

## Limiting Amplifiers

### FEATURES:

- ❖ Wide Input Dynamic Range
- ❖ Removable Connectors
- ❖ Narrow Output Power Window
- ❖ Cover From 0.5 to 26.5 GHz
- ❖ Fast Pulse Response In Saturated Mode
- ❖ Thin-Film MIC Technology For High Reliability



**CLA Series**

### DESCRIPTION:

Cernex's CLA series limiting amplifiers combine the proven circuit design and thin film construction of the Cernex's CGM series of low noise amplifiers with a GaAs FET output limiting stages. Available in frequency ranges of 0.5-2 GHz through 8-20 GHz frequency bands. CLA series amplifiers offer nominal 35dB and 60dB of small signal gain combined with saturated power outputs that remains within a very narrow window for an extremely wide range of input signal level. Other important features include excellent full-band saturated power flatness, low small signal Noise Figure, VSWR, Harmonics, and an integrated voltage regulator for reliable operation from +12 to +15VDC unregulated-power source.

### SPECIFICATIONS:

Saturated Power Flatness.....3.0 dB peak-to-peak, max. for octave Bandwidth  
 Saturated Power Variation over temperature.....1.5 dB peak-to-peak, typ.  
 Harmonics at the input power up to +10dBm.....-10 dBc typ.  
 Pulse response: Overshoot.....1.0 dB Maximum  
     Setting time.....100 ns max  
     Recovery time.....100 ns max  
     Rise time.....20 ns max  
 Small signal suppression.....6 dB typ.  
 DC Supply Voltage.....+12VDC power supply

### MEDIUM GAIN:

Model Number	Frequency Range (GHz)	Input Range (dBm) Min./Max.	NF (dB) Max.	Psat (dBm) Min./Max.	VSWR In/Out Max.	Current @ 15 VDC (mA)Typ.	Case Type
CLAU5023512	0.5-2	-20 / +20	3.5	12 / 18	2:1	250	LN5/HN5
CLAU5023503	0.5-2	-32 / +10	3.5	3 / 7	2:1	250	LN5/HN5
CLA02043512	2-4	-20 / +20	3.0	12 / 18	2:1	250	LN5/HN5
CLA02043507	2-4	-28 / +10	3.0	7 / 11	2:1	300	LN5/HN5
CLA02063512	2-6	-20 / +20	4.0	12 / 18	2:1	300	LN5/HN5
CLA02063514	2-6	-21 / +10	4.0	14 / 18	2:1	300	LN5/HN5
CLA02083516	2-8	-19 / +10	4.0	16 / 20	2:1	350	LN5/HN5
CLA02083512	2-8	-20 / +20	4.0	12 / 18	2:1	450	LN5/HN5
CLA02183507	2-18	-28 / +10	6.5	7 / 11	2:1	375	LN5/HN5
CLA02183514	2-18	-21 / +10	6.5	14 / 19	2:1	425	LN5/HN5



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Model Number	Frequency Range (GHz)	Input Range (dBm) Min./Max.	NF (dB) Max.	Psat (dBm) Min./Max.	VSWR In/Out Max.	Current @ 15 VDC (mA)Typ.	Case Type
CLA04083512	4-8	-20 / +20	4.5	12 / 18	2:1	300	LN5/HN5
CLA04083514	4-8	-21 / +10	4.0	14 / 18	2:1	350	LN5/HN5
CLA06183512	6-18	-20 / +20	5.0	12 / 18	2:1	400	LN5/HN5
CLA07123514	7-12.4	-21 / +10	5.0	14 / 19	2:1	400	LN5/HN5
CLA06183514	6-18	-21 / +10	6.0	14 / 19	2:1	400	LN5/HN5
CLA08193514	8-18	-21 / +10	6.0	14 / 19	2:1	400	LN5/HN5
CLA08183512	8-18	-20 / +20	5.0	12 / 18	2:1	400	LN5/HN5
CLA08123512	8-12	-20 / +20	5.0	12 / 18	2:1	400	LN5/HN5
CLA12183512	12-18	-20 / +20	5.0	12 / 18	2:1	400	LN5/HN5
CLA12183514	12-18	-21 / +10	6.0	14 / 19	2:1	400	LN5/HN5
CLA18263512	18-26.5	-20 / +15	7.0	12 / 18	2:1	500	LN5/HN5

### HIGH GAIN:

CLAU5027212	0.5-2	-60 / +20	4.0	12 / 18	2:1	500	L/HN5+L/HN5
CLAU5026403	0.5-2	-61 / +10	4.0	3 / 7	2:1	550	L/HN5+L/HN5
CLA02046712	2-4	-55 / +20	4.5	12 / 18	2:1	500	L/HN5+L/HN5
CLA02046807	2-4	-61 / +10	4.5	7 / 11	2:1	650	L/HN5+L/HN5
CLA02067514	2-6	-61 / +10	5.5	14 / 18	2:1	650	L/HN5+L/HN5
CLA02066212	2-6	-50 / +20	5.5	12 / 18	2:1	650	L/HN5+L/HN5
CLA02086212	2-8	-50 / +20	5.5	12 / 18	2:1	650	L/HN5+L/HN5
CLA02087716	2-8	-61 / +10	5.5	16 / 20	2:1	750	L/HN5+L/HN5
CLA02186807	2-18	-61 / +10	7.5	7 / 11	2:1	950	L/HN5+L/HN5
CLA02187514	2-18	-61 / +10	7.5	14 / 19	2:1	950	L/HN5+L/HN5
CLA04087514	4-8	-61 / +10	5.5	14 / 18	2:1	750	L/HN5+L/HN5
CLA04086212	4-8	-50 / +20	5.5	12 / 18	2:1	650	L/HN5+L/HN5
CLA06186212	6-18	-50 / +20	6.0	12 / 18	2:1	650	L/HN5+L/HN5
CLA06187514	6-18	-61 / +10	7.0	14 / 19	2:1	900	L/HN5+L/HN5
CLA07127514	7-12.4	-61 / +10	6.0	14 / 19	2:1	900	L/HN5+L/HN5
CLA08126212	8-12	-50 / +20	7.0	12 / 18	2:1	700	L/HN5+L/HN5
CLA08187514	8-18	-61 / +10	7.0	14 / 19	2:1	900	L/HN5+L/HN5
CLA08186212	8-18	-50 / +20	7.0	12 / 18	2:1	700	L/HN5+L/HN5
CLA12186212	12-18	-50 / +20	7.0	12 / 18	2:1	700	L/HN5+L/HN5
CLA12187514	12-18	-61 / +10	7.0	14 / 19	2:1	900	L/HN5+L/HN5
CLA18266212	18-26.5	-50 / +15	7.0	12 / 18	2:1	750	L/HN5+L/HN5

ALL THE ABOVE SPECIFICATIONS ARE @ 25°C  
OTHER FREQUENCY BANDS & GAIN ARE ALSO AVAILABLE.

CERNEX RESERVE THE RIGHT TO CHANGE THE SPECIFICATIONS WITHOUT NOTICE.