

BUNCHER SECTION

IDR REPORT (IDS-NF-020)

cavity:		1	2	3	4	5	6	7	8	9	10	11	12	13
Group with same frequency		319.63	305.56	293.93	285.46	278.59	272.05	265.80	259.83	254.13	248.67	243.44	238.42	233.61
Frequency [MHz]		319.63	305.56	293.93	285.46	278.59	272.05	265.80	259.83	254.13	248.67	243.44	238.42	233.61
Total voltage [MV]		1.37	3.92	3.34	4.80	5.72	6.66	7.57	8.48	9.41	10.33	11.23	12.16	13.11
Number of cavities with same frequency in the group		1	2	2	2	2	3	3	3	3	3 (4)	3 (4)	3 (4)	3 (4)
Gradient [MV/m]		3.42 (4)	4.894 (5)	4.17 (4)	5.34 (5.5)	6.36 (6.4)	4.94 (5)	5.61 (5.7)	6.3 (6.5)	6.97 (7)	7.65 (5.7)	8.31 (6.5)	9.01 (7)	9.71 (7.5)
Peak power [MW]		0.2	0.6	0.5	1	1.25	1.5	1.5	2	2.3	2.3	2.5	3	3.5
Phase [deg]		0	0	0	0	0	0	0	0	0	0	0	0	0
Cavity length [m]		0.4	0.4	0.4 (0.45)	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
Cavity wall size [m]		no info	no info	no info	no info	no info	no info	no info	no info	no info	no info	no info	no info	no info
Group length [m]		3.55	3.375	2.605	2.25	2.025	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
Z position (upstream edge) of the first cavity in the group [m]		81.48	85.03	88.405	91.01	93.26	95.285	97.535	99.785	102.03	104.28	106.53	108.78	111.03
Cavity radius [m]		0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Thickness of Be window [m]		no info	no info	no info	no info	no info	no info	no info	no info	no info	no info	no info	no info	no info
Be window radius [m]		no info	no info	no info	no info	no info	no info	no info	no info	no info	no info	no info	no info	no info
coil:														
Length [m]		0.50												
Space between coils [m]		0.25												
Inner radius [m]		0.68												
Radial thickness [m]		0.04												
Current density [A/mm ²]		47.5												
Total number of coils		42 (44)												
Total length of section [m]		31.5 (33)												
Total number of cavities		33 (37)												

() = difference in Tables X and from calculations.
 () = difference in Tables X, XII and section 2.4.2.
 () = difference in Tables X and XII.
 no space between some cavities with this conf.
 no space between some cavities with this conf.

ICOOL-2010-04-01 (FrontEnd v1.1 IDR discrete)

cavity:		1	2	3	4	5	6	7	8	9	10	11	12	13
Group with same frequency		319.63	305.56	293.93	285.46	278.59	272.05	265.8	259.83	254.13	248.67	243.44	238.42	233.61
Frequency [MHz]		319.63	305.56	293.93	285.46	278.59	272.05	265.8	259.83	254.13	248.67	243.44	238.42	233.61
Total voltage [MV]		1.37	3.92	3.34	4.81	5.72	6.67	7.57	8.51	9.41	10.33	11.22	12.16	13.11
Number of cavities with same frequency in the group		1	2	2	2	2	3	3	3	3	3	3	3	3
Gradient [MV/m]		3.42	4.894	4.17	5.34	6.36	4.94	5.61	6.3	6.97	7.65	8.31	9.01	9.71
Peak power [MW]		no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Phase [deg]		0	0	0	0	0	0	0	0	0	0	0	0	0
Cavity length [m]		0.4	0.4	0.4	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
Cavity wall size [m]		no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Group length [m]		3.75	3.75	3	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
Z position (upstream edge) of the first cavity in the group [m]		81.2750	84.8248	88.1998	90.7748	93.0248	95.0496	97.2996	99.5496	101.7996	104.0496	106.2996	108.5496	110.7996
Cavity radius [m]		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Thickness of Be windows [m]		0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Be window radius [m]		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Space at the beginning and end of the group [m]		1.6748	1.4746	1.0996	0.6746	0.6746	0.4494	0.4494	0.4494	0.4494	0.4494	0.4494	0.4494	0.4494
coil:														
Length [m]		no data												
Inner radius [m]		no data												
Radial thickness [m]		no data												
Current density [A/mm ²]		no data												
Total number of coils		no data												
Total length of section [m]		33												
Total number of cavities		33												

() = difference in Tables IX, XII and section 2.4.2.
 () = difference in Tables IX, XII and section 2.4.2.
 () = difference in Tables IX, X and XII.

G4BL-2011-05-27 (FrontEnd v1.1 IDR discrete)

cavity:		1	2	3	4	5	6	7	8	9	10	11	12	13
Group with same frequency		319.63	305.56	293.93	285.46	278.59	272.05	265.8	259.83	254.13	248.67	243.44	238.42	233.61
Frequency [MHz]		319.63	305.56	293.93	285.46	278.59	272.05	265.8	259.83	254.13	248.67	243.44	238.42	233.61
Total voltage [MV]		1.37	3.92	3.34	4.81	5.72	6.67	7.57	8.51	9.41	10.33	11.22	12.16	13.11
Number of cavities with the same frequency in the group		1	2	2	2	2	3	3	3	3	3	3	3	3
Gradient [MV/m]		3.42	4.894	4.17	5.34	6.36	4.94	5.61	6.3	6.97	7.65	8.31	9.01	9.71
Peak power [MW]		no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Phase [deg]		0	0	0	0	0	0	0	0	0	0	0	0	0
Cavity length [m]		0.4	0.4	0.4	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
Cavity wall size [m]		0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Cell length [m]		3.75	3.75	3	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
Z position (center) of the first cavity in the group [m]		81.475	85.0198	88.395.8	90.9948	93.2448	95.2646	97.5146	99.7646	102.0354	104.2646	106.5146	108.7646	111.0146
Iris radius [m]		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Thickness of Be window (made of LiH) [m]		0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Be window radius [m]		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Space at beginning and end of the group [m]		1.6698	1.4646	1.0896	0.6646	0.6646	0.4344	0.4344	0.4344	0.4344	0.4344	0.4344	0.4344	0.4344
coil :														
Length [m]		no data												
Inner radius [m]		no data												
Radial thickness [m]		no data												
Current Density [A/mm ²]		no data												
Total number of coils		no data												
Total length of section [m]		33												
Total number of cavities		33												

