

Broadband Medium Power Amplifiers

FEATURES:

- ❖ Coverage From 0.5 to 65.0 GHz (Octave/Multioctave)
- ❖ Up to 2 Watt Output Power (@1dB Compression Point)
- ❖ Compact/Rugged Thin-Film Construction
- ❖ Economically Priced



CBM Series

APPLICATIONS:

- ❖ General High Power Laboratory RF Sources.
- ❖ Output Amplifiers in test Equipment (ATE & AGE)
- ❖ Driver Amplifiers in RF Distribution Intermediate Power Amplifiers (IPA) in High Power Chains.

DESCRIPTION:

Cernex's **CBM series** amplifiers are designed for use in a wide range of general purpose applications such as laboratory test equipment, instrumentation and other applications requiring moderate power output. Reliable operation is achieved using rugged stripline circuit construction with selected GaAs FET devices.

SPECIFICATIONS:

Model Number	Frequency Range (GHz)	Gain (dB) Min.	SS Flatness (+/-dB) Max.	NF (dB) Max.	P1dB (dBm) Min.	VSWR In/Out Max.	Current @ 12 VDC (mA) Typ.	Case Type
CBMH10134300P	0.001-1	34	1.5	-	30	2:1	1000(Max)** √	6 x 3 x 1.1
CBMU1183425	0.1-18	34-40 (Max)	2.8	3.5	25, 26 typ	2.5:1 typ	15V@950	MK5
CBMU1182529	0.1-18	25	3.0 Typ	8 Typ	29	2.5:1	15V@1000	SN8
CBMU1222527	0.1-22	25	3.0 Typ	8 Typ	27	2.5:1	15V@1000	SN8
CBMU5022523	0.5-2	25	1.5	5.00	23	2:1	300	LN4 °
CBMU5022425	0.5-2	24	1.5	5.00	25	2:1	450	LN4 °
CBMU5023027	0.5-2	30	1.5	5.00	27	2:1	700	LN4 °
CBMU5023030	0.5-2	30	1.5	5.00	30	2:1	1300	LN5 °
CBMU5042023	0.5-4	20	2.0	5.00	23	2.5:1	300	LN4 °
CBMU5042523	0.5-4	25	2.0	5.00	23	2.5:1	350	LN4 °
CBMU5042525	0.5-4	25	2.0	5.00	25	2.5:1	550	LN4 °
CBMU5043225	0.5-4	32	2.5	5.00	25	2.5:1	600	LN4 °
CBMU5042527	0.5-4	25	2.0	5.00	27	2.5:1	700	LN5 °
CBMU5043027	0.5-4	30	2.5	5.00	27	2.5:1	780	LN5 °
CBMU5043030	0.5-4	30	3.00	6.00	30	2.5:1	1500	LN7
CBMU8043030	0.8-4.2	30	1.50	10.00	30	2:1	1500 (Max)** √	3.11x2.32x0.66
CBM01022723	1-2	27	1.50	5.00	23	2:1	300	LN4 °
CBM01023523	1-2	35	1.75	5.00	23	2:1	400	LN4 °



