

Summary of module production in Japan

- Defective ASIC's in hybrids
- Defective channels in hybrids and modules
- Midyf and loCoolingFacing b
- I-V
- Module Class Categories

Summary of Defective ASIC's

	01/02/02 - 25/09/02	26/09/02 - 26/11/02	29/11/02 - 21/02/03	24/02/03 - 08/04/03	09/04/03 - 31/08/03	31/08/03 - 30/11/03	All
Total # of Hybrids	113	102	216	89	187	97	804
# of Hybrids with defective ASIC's	20	19	22	8	24	15	108
# of defective ASIC's	20	20	27	8	31	16	122
Rate (Hybrids)	17.7%	18.63%	10.19%	8.99%	12.8%	15.5%	13.4%
Rate (ASIC's)	1.47%	1.63%	1.04%	0.75%	1.38%	1.37%	1.26%

Date (yymmdd)	Dead	STUCK CELL	Large Gain Spread (LGS)			TrimDAC loading failed	Negative offset	High offset	Low gain (<45 mV/°C)	Abnormal cal line	SAWTO OTH s- curve	Block of "partbon ded"	Others	defective ASIC's
			ISH=30u A Warm	ISH=30u A COLD	ISH=20u A COLD									
030501														0
030601														0
030701	15	8	5	35	2	2	16	5	2	6	3	0	2	61
030801	15	8	6	41	7	3	21	5	2	7	3	14	5	90
030901	15	8	6	41	7	3	21	5	2	7	3	14	5	90
031001	15	8	6	41	7	3	21	5	2	7	3	14	5	90
031101	15	9	6	42	7	3	22	5	2	8	3	19	9	102
031201	19	12	11	42	15	3	22	5	2	9	4	22	9	122

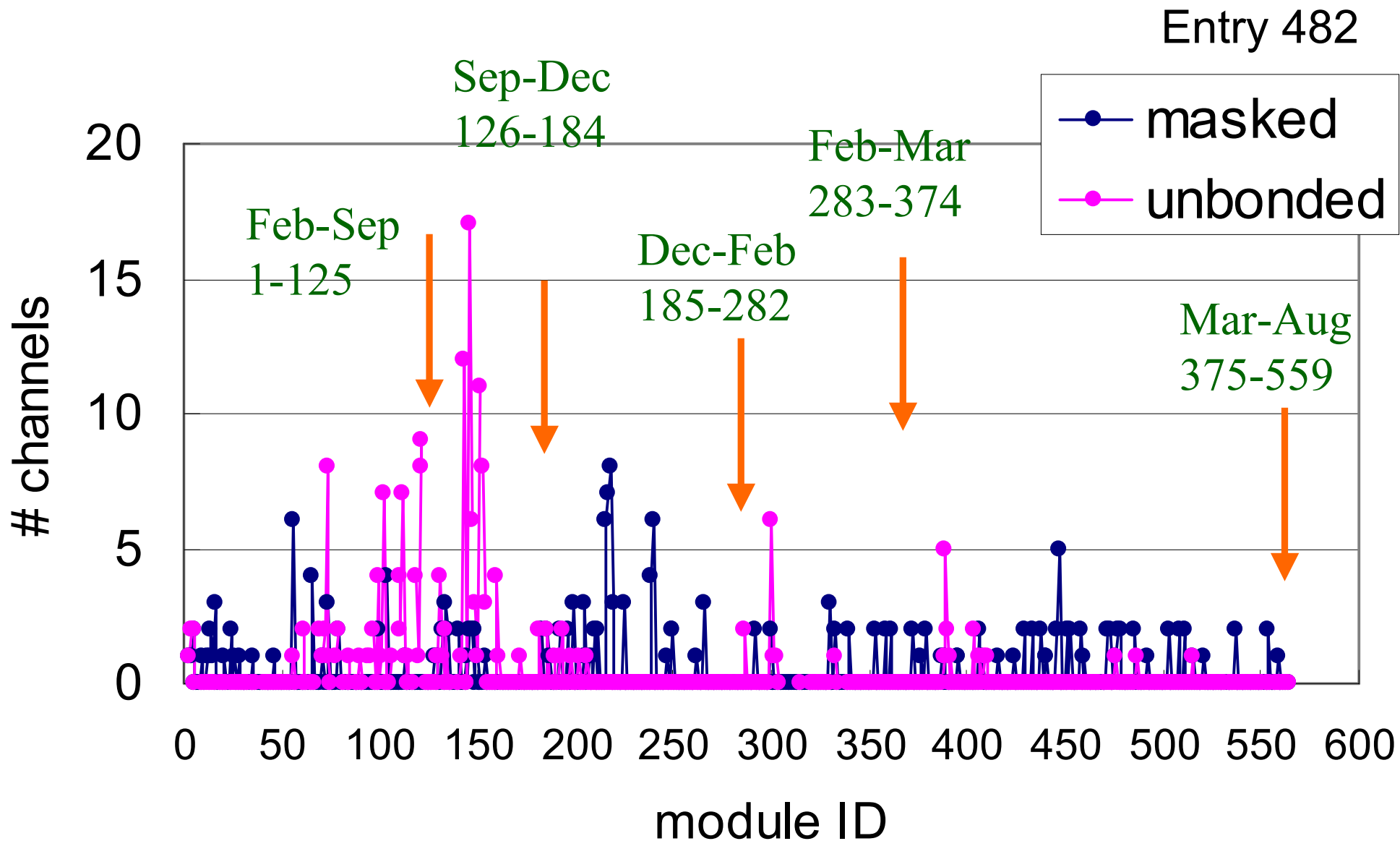
Summary of Defective Channels in Hybrids

