Cost of NRAO Type-581 130-170 GHz SIS mixers, assuming a batch of 4 mixers.

			Materials		
			services	Labor	Direct
PER MIXER	,		supplies	hours	Labor
Block	Machining	Shop	-	15	\$295
	Plating	Vince	-	1	\$21
	Assembly	Neil	-	4	\$101
Backshorts -pair	Machining	Shop	-	4	\$79
	Plating	Vince	-	1	\$21
	Assembly	Dan	-	4	\$82
Substrate	Lithography	Francoise	-	0.5	\$10
Cubstrate	Sawing	Francoise	-	2	\$41
	Assembly	Neil	-	16	\$406
Junction	Fabrication	UVA	\$1,000	•	•
ounouon	Dicing/Thining	Francoise	•	16	\$330
Testing	RF	Pan	-	16	\$579
B/S drive	Machining	Shop	-	24	\$472
	Assembly	Dan [']		8	\$165
Misc.	Materials	_	\$130	-	
	Cryogens	_	\$120		-
	Documentation	Nancyjane	•	4	\$109
	Instruction (optional)	Pan	-	8	\$290
TOTALS (per mixer)			\$1,250	124	\$3,000
	Direct Labor	\$3,000			
	Benefits	\$945	31.50% o	f Direct Labor	
	Labor + Benefits	\$3,945			
	Materials etc.	\$1,250			
	Labor+Ben+Material	\$5,195			
	Overhead	\$4,000	77.00% o	f Labor+Benefi	t+Materials
GRAND TOTAL (per mixer)		\$9,195	with instructi	on	
		\$8,487	w/o instruction	on l	

John, This is how I determed the price of the SIS mixers, etc., we sell to Princeton. (Lo complex & Bias-T sheets attached).

- Tony

Cost of NRAO BLC581 LO couplers, assuming a batch of 4.

			Materials		
			services	Labor	Direct
PER COU	PLER		supplies	hours	Labor
Block	Machining	Shop	•	20	\$393
2.00.1	EDM	Albinsky	\$ 160	-	•
	Plating	Vince	•	1	\$21
	Assembly	Neil	-	1	\$25
Testing	RF	Nancyjane	-	4	\$109
Misc.	Materials	-	\$50	-	-
	Documentation	Nancyjane	-	1	\$27
TOTALS (per mixer)			\$210	27	\$576
	Direct Labor	\$576			
	Benefits	\$181	31.50% of	31.50% of Direct Labor	
	Labor + Benefits	\$757			
	Materials etc.	\$210			
	Labor+Benefits+Material	\$967			
	Overhead	\$745	77.00% of	_abor+Benefit	+Materials
GRAND TO	OTAL (per mixer)	\$1,712			

Cost of NRAO BIAST50A, assuming a batch of 4.

			Materials		
			services	Labor	Direct
PER BIAS-T			supplies	hours	Labor
Substrates	Lithography & cutting	Dan	•	1	\$21
Block	Machining	Shop	-	10	\$197
	Plating	Vince	-	1	\$21
	Assembly	Dan	-	8	\$165
Testing	RF/DC (295 K & 77 K)	Dan	-	2	\$41
Misc.	Materials	-	\$50	-	-
	Documentation	Dan	-	1	\$21
TOTALS (per mixer)			\$50	\$23	\$465
	Direct Labor	\$465			
	Benefits	\$146	31.50% of Direct Labor		
	Labor + Benefits	\$611			
	Materials etc.	\$50			
	Labor+Benefits+Material	\$661			
	Overhead	\$509	77.00% of	of Labor+Benefit+Mater	
GRAND TOTA	AL (per mixer)	\$1,170			