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CBM01022727	1-2	27	1.50	5.00	27	2:1	700	LN4 °
CBM01023527	1-2	35	1.75	5.00	27	2:1	650	LN5 °
BM01022730	1-2	27	1.50	5.00	30	2:1	1500	LN5 °
CBM01023530	1-2	35	2.00	5.00	30	2:1	1400	LN5 °
CBM01023527	1-2	35	1.75	5.00	27	2:1	650	LN5 °
CBM01022730	1-2	27	1.50	5.00	30	2:1	1500	LN5 °
CBM01023530	1-2	35	2.00	5.00	30	2:1	1400	LN5 °
CBM01063530	1-6	35	3.00	8.00	30	2:1/2.5:1	1500	DN8
CBM02042523	2-4	25	1.50	5.00	23	2:1	300	LN3 °
CBM02043223	2-4	32	1.75	5.50	23	2:1	350	LN5 °
CBM02042527	2-4	25	1.50	5.00	27	2:1	600	LN5
CBM02043527	2-4	35	1.75	5.50	27	2:1	680	LN7
CBM02042530	2-4	25	1.50	5.00	30	2:1	850	LN5
CBM02043530	2-4	35	2.00	5.00	30	2:1	1000	LN7
CBM02044033	2-4	40	2.25	5.00	33	2:1	1600	LN7
CBM02062523	2-6	25	1.50	5.00	23	2:1	300	LN4 °
CBM02063523	2-6	35	2.00	5.00	23	2:1	400	LN4 °
CBM02062527	2-6	25	1.50	5.00	27	2:1	550	LN5 °
CBM02063527	2-6	35	2.00	5.00	27	2:1	650	LN5 °
CBM02062530	2-6	25	1.50	5.00	30	2:1	950	LN7
CBM02063530	2-6	35	1.75	5.50	30	2:1	1000	LN7
CBM02082823	2-8	28	1.75	5.00	23	2:1	400	LN5 °
CBM02083523	2-8	35	2.50	5.00	23	2:1	450	LN5 °
CBM02083027	2-8	30	1.75	5.00	27	2:1	750	LN7 °
CBM02083827	2-8	38	2.00	5.00	27	2:1	850	LN7 °
CBM02083030	2-8	30	2.25	5.50	30	2:1	1100	LN6
CBM02083830	2-8	38	2.50	5.50	30	2:1	1200	LN7
CBM02181822	2-18	18	3.00	6.00	22	2.3:1	600	LN4 °
CBM02182030	2-18	20	3.50	*	30	2:1	4.0	SN8
CBM02182422	2-18	24	3.25	6.00	22	2.3:1	700	LN4 °
CBM02183022	2-18	30	3.50	6.00	22	2.3:1	800	LN4 °
CBM02183522	2-18	35	3.75	6.00	22	2.3:1	900	LN4 °
CBM02183023	2-18	30	3.0	6.5	23	2.3:1	1000	LN5 °
CBM02183027	2-18	30	3.0	7.0	27	2.2:1	2000	LN5
CBM02183825	2-18	38	3.0	6.5	25	2.3:1	1700	MN5
CBM02201621	2-20	16	3.50	7.00	21	2.5:1	600	LN4 °
CBM02202221	2-20	22	3.75	7.00	21	2.5:1	700	LN4 °
CBM02202821	2-20	28	3.75	7.00	21	2.5:1	800	LN4 °
CBM02203421	2-20	34	4.00	7.00	21	2.5:1	900	LN5 °
CBM02203030	2-20	30	6.0	8.0	30	2.5:1	2500	SN8
CBM03122523	3.7-12.7	25	2.00	5.5	23	2:1	400	LN4 °
CBM03123023	3.7-12.7	30	2.50	5.5	23	2:1	480	LN4 °