	01/02/02 - 25/09/02 (1-165)	26/09/02 - 26/11/02 (166-244)	29/11/02 - 21/02/03 (245-343)	24/02/03 - 08/04/03 (344-429)	09/04/03 - 31/08/03 (430-578)	All (1-578)
# of Hybrids (w/o def ASIC's)	137	77	95	85	146	540
Pipeline(ch)	2	4	0	1	1	8
DEAD(ch)	2	9	0	0	0	11
STUCK(ch)	3	13	0	1	0	17
Noisy(ch)	29	15	21	15	26	106
Total(ch)	36	41	21	17	27	142
Average(ch) per Hybrid	0.26	0.53	0.22	0.20	0.18	0.26

Summary of Defective Channels in Module

	01/02/02 - 25/09/02 (1-125)	26/09/02 - 26/11/02 (126-184)	29/11/02 - 21/02/03 (185-282)	24/02/03 - 08/04/03 (283-374)	09/04/03 - 31/08/03 (375-559)	09/04/03 - 31/08/03 (508-564)	All (1-559)
# of Modules	95	50	90	67	149	30	481
Pipeline(ch)	1(1)	1(1)	3(3)	0(0)	2(2)	0(0)	7(7)
DEAD(ch)	2(2)	0(0)	9(9)	0(0)	0(0)	0(0)	11(11)
STUCK(ch)	3(3)	0(0)	12(12)	0(0)	1(1)	0(0)	16(16)
Noisy(ch)	32(17)	25(14)	40(19)	14(22)	50(31)	14(5)	175(108)
unbonded(ch)	95	76	9	11	17	0	208
Total(ch)	133	102	75	25	70	44	449
Average(ch) per Module	1.4	2.0	0.8	0.4	0.5	1.4	0.9

