

TECHNICAL REPORT

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Report title: VERIFY BR100 LOSS SYSTEM

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Checked by:

Reviewed by Technical Advisor
(if any)

Approved by:

I. Background:

To catch up demand of SC-APC AFL products, FOV bought new Loss system: BR-100.

We verify performance of BR100 and propose using BR-100 for mass production.

This technical report is reviewing loss data compare between BR5 and BR-100.

II. Conclusion:

Loss data measured on BR100 are not much difference compare with loss data on BR5 (Average of IL variance is 0.013~0.015; Average of RL variance is 0.5~0.75)

We can apply BR100 for mass production

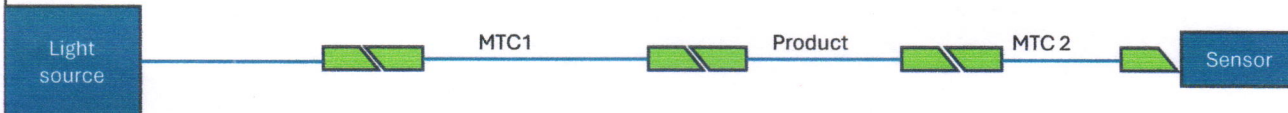
III. Analysis (Yield ratio, Productivity, Cpk, Process Reliability, product's reliability...):

Loss systems

BR5: F12MME0349

BR100: F24MME0390

Measuring MAP:



Keep same criteria for 2 systems:

MTC1: CMM0113-230809-001

MTC2: CMM0120-2403767378-00300

Adaptor: SC 241815, SC 241817

Connector	BR100				BR5				Variance loss data BR100 ~BR5			
	IL-1310	RL-1310	IL-1550	RL-1550	IL-1310	RL-1310	IL-1550	RL-1550	IL-1310	RL-1310	IL-1550	RL-1550
CMM0290-230412-001-1L	0.092	58.1	0.108	57.6	0.080	58.7	0.120	57.9	0.012	0.600	0.012	0.300
CMM0290-230412-001-1R	0.271	58.3	0.236	57.8	0.270	59.2	0.220	56.3	0.001	0.900	0.016	1.500
CMM0290-230412-001-2L	0.185	58.2	0.176	57.8	0.160	59.1	0.180	57.8	0.025	0.900	0.004	0.000
CMM0290-230412-001-2R	0.107	58.8	0.103	57.7	0.120	59.4	0.127	57.6	0.013	0.600	0.024	0.100
CMM0290-230412-001-3L	0.160	58.1	0.151	57.7	0.180	59.8	0.160	59.7	0.020	1.700	0.009	2.000
CMM0290-230412-001-3R	0.100	58.0	0.106	57.6	0.090	58.6	0.090	58.9	0.010	0.600	0.016	1.300
CMM0290-230412-001-4L	0.101	58.6	0.108	58.4	0.100	58.1	0.120	57.6	0.001	0.500	0.012	0.800
CMM0290-230412-001-4R	0.138	58.7	0.114	58.5	0.120	58.2	0.130	58.1	0.018	0.500	0.016	0.400
CMM0290-230412-001-5L	0.064	58.5	0.078	58.3	0.080	57.3	0.080	58.3	0.016	1.200	0.002	0.000
CMM0290-230412-001-5R	0.134	58.6	0.133	58.4	0.150	58.3	0.140	58.5	0.016	0.300	0.007	0.100
CMM0290-230412-001-6L	0.124	58.6	0.119	58.4	0.110	58.1	0.100	58.5	0.014	0.500	0.019	0.100
CMM0290-230412-001-6R	0.148	58.6	0.143	58.4	0.160	57.5	0.160	58.9	0.012	1.100	0.017	0.500
CMM0290-230412-001-7L	0.151	58.6	0.129	58.4	0.130	58.2	0.120	58.1	0.021	0.400	0.009	0.300
CMM0290-230412-001-7R	0.074	58.5	0.063	58.3	0.050	57.6	0.070	57.8	0.024	0.900	0.007	0.500
CMM0290-230412-001-8L	0.087	58.5	0.096	58.3	0.090	58.4	0.100	58.2	0.003	0.100	0.004	0.100
CMM0290-230412-001-8R	0.061	58.5	0.062	58.3	0.043	58.4	0.060	58.0	0.018	0.100	0.002	0.300
CMM0290-230412-001-9L	0.267	58.8	0.230	58.6	0.260	57.9	0.210	58.4	0.007	0.900	0.020	0.200
CMM0290-230412-001-9R	0.165	58.7	0.167	58.5	0.140	58.1	0.180	58.1	0.025	0.600	0.013	0.400
CMM0290-230412-001-10L	0.146	58.6	0.141	58.4	0.130	58.4	0.160	58.2	0.016	0.200	0.019	0.200
CMM0290-230412-001-10R	0.057	58.5	0.082	58.3	0.040	57.7	0.060	57.8	0.017	0.800	0.022	0.500
CMM0290-230412-001-11L	0.123	58.6	0.143	58.4	0.120	58.6	0.120	59.0	0.003	0.000	0.023	0.600
CMM0290-230412-001-11R	0.107	58.5	0.113	58.3	0.120	58.6	0.100	59.4	0.013	0.100	0.013	1.100