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CBM03123823	3.7-12.7	38	2.75	5.5	23	2:1	560	LN5 °
CBM03122527	3.7-12.7	25	2.00	6.0	27	2:1	640	LN4 °
CBM03123027	3.7-12.7	30	2.50	6.0	27	2:1	800	LN5 °
CBM03123827	3.7-12.7	38	2.75	6.0	27	2:1	860	LN5 °
CBM03123030	3.7-12.7	30	2.50	6.0	30	2:1	1600	LN6 °
CBM03122530	3.7-12.7	25	2.00	6.0	30	2:1	880	LN5 °
CBM03142323	3.7-14.5	23	2.50	6.0	23	2.2:1	400	LN4 °
CBM03142823	3.7-14.5	28	2.75	6.0	23	2.2:1	480	LN4 °
CBM03143623	3.7-14.5	36	3.00	6.0	23	2.2:1	560	LN5 °
CBM03142327	3.7-14.5	23	2.50	6.50	27	2.2:1	640	LN4 °
CBM03142827	3.7-14.5	28	2.75	6.50	27	2.2:1	800	LN5 °
CBM03143627	3.7-14.5	36	3.00	6.50	27	2.2:1	860	LN5 °
CBM04082823	4-8	28	1.50	5.50	23	2:1	350	LN4 °
CBM04083623	4-8	36	1.75	5.50	23	2:1	425	LN4 °
CBM04082627	4-8	26	1.25	6.00	27	2:1	600	LN4 °
CBM04083027	4-8	30	1.50	6.00	27	2:1	680	LN4 °
CBM04082830	4-8	28	2.00	6.00	30	2:1	1100	LN5
CBM04083830	4-8	38	2.00	6.00	30	2:1	1200	LN7
CBM04082833	4-8	28	2.25	6.00	33	2:1	2000	LN7
CBM04102523	4-10.5	25	2.00	6.00	23	2:1	500	LN4 °
CBM04103027	4-10.5	30	2.00	6.00	27	2:1	800	LN5 °
CBM04103030	4-10.5	30	2.25	6.00	30	2:1	1400	LN5 °
CBM04103830	4-10.5	38	2.25	6.00	30	2:1	1500	LN7 °
CBM04122523	4-12	25	1.50	6.00	23	2:1	400	LN4 °
CBM04123523	4-12	35	1.75	6.00	23	2:1	500	LN5 °
CBM04124023	4-12	40	2.00	6.00	23	2:1	560	LN5 °
CBM04123027	4-12	30	2.50	7.00	27	2:1	800	LN4 °
CBM04124027	4-12	40	3.00	7.00	27	2:1	880	LN5 °
CBM04123030	4-12	30	2.50	8.00	30	2:1	1500	LN5 °
CBM04124030	4-12	40	3.00	8.00	30	2:1	1800	LN7 °
CBM05143030	5.8-14.5	30	2.5 Typ	7.00	30	2:1	1500	SN8
CBM05152523	5-15	25	1.50	6.00	23	2:1	400	LN4 °
CBM05153023	5-15	30	1.75	6.00	23	2:1	480	LN4 °
CBM05153823	5-15	38	2.00	6.00	23	2:1	560	LN5 °
CBM05152527	5-15	25	2.00	7.00	27	2:1	640	LN4 °
CBM05153027	5-15	30	2.50	7.00	27	2:1	800	LN5 °
CBM05153827	5-15	38	3.00	7.00	27	2:1	880	LN5 °
CBM05152530	5-15	25	2.75	7.00	30	2:1	1600	LN5 °
CBM05153030	5-15	30	3.00	7.00	30	2:1	1670	LN5 °
CBM05153830	5-15	38	3.50	7.00	30	2:1	1800	LN7 °
CBM06122423	6-12	24	1.50	6.00	23	2:1	400	LN4 °
CBM06123023	6-12	30	1.75	6.00	23	2:1	480	LN4 °