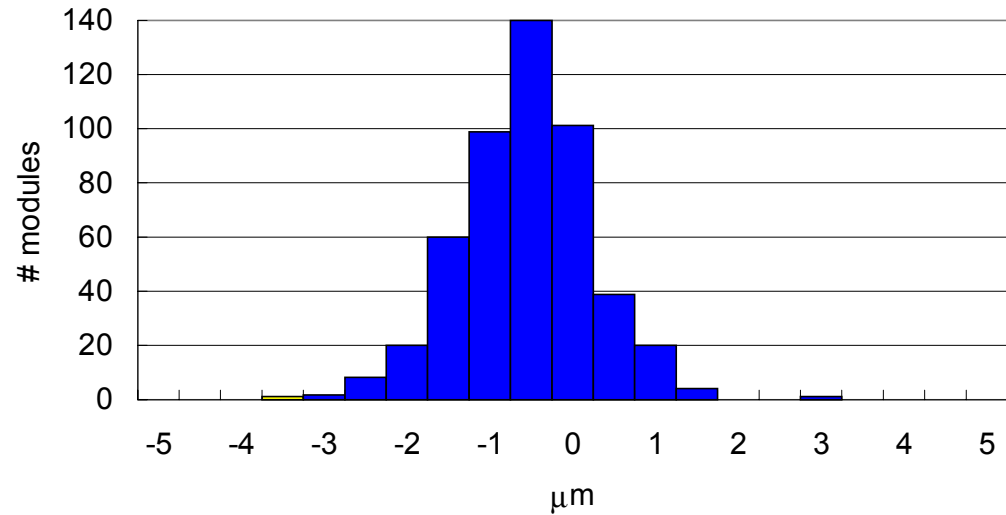
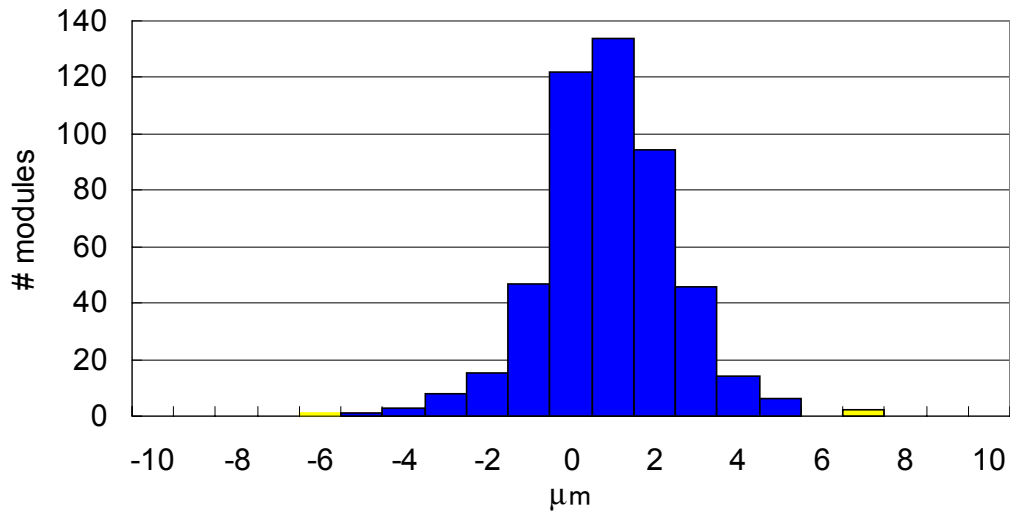
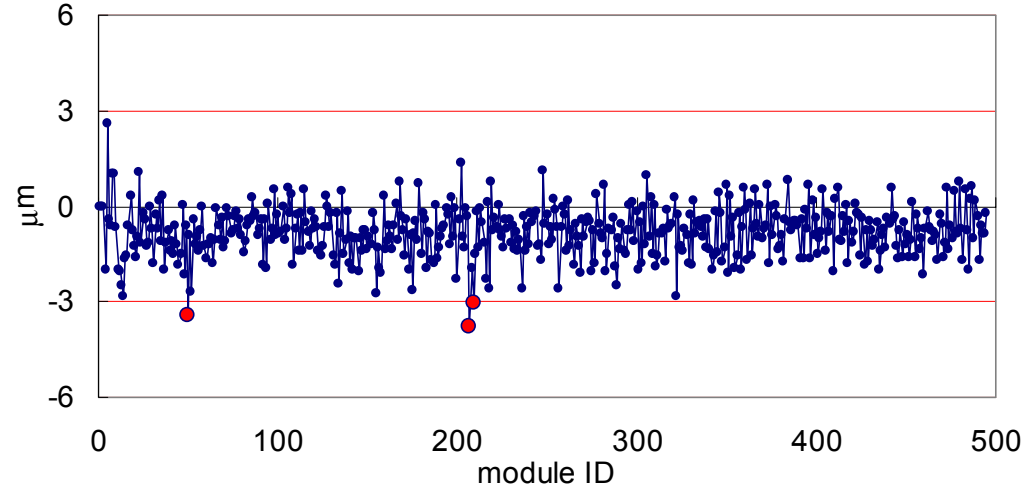
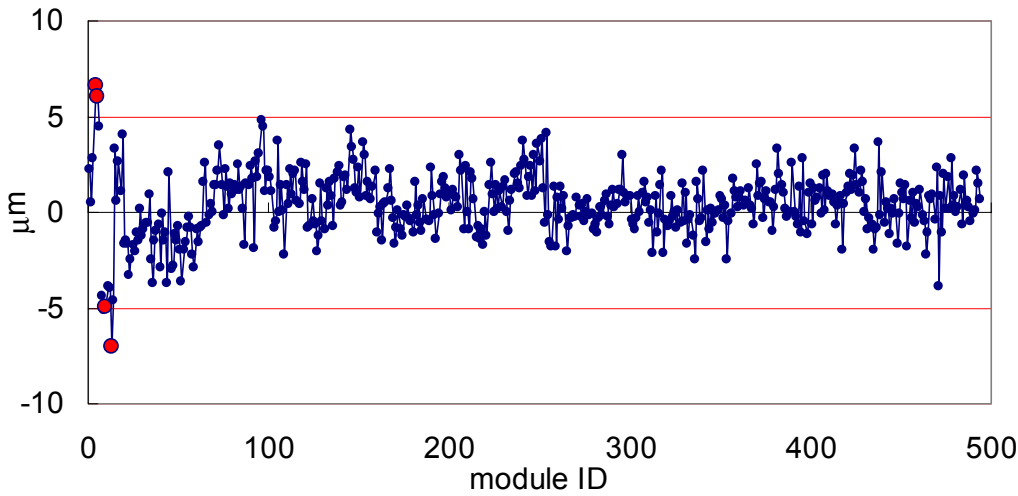
Defective Channels in Modules



