

Parameters for SIFT/SVX chips, revised Sept. 24, 1999

(13 pe/MIP input) mean VLPC gain = 35,000

Input Constants	value	units	Caps	value	units
1 fc	6250	e's			
VLPC gain	35000		C cable	25	pF
VLPC charge output	5.6	fC/ pe	C drain	25	pF
SIFT input noise	0.25	fC	C1 shwr	21	pF
layer MIP CPS 90 deg	13	pe	C2 shwr	7	pF
layer MIP -- CPS 90 deg	72.8	fC	(Ctot)	78	pF
layer MIP -- CPS 45 deg	39	pe	Cap prec	0.1	fraction
layer MIP -- CPS 45 deg	218.4	fC	Ccab pre	0.03	fraction
layer MIP -- FPS 45 deg	18	pe			
layer MIP -- FPS 45 deg	103	fC	chg frac	0.269	
strip avg Q fraction	0.67	full layer	chg frac	0.090	
SIFT max threshold	160	fC	d fract	0.022	
SIFT min threshold	5	fC	d fract	0.009	
SVX ramp full range	150	fC			
SVX full scale cnts	256	counts			

	CPS center		CPS 45 deg		FPSDnstrm		FPS	Units
	High	Low	High	Low	High	Low	Upstrm	
Nom Charge fract	26.9%	9.0%	26.9%	9.0%	26.9%	9.0%	100.0%	
		64.1%		64.1%		64.1%		
one pe	1.51	0.50	1.51	0.50	1.51	0.50	5.60	fC
lowest SIFT thrsh	0.26	0.77	0.09	0.26	0.18	0.54	0.05	MIP
highest SIFT thsh	8.16	24.49	2.72	8.16	5.79	17.37	1.56	MIP
Lower desired thsh	2.0	5.0	0.7	1.7	2.0	5.0	0.2	MIP
Highr desired thsh	5.0	10.0	3.5	3.3	5.0	10.0	0.5	MIP
Input chg low thsh	39.2	32.7	39.2	32.7	55.3	46.1	20.5	fC
Low thrsh(-1sig)	36.0	29.4	36.0	29.4	50.8	41.4	20.1	
# noise sigmas	144	118	144	118	203	166	80	
Input chg hi thsh	98.0	65.3	98.0	65.3	138.2	92.1	51.3	fC
Hi thrsh (+1sig)	105.9	71.9	105.9	71.9	149.4	101.4	52.4	
frac mx thsh(+1s)	0.66	0.45	0.66	0.45	0.93	0.63	0.33	
SIFT output gain	0.388	0.194	0.388	0.194	0.388	0.194	.194	
SVX ramp fullscale	150	150	150	150	150	150	150	fC
SVX full scale	19.7	118.3	6.6	39.4	14.0	83.9	7.5	MIP
SVX resolution	13.0	2.2	38.9	6.5	18.3	3.1	34.0	ct/MIP
SVX resolution	1.00	0.17	1.00	0.17	1.00	0.17	1.85	ct/pe