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CBM06124023	6-12	40	2.00	6.00	23	2:1	640	LN5 °
CBM06122427	6-12	24	1.50	6.00	27	2:1	800	LN4 °
CBM06123027	6-12	30	1.75	6.00	27	2:1	850	LN5 °
CBM06124027	6-12	40	2.00	6.00	27	2:1	980	LN5 °
CBM06122430	6-12	24	1.50	6.50	30	2:1	1000	LN6 °
CBM06123030	6-12	30	1.75	6.50	30	2:1	1100	LN6 °
CBM06124030	6-12	40	2.50	6.50	30	2:1	1500	LN7
CBM06182223	6-18	22	1.50	6.00	23	2:1	400	LN4 °
CBM06183023	6-18	30	1.75	6.00	23	2:1	480	LN4 °
CBM06183823	6-18	38	2.00	6.00	23	2:1	560	LN5 °
CBM06182627	6-18	26	2.00	6.00	27	2:1	640	LN5 °
CBM06183027	6-18	30	2.50	7.00	27	2:1	800	LN5 °
CBM06183827	6-18	38	2.50	7.00	27	2:1	960	LN7 °
CBM06182530	6-18	25	2.75	10.00	30	2:1	1600	SN8 ▲
CBM06183030	6-18	30	3.00	10.00	30	2:1	1670	SN8 ▲
CBM06183830	6-18	38	3.50	10.00	30	2:1	1800	LN6 ▲
CBM08122423	8-12.4	24	1.00	5.50	23	2:1	400	LN4 °
CBM08123023	8-12.4	30	1.50	5.00	23	2:1	480	LN4 °
CBM08123823	8-12.4	38	1.75	5.00	23	2:1	560	LN4 °
CBM08122427	8-12.4	24	1.50	6.00	27	2:1	700	LN4 °
CBM08123027	8-12.4	30	1.75	6.00	27	2:1	800	LN5 °
CBM08123827	8-12.4	38	2.00	6.00	27	2:1	900	LN4 °
CBM08122430	8-12.4	24	1.75	6.00	30	2:1	1500	LN6 °
CBM08123230	8-12.4	32	2.00	6.00	30	2:1	1600	LN6 °
CBM08123830	8-12.4	38	2.25	6.00	30	2:1	1670	LN7 °
CBM08182423	8-18	24	1.25	7.00	23	2:1	400	LN4 °
CBM08183023	8-18	30	1.50	7.00	23	2:1	480	LN5 °
CBM08183823	8-18	38	1.75	7.50	23	2:1	560	LN5 °
CBM08182627	8-18	26	2.00	7.00	27	2:1	800	LN4 °
CBM08183427	8-18	34	2.00	7.00	27	2:1	880	LN5 °
CBM08184027	8-18	40	2.50	7.50	27	2:1	960	LN5 °
CBM08182830	8-18	28	2.50	10.00	30	2:1	1600	SN8
CBM08183430	8-18	34	3.00	10.00	30	2:1	1670	SN8
CBM08184030	8-18	40	3.00	10.00	30	2:1	1740	SN8
CBM12182423	12-18	24	1.25	7.00	23	2:1	400	LN4 °
CBM12183023	12-18	30	1.50	7.00	23	2:1	480	LN4 °
CBM12183623	12-18	36	1.75	7.00	23	2:1	560	LN4 °
CBM12182827	12-18	28	2.00	7.00	27	2:1	800	LN4 °
CBM12183827	12-18	38	2.50	7.00	27	2:1	960	LN5 °
CBM12182830	12-18	28	2.00	10.00	30	2:1	1600	LN6 ▲
CBM12183830	12-18	38	2.50	10.00	30	2:1	1700	SN8 ▲
CBM12202523	12-20	25	1.50	7.00	23	2:1	650	MIK2