Midyf and loCoolingFacing b

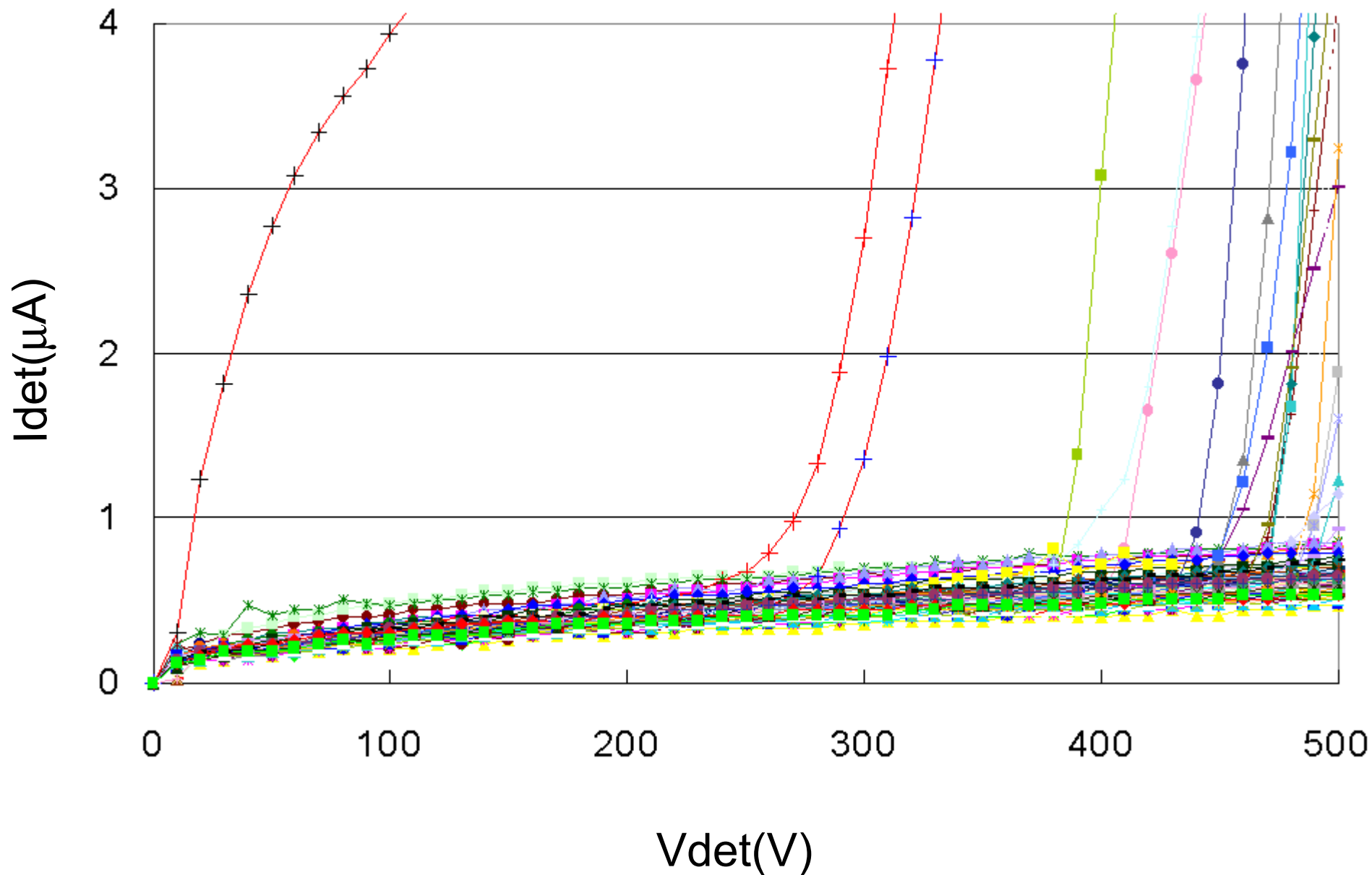
midyf

loCoolingFacing b



