Normalise to 128 x 63.6 mm 8140.8

TDRModApr97

Item	No. off	Basic x	Basic y	Basic area	Less 1	Less 2	Less 3	Actual area	Thickness	Scaled area	Scaled thickness	X0 (mm)	Rad len (%)
Module													
Silicon detectors	4	64	63.6	4070	0	0	0	4070	0.3	2.00	0.600	93.6	0.641
Silicon detectors thermal adhesive	2	30	58	3583	2687	0	0	896	0.075	0.22	0.017	250	0.007
FE amplifiers (eg CAFE)	12	4	7.2	28.8	0	0	0	29	0.35	0.04	0.015	93.6	0.016
FE amplifiers thermal adhesive	12	3.5	6	21	0	0	0	21	0.075	0.03	0.002	250	0.001
FE amplifiers (eg ABC)	12	5.5	6.2	34.1	0	0	0	34	0.35	0.05	0.018	93.6	0.019
FE amplifiers thermal adhesive	12	5	5	25	0	0	0	25	0.075	0.04	0.003	250	0.001
TPG baseboard (Left hand)	1	40	40	1056	0	0	0	1056	0.38	0.13	0.049	190	0.026
TPG baseboard (Right hand)	1	22	85	1870	0	0	0	1870	0.38	0.23	0.087	190	0.046
BeO baseboard	1	60	85	2527	22.4	0	0	2504	0.38	0.31	0.117	144	0.081
BeO cover stiffener (pipe)	1	60	13	780	22.4	0	0	758	0.25	0.09	0.023	144	0.016
BeO cover stiffener (far)	1	42	7	294	0	0	0	294	0.25	0.04	0.009	144	0.006
Baseboard thermal adhesive	1	58	18	1258	629	0	0	629	0.075	0.08	0.006	250	0.002
Baseboard double PEEK insert	1	5	4	20	0	0	0	20	0.75	0.00	0.002	319	0.001
Baseboard single PEEK insert	1	4	3.83	15	0	0	0	15	0.75	0.00	0.001	319	0.000
Glass fan-in	2	3.5	67	235	0	0	0	235	0.25	0.06	0.014	123	0.012
Fan-ins tracks	2	3.5	67	235	176	0	0	59	0.001	0.01	0.000	89	0.000
Fan-in adhesive	2	2.5	65	162.5	0	0	0	163	0.075	0.04	0.003	250	0.001
Beryllia hybrid board	2	28	74.6	2089	0	0	0	2089	0.38	0.51	0.195	144	0.135
Beryllia hybrid "steps"	4	28	4	112	0	0	0	112	0.25	0.06	0.014	144	0.010
Beryllia hybrid step adhesive	4	25	3	75	0	0	0	75	0.075	0.04	0.003	250	0.001
Thick film Au planes	6	60	23	1380	828	0	0	552	0.003	0.41	0.001	3.35	0.036
Thick film glass layers	10	60	23	1380	138	0	0	1242	0.035	1.53	0.053	80	0.067
Thick film Au tracking	4	60	23	1380	1104	0	0	276	0.003	0.14	0.000	3.35	0.012
Interconnect cable kapton	1	24	11	264	0	0	0	264	0.025	0.03	0.001	290	0.000
Interconnect cable copper (Gnd)	1	24	11	264	0	0	0	264	0.005	0.03	0.000	14.3	0.001
Interconnect cable copper (tracks)	1	24	11	264	66	0	0	198	0.005	0.02	0.000	14.3	0.001
Other hybrid components	41	2	2	4	0	0	0	4	1	0.02	0.020	78	0.026
Capacitor solder pads	38	1.3	1.1	1.43	0	0	0	1	0.15	0.01	0.001	9.12	0.011
Capacitor Ag/Pa pad layer	38	1.3	1.1	1.43	0	0	0	1	0.015	0.01	0.000	8.26	0.001
Resistor solder pads	44	0.5	0.7	0.35	0	0	0	0	0.15	0.00	0.000	9.12	0.003
Resistor Ag/Pa pad layer	44	0.5	0.7	0.35	0	0	0	0	0.015	0.00	0.000	8.26	0.000
Kapton solder pads	100	1	1	1	0	0	0	1	0.15	0.01	0.002	9.12	0.020
												Total =	**1.201%**

Note: Changes made at Carl's suggestion.
Contains 6 metal layers on the hybrids
Also, Radiarion length of components raised to 0.026%
Solder pad barrier layers now Ag/Pa
Area of thermal adhesives reduced.
Contains 10 glass layers on the hybrids
Solder pads thinned from 200 µm to 150 µm.