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CBM12203023	12-20	30	1.50	7.00	23	2:1	700	LN5 °
CBM12203523	12-20	35	2.00	7.00	23	2:1	800	LN5 °
CBM18242227	18-24.5	22	3.00	7.00	27	2:1	1500	MN3
CBM18243030	18-24.5	30	3.00	7	30.5	2:1	3500	MN4
CBM18243027	18-24.5	30	3.00	7.00	27	2:1	1700	MN3
CBM18262423	18-26.5	24	2.00	7.00	23	2:1	850	LN4 °
CBM18263023	18-26.5	30	2.50	7.00	23	2:1	600	LN4 °
CBM18263523	18-26.5	35	2.50	7.00	23	2:1	950	LN5 °
CBM18262827	18-26.5	28	2.50	7.00	27	2:1	1150	MN3
CBM18263427	18-26.5	35	2.50	7.00	27	2:1	1200	MN3
CBM18263030	18-26.5	30	3.0	7.0	30	2:1	2400	SN8
CBM18263530	18-26.5	35	4.0	7.0	30	2:1	2500	SN8
CBM18401518	18-40	15	2.5	12	18.5	3.0:1	600	50x20x15mm
CBM18402020	18-40	20	4.0	9.0	20	2.5:1	450	MK3
CBM18402023	18-40	20	4.0	9.0	23	2.5:1	500	MK3
CBM18403523	18-40	35	4.0	9.0	23	2.5:1 typ	1000	MK3
CBM18403525	18-40	35	4.0	9.0	25	2:1	1800	MKP4
CBM18403327	18-40	33	3.50	10.0	27	2:1 typ	2000	*
CBM20422020	20-42	20	4.0	10.0	20	2.5:1	400	MK3
CBM22423520	22-42	35	6.0	4.0	20Psat	2.5:1 typ	400	MK2
CBM23283020	23-28	30	3.5	10.0	20	2:1	300	MK3
CBM25302523	25-30	25	2.50	8.00	23	2:1	1000	MK3
CBM25303027	25-30	30	3.00	8.00	27	2:1	1800	Mk3
CBM25303530	25-30	35	3.50	8.00	30	2:1	2500	MKP4
CBM26402020	26.5-40	20	2.5	9.0	20	2.5:1	500	MK3
CBM26402520	26.5-40	25	2.5	9.0	20	2.5:1	575	MK3
CBM26403022	26.5-40	30	2.5	9.0	22	2.5:1	650	MK3
CBM26403025	26.5-40	30	2.5	15.0	25	2.5:1	2000	MKP4
CBM26403527	26.5-40	35	4.0Typ	10.0	27Psat	2.5:1	3000	MKP4
CBM26403720	26.5-40	37	5.0	4.0	20Psat	2.5:1 typ	400	MK2
CBM26403529	26.5-40	35	7.0Typ	10.0	29Psat	2.5:1	7000	CKP4
CBM26403530	26.5-40	35	7.0Typ	10.0	30Psat	2.5:1	8000	*
CBM27323027	27-32	30	3.0	10.0	27	2:1	800	MK3
CBM27323530	27-32	35	3.5	10.0	30	2:1	1500	MKP4
CBM30362523	30-36	25	2.50	10.00	23	2:1	800	MK3
CBM30363027	30-36	30	3.00	10.00	27	2:1	1500	MKP4
CBM30363528	30-36	35	3.50	10.00	28	2:1	2000	MKP4
CBM30402020	30-40	20	2.0 Typ	*	20Psat	2.5:1	350	MK2
CBM30453027	30-45	30	3.0Typ	*	27	2:1 typ	1800	MKP4
CBM32471827	32-47	18	2.0Typ	*	27	2:1 typ	1500	MKP4



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CBM32473027	32-47	30	2.0Typ	*	27	2:1 typ	1600	MKP4
CBM32474227	32-47	42	2.0Typ	*	27	2:1 typ	1700	MKP4
CBM32472329	32-47	23	2.5Typ	*	29Typ	*	3000	*
CBM32473529	32-47	35	2.5Typ	*	29Typ	*	3200	*
CBM32474729	32-47	47	3.5 Typ	*	29	2:1 Typ	1700	*
CBM32481023	32-48	10	2.5 Typ	*	23	2:1 Typ	700	MK1
CBM32482223	32-48	22	2.5 Typ	*	23	2:1 Typ	800	MK2
CBM32483423	32-48	34	3.0 Typ	*	23	2:1 Typ	900	MK3
CBM32484623	32-48	46	3.0 Typ	*	23	2:1 Typ	1000	MK4
CBM36402330	36-40	23	3.0 Typ	*	30	2:1 Typ	3000	MKP4
CBM36402520	36-40	25	2.5	10.0	20	2:1	500	MK3
CBM36402523	36-40	25	2.50	10.00	23	2:1	800	MK3
CBM36403025	36-40	30	3.00	10.00	25	2:1	1000	MK3
CBM36403527	36-40	35	3.50	10.00	27	2:1	1000	MK3
CBM36403530	36-40	35	350	10.0	30	2:1	2000	MKP4
CBM36432222	36-43	22	2.0	10.0	22	2:1typ	500	MK3
CBM36434022	36-43	40	4.5	10.0	22	2:1typ	650	MK3
CBM37453020	37-45	30	3.5	5.0	20	2:1	500	MK3
CBM40503029	40-50	30	6Typ	10	29Psat	2:1	10V@6000Typ	CPK5
CBM40503127	40-50	31	5.5Typ	10 Typ	27Psat***	2:1 Typ	10V@4000Typ	MKP4
CBM45572532	45-57	25	2.5Typ	*	22Psat Typ	*	8V@2000	*
CBM45573522	45-57	35	2.7Typ	*	22Psat Typ	*	8V@2000	*
CBM45574522	45-57	45	2.8Typ	*	22Psat Typ	*	8V@2000	*
CBM50653017	50-65	30 Nom	3.0	*	17.5	2.8:1 typ	870	*
CBM50661523	50-66	15	3.5	*	23	*	8000	*
CBM50663023	50-66	30	3.5	*	23	*	8000	*
CBM50751513	50-75	15 Nom	2Typ	8Typ	13Psat	2.8:1 typ	180	MV2R
CBM55653022	55-65	30 Nom	3.0	*	22Psat	2.2:1 typ	800	*
CBM57653015	57-65	30	3.50	7	15	2:1	300	*
CBM59611515	59-61	15 Nom	0.5	7Typ	15	2.2:1 typ	190	*
CBM71762522	71-76	25	2.0 Typ	*	22	2.5:1/2:1 Typ	5V@1500 Typ	IE3
CBM71762821	71-76	28	2.0	*	21	*	6000	*
CBM751002013M	75-100	20	*	*	13Psat	*	*	TBD
CBM751102011M	75-110	20	*	*	11.5Psat	*	*	TBD
CBM76783019	76-78	30 Nom	2.0	*	19Psat Typ	3.0:1 typ	450	*
CBM76841514	76-84	15 Nom	2.5	*	14 Typ	6.0:1 typ	150	*
CBM76843014	76-84	30 Nom	5.0	*	14 Typ	6.0:1 typ	300	*
CBM80911522	80-91	15	3.0	*	22	*	8000	*
CBM80913022	80-91	30	3.0	*	22	*	8000	*
CBM76863000	76-86	30	2.0 typ	*	0	2.5:1 typ	150 (typ)/5V	IE3
CBM76863010	76-86	30	2.5 typ	*	10	2.5:1 typ	300 (typ)/5V	IE3