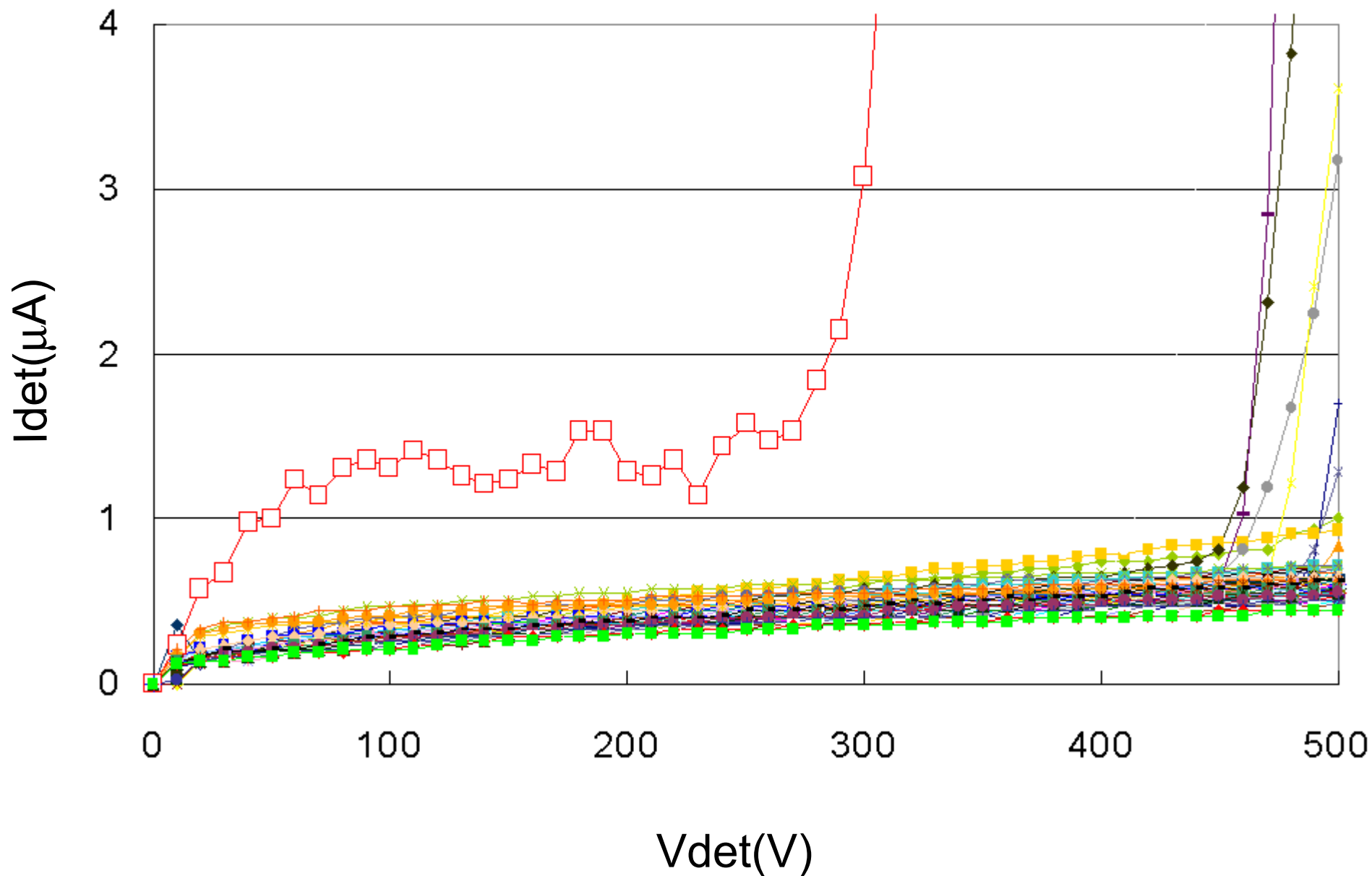
IV curve_mDaqLT_@20C

Module#001-200



