

Input Coupler

Spec. profile for Plug Compatibility

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Spec. Profile Table @Oct.2007 GDE meeting/FNAL

specification items	condition	Rough guess	unit and comments		
Power requirements	Operation	>400	kW for 1300 us		
	Processing	>1000	kW upto 400 us	need after vac break, cool-down	
		>600	kW larger than 400 us	need after vac break, cool-down	
	Processing with reflection mode	>600	kW for 1300us	in Test stand	
Processing time	warm	<50	hours	after installation	
	cold	<30	hours	after installation	
Heat loads /coupler	2K static	<0.1	W		should get Tom'snumber later
	5K static	<0.5	W	depend on tunability	should get Tom'snumber later
	80 K static	<3	W		should get Tom'snumber later
	5K dynamic	<0.3	W		should get Tom'snumber later
	80K dynamic	<3	W		should get Tom'snumber later
Cavity vacuum integrity		2	# of windows		
			bias capability	decide later	
RF Properties	Qext	Yes/No	tunable	decide later	
	Tuning range	1-10	10 ⁶ if tunable	decide later	
Physical envelope	Position		compatible to TTF-III	decide later	
	Flange		compatible to TTF-III	decide later	to cavity, to cryostat
	waveguide		compatible to TTF-III	decide later	
	support		compatible to TTF-III	decide later	
Instrumentation					
	vacuum level	>1			
	spark detection	0	at window		
	electron current detection	>1	at coax		
	temperature	>1	at window		

Spec. items to be determined

- Heat loads
- Bias capability
- Qext tunable or fixed
- If it is tunable, Tuning range
- Physical envelope

‘Qext tunable or not’ is a big topic to be discussed.
(RDR baseline is Qext tunable,
Noguchi is proposing Qext fixed, for cost reduction and easy handling
and installation)