Broadband Medium Power Amplifiers

Model Number	Frequency Range (GHz)	Gain (dB) Min.	SS Flatness (+/-dB) Max.	NF (dB) Max.	P1dB (dBm) Min.	VSWR In/Out Max.	Current @ 12 VDC (mA) Typ.	Case Type
CBM81863019	81-86	30 Nom	1.5	*	19Psat Typ	3.0:1 typ	520	*
CBM81862522	81-86	25	2.0 Typ	*	22	2.5:1/2:1 Typ	5V@1800 Typ	IE3
CBM90951823	90-95	18	3.0	*	23	*	3000	*
CBM90952823	90-95	28	3.0	*	23	*	3000	*
CBM90951527	90-95	15	3.0	*	27Psat Typ	*	5000	*
CBM90952827	90-95	28	3.0 Typ	*	27Psat Typ	*	5000	*
CBM92961520	92-96	15	2Typ	-	20Typ	2:1typ	750	*
CBM92961810	92-96	18	2Typ	-	10	2:1typ	250	*
CBM92962015	92-96	20 Nom	3.0	*	15 Typ	3.0:1 typ	200	*
CBM92962518	92-96	25 Nom	3.0	*	18 Typ	3.0:1 typ	550	*
CBM93951015	93-95	10 Nom	1.0	*	15 Typ	2.0:1 typ	250	*
CBM93952020	93-95	20 Nom	2.0	*	20Psat Typ	2.0:1 typ	500	*

ALL THE ABOVE SPECIFICATIONS ARE @ 25°C

OTHER FREQUENCY BANDS & POWER LEVELS ARE ALSO AVAILABLE.

TEMPERATURE COMPENSATED AMPLIFIERS & GAIN CONTROL ARE ALSO AVAILABLE

*CONSULT THE FACTORY

**VDC is 28V

*** 27Psat Min from 40 to 49GHz; 27Psat Typ @50GHz

▲ SMALLER PACKAGES ARE ALSO AVAILABLE

° SMALLER CASES (HN SERIES) ARE ALSO AVAILABLE

CERNEX RESERVE THE RIGHT TO CHANGE THE SPECIFICATIONS WITHOUT NOTICE.