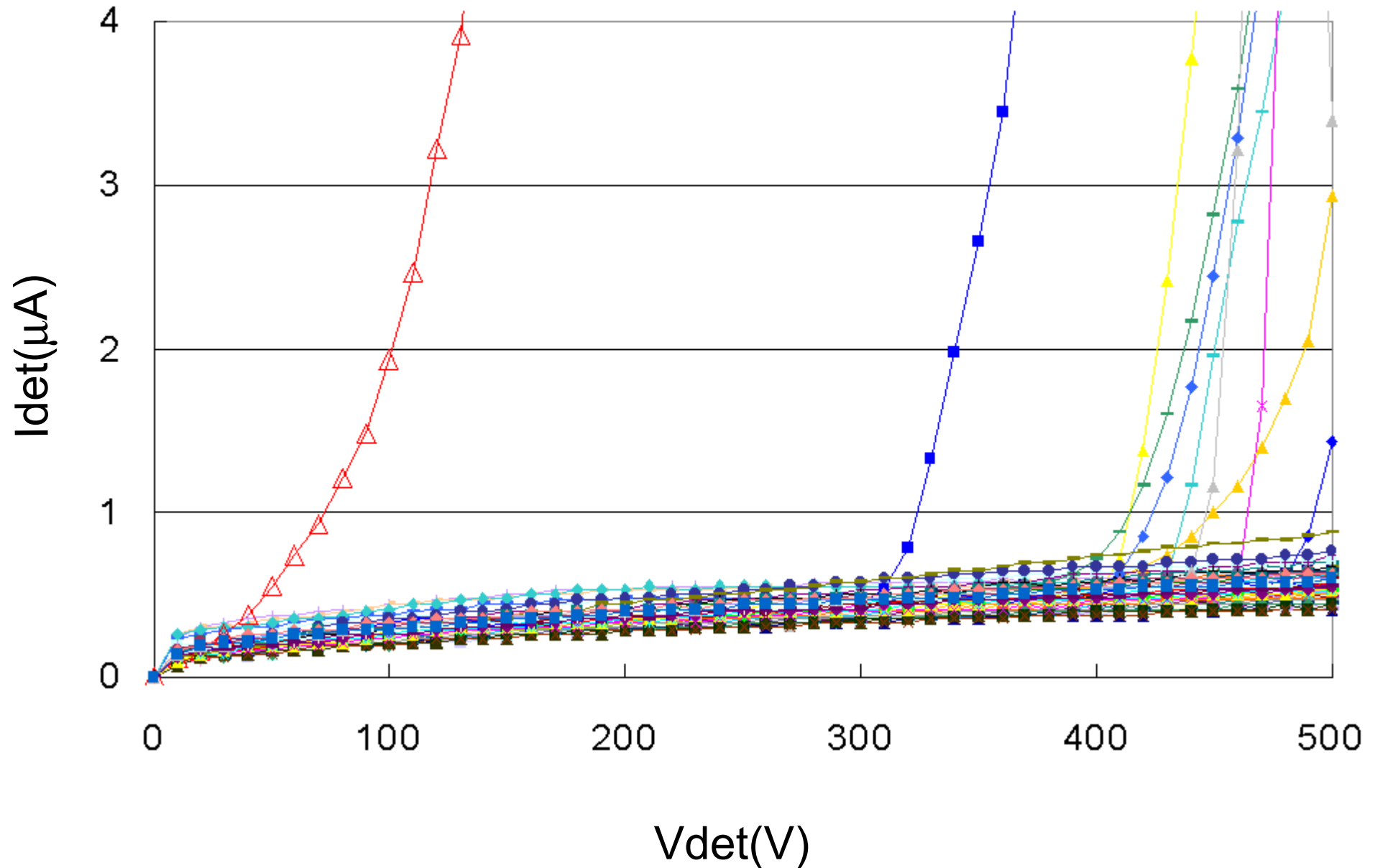
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Module#201-400

