04	pass
	IN→P5	0.77				0.82	0.05	pass
	IN→P6	0.77				0.99	0.22	pass
	IN→P7	0.73				0.76	0.03	pass
	IN→P8	0.61				0.89	0.28	pass
1100110	IN→P1	0.74				0.96	0.22	pass
	IN→P2	0.69				0.76	0.07	pass
	IN→P3	0.62				0.78	0.16	pass
	IN→P4	0.70				0.96	0.26	pass
	IN→P5	0.84				0.93	0.09	pass
	IN→P6	0.78				0.9	0.12	pass
	IN→P7	0.63				0.92	0.29	pass
	IN→P8	0.79				0.99	0.2	pass
	Af IL Max=1.08(dB) △ Max=0.36(dB)							

Group 11.

	The Low Temperature Storage Test of Long term							
SN	Port	Initial IL	Af 168h	Af 500h	Af 1000h	Af 2000h	Δ (dB)	Conclusion
1100111	IN→P1	0.73	0.79	0.80	0.81	0.85	0.12	pass
	IN→P2	0.61	0.72	0.69	0.72	0.76	0.15	pass
	IN→P3	0.61	0.68	0.71	0.73	0.73	0.12	pass
	IN→P4	0.63	0.64	0.68	0.71	0.71	0.08	pass
	IN→P5	0.66	0.77	0.75	0.76	0.76	0.11	pass
	IN→P6	0.8	0.80	0.78	0.8	0.8	0.02	pass
	IN→P7	0.77	0.74	0.70	0.8	0.8	0.06	pass
	IN→P8	0.78	0.76	0.71	0.76	0.79	0.08	pass
1100112	IN→P1	0.82	0.78	0.8	0.83	0.87	0.09	pass
	IN→P2	0.82	0.81	0.85	0.86	0.86	0.04	pass
	IN→P3	0.83	0.85	0.90	0.92	0.92	0.09	pass
	IN→P4	0.74	0.87	0.9	0.93	0.93	0.19	pass
	IN→P5	0.85	0.73	0.75	0.78	0.78	0.12	pass
	IN→P6	0.64	0.69	0.8	0.82	0.82	0.18	pass
	IN→P7	0.98	1.10	1.12	1.15	1.19	0.21	pass
	IN→P8	0.78	0.76	0.8	0.84	0.84	0.06	pass
1100113	IN→P1	0.84		1.02	1.03	1.03	0.19	pass
	IN→P2	0.9		0.74	0.76	0.76	0.16	pass
	IN→P3	0.68		0.59	0.67	0.67	0.09	pass
	IN→P4	0.83		0.62	0.71	0.79	0.21	pass
	IN→P5	0.76		0.80	0.82	0.82	0.06	pass
	IN→P6	0.76		0.95	0.96	0.96	0.2	pass
	IN→P7	0.89		0.85	0.87	0.87	0.04	pass
	IN→P8	0.74		0.83	0.85	0.85	0.11	pass
1100114	IN→P1	0.65		0.52	0.56	0.56	0.13	pass
	IN→P2	0.65		0.73	0.76	0.76	0.11	pass
	IN→P3	0.68		0.50	0.6	0.6	0.18	pass
	IN→P4	0.89		0.73	0.77	0.77	0.16	pass
	IN→P5	0.76		0.69	0.76	0.83	0.14	pass
	IN→P6	0.72		0.56	0.66	0.66	0.16	pass
	IN→P7	0.8		0.90	0.94	0.94	0.14	pass
	IN→P8	0.58		0.44	0.54	0.54	0.14	pass
1100115	IN→P1	0.72			0.83	0.83	0.11	pass
	IN→P2	0.75			0.86	0.86	0.11	pass
	IN→P3	0.72			0.91	0.91	0.19	pass
	IN→P4	0.88			0.92	0.93	0.05	pass
	IN→P5	0.76			0.91	0.91	0.15	pass
	IN→P6	0.84			0.94	0.97	0.13	pass

	IN→P7	0.68			0.83	0.85	0.17	pass
	IN→P8	0.68			0.82	0.89	0.21	pass
1100116	IN→P1	0.7			0.78	0.78	0.08	pass
	IN→P2	0.62			0.82	0.82	0.2	pass
	IN→P3	0.69			0.84	0.95	0.26	pass
	IN→P4	0.61			0.83	0.83	0.22	pass
	IN→P5	0.81			0.92	0.92	0.11	pass
	IN→P6	0.61			0.78	0.78	0.17	pass
	IN→P7	0.82			0.93	0.93	0.11	pass
	IN→P8	0.68			0.82	0.82	0.14	pass
1100117	IN→P1	0.8				0.94	0.14	pass
	IN→P2	0.82				1.07	0.25	pass
	IN→P3	0.86				0.92	0.06	pass
	IN→P4	0.61				0.92	0.31	pass
	IN→P5	0.78				1.03	0.25	pass
	IN→P6	0.76				0.97	0.21	pass
	IN→P7	0.73				0.95	0.22	pass
	IN→P8	0.66				0.75	0.09	pass
1100118	IN→P1	0.87				0.9	0.03	pass
	IN→P2	0.73				0.8	0.07	pass
	IN→P3	0.8				0.96	0.16	pass
	IN→P4	0.87				1.15	0.27	pass
	IN→P5	0.61				0.97	0.36	pass
	IN→P6	0.82				0.93	0.11	pass
	IN→P7	0.79				0.8	0.01	pass
	IN→P8	0.82				0.93	0.11	pass
1100119	IN→P1	0.8				0.82	0.02	pass
	IN→P2	0.87				1.15	0.28	pass
	IN→P3	0.77				0.84	0.07	pass
	IN→P4	0.71				0.8	0.09	pass
	IN→P5	0.72				0.76	0.04	pass
	IN→P6	0.61				0.83	0.22	pass
	IN→P7	0.64				0.97	0.33	pass
	IN→P8	0.68				0.72	0.04	pass
1100120	IN→P1	0.85				0.96	0.11	pass
	IN→P2	0.86				0.87	0.01	pass
	IN→P3	0.71				0.85	0.14	pass
	IN→P4	0.75				0.97	0.22	pass
	IN→P5	0.76				0.98	0.22	pass
	IN→P6	0.76				0.98	0.22	pass
	IN→P7	0.64				0.98	0.34	pass

	IN→P8	0.84				0.9	0.06	pass
1100121	IN→P1	0.64				0.91	0.27	pass
	IN→P2	0.81				1.08	0.27	pass
	IN→P3	0.76				0.79	0.03	pass
	IN→P4	0.75				1.03	0.28	pass
	IN→P5	0.72				0.99	0.27	pass
	IN→P6	0.73				0.98	0.25	pass
	IN→P7	0.8				1.06	0.26	pass
	IN→P8	0.84				0.89	0.05	pass
	Af IL Max=1.19(dB) △ Max=0.36(dB)							

Table 6: Conclusion

According to the above experimental data, we can draw the following conclusion that the MEMS switch meets the GR-1073-CORE . Experimental success.