	BR100				BR5				Variance loss data BR100 ~BR5			
Connector	IL-1310	RL-1310	IL-1550	RL-1550	IL-1310	RL-1310	IL-1550	RL-1550	IL-1310	RL-1310	IL-1550	RL-1550
CMM0290-230412-001-12L	0.067	58.2	0.086	57.7	0.091	58.4	0.102	58.0	0.024	0.200	0.016	0.300
CMM0290-230412-001-12F	0.112	58.1	0.118	57.7	0.090	58.3	0.120	57.9	0.022	0.200	0.002	0.200
CMM0290-230412-001-13L	0.065	58.0	0.077	57.6	0.050	58.6	0.060	59.4	0.015	0.600	0.017	1.800
CMM0290-230412-001-13F	0.094	58.1	0.089	57.7	0.070	58.6	0.070	59.2	0.024	0.500	0.019	1.500
CMM0290-230412-001-14L	0.098	58.0	0.095	57.6	0.075	58.2	0.072	59.1	0.023	0.200	0.023	1.500
CMM0290-230412-001-14F	0.093	58.2	0.070	57.8	0.070	58.5	0.070	59.0	0.023	0.300	0.000	1.200
CMM0290-230412-001-15L	0.156	58.1	0.132	57.7	0.140	58.2	0.110	59.1	0.016	0.100	0.022	1.400
CMM0290-230412-001-15F	0.107	58.1	0.102	57.7	0.090	58.7	0.080	59.4	0.017	0.600	0.022	1.700
CMM0290-230412-001-16L	0.104	58.0	0.103	57.6	0.090	58.8	0.090	58.7	0.014	0.800	0.013	1.100
CMM0290-230412-001-16F	0.112	58.1	0.109	57.6	0.100	58.6	0.100	59.6	0.012	0.500	0.009	2.000
Mean	BR100				BR5				Variance loss data BR100 ~BR5			
	IL-1310	RL-1310	IL-1550	RL-1550	IL-1310	RL-1310	IL-1550	RL-1550	IL-1310	RL-1310	IL-1550	RL-1550
	0.121	58.369	0.118	58.034	0.113	58.409	0.115	58.453	0.015	0.547	0.013	0.750
Standard deviation	0.051	0.267	0.041	0.368	0.053	0.524	0.043	0.739	0.007	0.378	0.007	0.647

As manual of BR5 and BR100:

Accuracy	BR5	BR100	Total
Insertion loss accuracy	±0.05dB	±0.03dB	±0.08dB
Return loss accuracy	±0.4dB	±0.4dB	±0.8dB

Variance loss data BR100 ~BR5				
	IL-1310	RL-1310	IL-1550	RL-1550
Mean	0.015	0.547	0.013	0.750
Standard deviation	0.007	0.378	0.007	0.647
Judgement	<0.08: Pass	<0.8: Pass	<0.08: Pass	<0.8: Pass

Conclusion: Average variance of loss data compare BR100 with BR5 is in control of accuracy of 2 systems (Average IL variance: 0.013~0.015 <0.08dB; average RL variance: 0.55~0.75<0.8dB)

V. Others:

N/A

PRE2 controlled