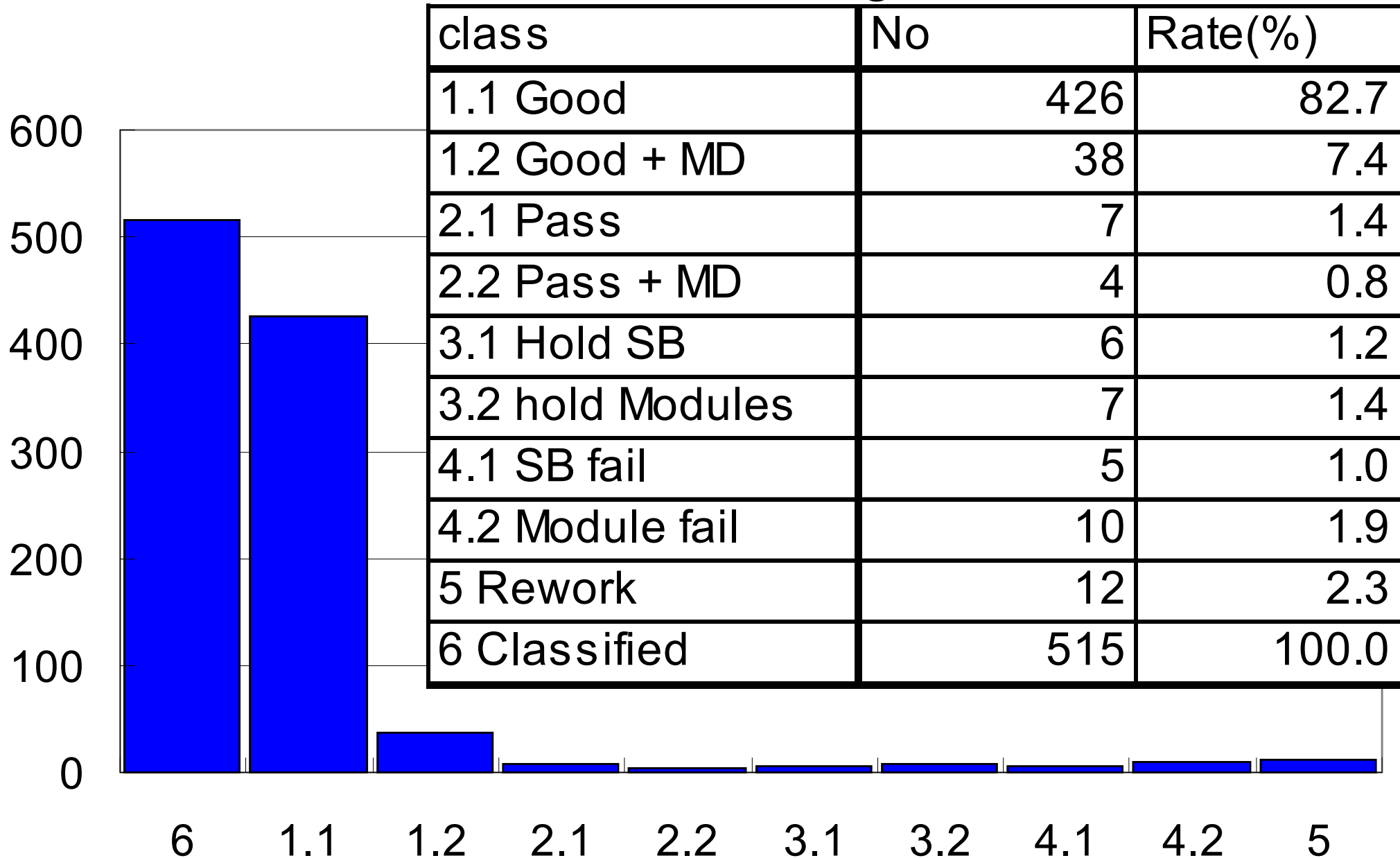


IV curve_mDaqLT_@20C

Module#401-564



Module Class Categories



SB Holds & fails

SB ID	Reason	category
20220480110118	Sensor scratch	F1
20220480110278	mhy=32 um (Hold)	H1
20220480110461	Sensor scratch	F1
20220480110415	Chipped sensor	F1
20220480110511	Glue coming-out	F3
20220480110420	msy=-37 um (Hold)	H1
20220480110120	maxZlower=-0.223 mm	H1
20220480110188	optZmax~67um, RMS~25um	H1
20220480110390	B=-7.4 mrad	H1
20220480110622	msy=38 um	H1
20220480110019	Fail gluing process	F1

Modules Holds and Fails

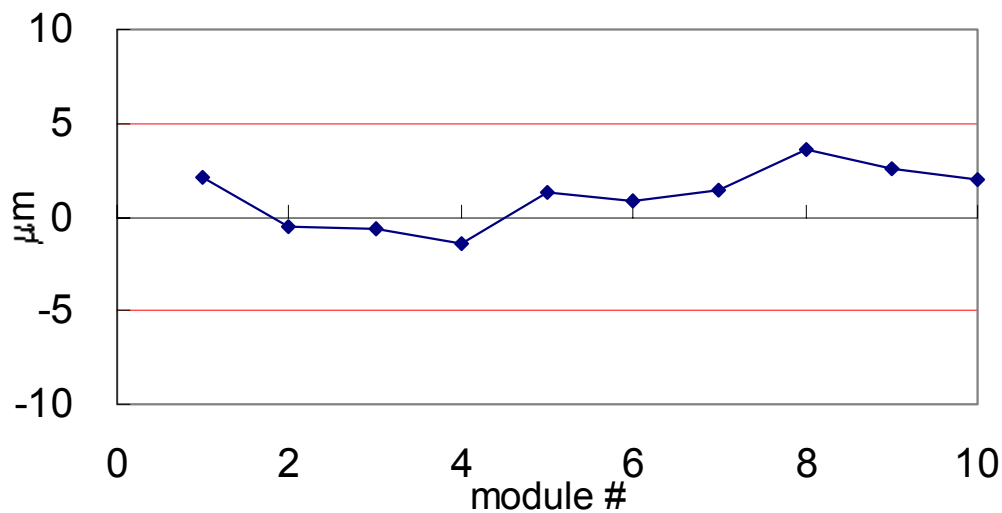
Module ID	Reason	Category
20220170200018	facing scratch	F6
20220170200025	IV	F8
20220170200029	sensor scratch	F5
20220170200034	IV	F8
20220170200069	IV	H6
20220170200074	IV	H6
20220170200100	IV	H6
20220170200102	IV	H6
20220170200146	# of unbonded 16	F9
20220170200160	IV	F8
20220170200188	sensor surface distortion	F5
20220170200202	IV	F8
20220170200228	IV	H6
20220170200430	mhy=41um	H3
20220170200475	IV	H6
20220170200497	IV	F8

Rework Modules

Module ID	Reason
20220170200010	ASIC to be replaced
20220170200023	ASIC to be replaced
20220170200038	ASIC to be replaced
20220170200040	ASIC to be replaced
20220170200054	WB damaged due to miss handling
20220170200090	WB damaged due to miss handling
20220170200155	link1 (PA-ASIC) half-unbonded
20220170200230	Hybrid connector to repair<-repaired
20220170200231	Hybrid connector to repair<-repaired
20220170200233	Hybrid connector to repair<-repaired
20220170200245	Hybrid connector to repair
20220170200254	Hybrid connector to repair
20220170200372	ASIC to be replaced
20220170200485	ASIC to be replaced
20220170200547	ASIC to be replaced
20220170200552	ASIC to be replaced
total	13 to be replaced

Midyf and loCoolingFacing b in SPI

midyf



loCoolingFacing b

