

SJM Prewell MMIC Application Guide for Broadcasting Market(v23)

CATV Forward Solution

Category	Part Number	Frequency MHz	Gain dB	S11 dB	S22 dB	CSO dBc	CTB dBc	P1dB dBm	OIP3 dBm	NF dB	Vcc V	Vd V	Id mA	PKG TYPE	Condition
CATV AMP.	PL08	40 ~ 1000	19.3	-18.0	-15.0	59.2	78.4	16.4	36.5	0.74	3.0	3.0	45	SOT-363	+15dBmV/132ch Flat
	PL07A	45 ~ 1000	20.0	-20.0	-15.0	59.5	77.6	16.5	35.5	0.67	3.0	3.0	45	DFN 8L	+15dBmV/132ch Flat
	PL09A	40 ~ 1200	20.0	-23.0	-17.0	61.9	77.5	16.0	34.5	0.90	3.0	3.0	48	SOT-89	+15dBmV/132ch Flat
	PL10C	40 ~ 1200	20.5	-24.0	-15.0	64.0	69.0	17.0	31.0	1.10	5.0	5.0	50	SOT-89	+15dBmV/98ch Flat
	PS401	45 ~ 1000	19.0	-17.0	-12.0	65.0	76.0	15.0	32.0	2.40	5.0	3.7	60	SOT-89	+15dBmV/132ch Flat
	PS404	45 ~ 1000	22.5	-13.0	-9.0	61.0	75.0	15.5	31.0	2.00	5.0	3.64	55	SOT-89	+15dBmV/132ch Flat
	PW125	45 ~ 1000	22.1	-19.0	-16.0	54.1	70.8	17.1	31.7	2.40	5.0	4.5	120	SOT-89	+25dBmV/132ch Flat
	PG885	40 ~ 1200	26.3	-9.8	-19.1	65.5	74.7	19.2	37.5	4.39	5.0	5.0	90	SOT-89	+25dBmV/99ch Flat
	PK831	40 ~ 1500	17.3	-22.0	-18.0	66.0	76.0	21.5	40.0	2.00	5.0	5.0	125	SOT-89	+30dBmV/132ch Flat
Push Pull	PK857	40 ~ 1200	20.5	-15.0	-24.0	64.0	74.0	20.0	40.0	1.70	5.0	5.0	120	SOT-89	+30dBmV/98ch Flat
	PW128	50 ~ 870	17.1	-18.0	-18.0	63.0	63.0	19.2	37.0	5.80	5.0	4.5	235	SOIC-8	+34dBmV/77ch Flat
	PT815	40 ~ 1200	18.6	-18.4	-15.2	72.7	73.4	25.1	39.4	1.90	5.0	5.0	210	SOIC-8	+34dBmV/98ch Flat
	PT818	40 ~ 1200	19.0	-17.7	-19.3	68.4	66.4	28.7	44.0	2.00	8.0	8.0	320	SOIC-8	+44dBmV/85ch Flat

CATV Reverse Solution

Category	Part Number	Frequency MHz	Gain dB	S11 dB	S22 dB	P1dB dBm	OIP3 dBm	NF dB	Vcc V	Vd V	Id mA	PKG TYPE
CATV AMP.	PS401	5 ~ 100	19.5	-14.0	-14.0	14.5	33.1	2.2	5.0	3.7	50	SOT-89
	PS404	5 ~ 100	23.5	-11.0	-11.0	15.2	32.5	1.9	5.0	3.64	45	SOT-89
	PW450	5 ~ 100	18.5	-14.0	-14.0	17.5	34.0	3.5	6.0	4.94	60	SOT-89
	PW125	5 ~ 100	23.0	-23.0	-23.0	18.3	41.0	2.2	5.0	4.5	95	SOT-89
Push Pull	PW128	5 ~ 300	21.0	-15.0	-19.0	24.0	43.0	3.7	5.0	4.5	220	SOIC-8
	PT815	5 ~ 700	18.6	-19.6	-22.1	24.6	39.8	1.5	5.0	5.0	210	SOIC-8
	PT818	5 ~ 700	18.7	-21.6	-24.8	28.4	44.5	1.6	8.0	8.0	320	SOIC-8



SMATV Solution

Category	Part Number	Frequency MHz	Gain dB	S11 dB	S22 dB	P1dB dBm	OIP3 dBm	NF dB	Vcc V	Vd V	Id mA	PKG TYPE
SMATV AMP.	PS205	950 ~ 2150	20.6	-20.0	-12.0	13.0	24.0	2.3	5.0	3.5	45.0	SOT-89
			20.6	-18.0	-13.0	12.0	23.0	2.1	5.0	3.45	35.0	
	PW210-63	950 ~ 2150	19.0	-17.0	-14.0	15.8	29.5	3.0	6.0	4.65	44.0	SOT-363
	PW250-63	950 ~ 2150	17.0	-17.0	-14.0	15.5	29.8	3.3	6.0	4.7	44.0	SOT-363
	PW290-63	950 ~ 2150	13.5	-17.0	-10.0	15.1	31.0	3.6	5.0	4.3	45.0	SOT-363
	PW350	950 ~ 2150	16.4	-18.0	-13.0	16.4	31.0	3.2	5.0	4.84	56.0	SOT-89
	PW550	950 ~ 2150	17.5	-16.0	-13.0	19.5	33.5	3.8	6.0	5.35	85.0	SOT-89
	PK833	40 ~ 2200	17.0	-12.5	-17.0	20.2	39.0	2.2	5.0	5.0	125.0	SOT-89

Mixer / 混频器

Category	Part Number	RF Freq. MHz	IF Freq. MHz	SSB CL dB	Input IP3 dBm	Input P1dB dBm	Vcc V	Vd V	Id mA	PKG TYPE
Mixer	PM210	150 ~ 1500	40 ~ 250	6.1	28.0	18.3	3	3	7	SOT-26

Passive Component Solution

Category	Part Number	Frequency	I/L	Isolation	VSWR (PORT S)	VSWR (PORT 1-2)	Amplitude Unbalance	Phase Unbalance	PKG TYPE	Remark
		MHz	dB	dB	:1	:1	dB	Degrees		
Splitter	PBS10A	5 ~ 500	0.2	20.0	1.1	1.1	0.09	0.54	SMD Base	Insertion Loss is less 3dB split
		500 ~ 1000	0.8	25.0	1.3	1.3	0.12	1.92		
	PBS30A	50 ~ 1500	0.4	21.0	1.9	1.9	0.10	0.90	SMD Base	
		1500 ~ 3000	0.3	17.0	1.3	1.3	0.30	5.50		

Category	Part Number	Frequency MHz	Main Line Loss dB	Isolation dB	Input Return Loss dB	Output Return Loss dB	Coupling Return Loss dB	Coupling dB	PKG TYPE
Coupler	PBC10A	5 ~ 1000	1.0	28.3	17.3	20.9	17.1	10.0	SMD Base
		1000 ~ 1200	1.3	22.1	13.4	14.5	13.0	10.1	
	PBC15A	5 ~ 1000	0.8	36.3	17.8	19.9	18.1	14.9	SMD Base
		1000 ~ 1200	1.1	27.2	13.3	14.4	13.7	15.6	

Category	Part Number	Frequency MHz	I/L dB	Input Return Loss dB	Amplitude Unbalance dB	Phase Unbalance Degrees	PKG TYPE
Balun	PBR11S	5 ~ 1000	0.3	21.3	0.9	2.2	SMD Base
		1000 ~ 3000	2.4	5.8	1.1	9.5	

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