SPECIFICATION   MODEL LX285

1. ＯＵＴＬＩＮＥ

Model LX285 is an amplifier of 2-ports hybrid construction.

In input stage an operation amplifier of bipolar is used as the buffer.

Isolation withstand voltage between Input and Output is guaranteed continuous

2kv p-p at least.

Non-linearity is ±0.05%(Maximum) at full scale.

Gain is 1V/V fixed.

Dimension is 10(W) x 50(L) x 20(H) mm

Construction is Epoxy Molded type.

2. ＦＥＡＴＵＲＥ

・ Hybrid IC

・ Fixed Gain １Ｖ／Ｖ

・ 2-Ports Type

・ Isolation withstand voltage is   ２０００Ｖｐｋ ＭＩＮ

・ Non-linearity is ±0.05%(Maximum)

・ Dimension is 10(W) x 50(L) x 20(H) mm

・ Construction is Epoxy Molded type.

3. ＣＯＮＴＥＮＴＳ

4. Absolute Maximum Rating

Power Supply Voltage １６．５Ｖ	Operating Temperature ０℃〜７０℃
Differential input Voltage ３０Ｖ	Storage Temperature −２５℃〜８５℃
Common Mode Input Voltage ２０００Ｖ ｐｋ MIN	Max Soldering Temperature ２６０℃（１０sec）

5. Electronic Characteristics（Ｔａ＝２５℃、Ｖ$^+$＝１５Ｖ ）

PARAMETER	SYMBOL	CONDITIONS	ＭＩＮ	ＴＹＰ	ＭＡＸ	UNITS
Input Offset Voltage	ＶISO	INITIAL		±１２	±２５	ｍＶ
Voltage Drift	△Ｖiso/△Ｖ$^+$			±０．５	±１	ｍＶ／％
Temperature Drift	△Ｖiso/△Ｔ	Ta=0℃〜70℃		２００	３５０	μＶ／℃
Input Bias Current	ＩＢ	INITIAL		８０	５００	ｎＡ
Temperature Drift	△ＩＢ/△Ｔ	Ta=0℃〜70℃		±１		ｎＡ／℃
Input Impedance	ＺIN		３Ｘ１０^5	１０^6		Ω
Linear Differential Input Voltage	ＶIDF		±５			Ｖ
Max Differential Input Voltage	ＶDF	Continuous	３０			Ｖrms
Max Common Mode Input Voltage	ＶCM	AC50Hz,60Hz,1min	２０００			Ｖrms
		AC50Hz,60Hz,Con.	２０００			Ｖpk
		ＤＣ Continuous	２０００			Ｖ
Common Mode Rejection Ratio	ＣＭＲＲ	110V,AC50Hz,60Hz		１００		ｄＢ
Non-Linearity	ＮＬ	フルスケール			±０．２	％
Gain	Ｇ			１		Ｖ／Ｖ
Gain Error	ＧＥ				±３	％
Gain、Temp.Drift	△Ｇ/△Ｔ	Ta=０℃〜７０℃			±0.03	％／℃
Max Output Voltaget	Ｖ０		±５			Ｖ
Output Impedance	Ｚ０			１		ＫΩ
Output Ripple V	ＶRI	20MHz Band Width		１０	１５	ｍＶｐｐ
Max Load Rest.	ＲＬ		５０			ＫΩ
Small Signal Frequency Response	ｆs	at−３ｄＢ (Remarks 1)	２	３		ＫＨｚ
Max Output Frequency	ｆc	(Remarks 2)	２	３		ＫＨｚ
Input Noise Voltage	ＶＮ	ｆ=0.05Hz〜100Hz			４０	μＶｐｐ
		ｆ= 10Hz〜1kHz			２０	μＶrms
Power Supply Voltage Range	Ｖ$^+$		１３．５	１５	１６．５	Ｖ
No Load Current Consumption	ＩＱ			２５	３０	ｍＡ

Remarks 1) Input Signal condition is ５０ｍＶｐｐ sin wave.
  Remarks 2) Input Signal Width is ±５Ｖ.

6. Block Diagram

7. PIN ASSIGNMENT

```
     ┌─┐
    ┌┘ └────────┐
    │ [i1   HI  INPUT
    │ [i2   (−MOD)
    │ [i3   (+MOD)
    │ [i4   LO  INPUT
    │
    │ [i5   LO  OUTPUT
    │
    │ [i6   HI  OUTPUT
    │
    │
    │ [i7   +Vs
    │
    │ [i8   POWER  COM.
    └────────────┘
```
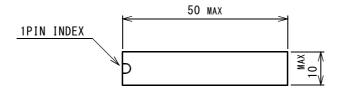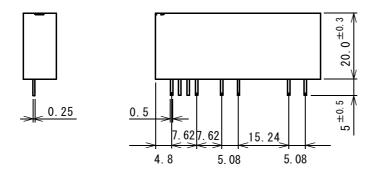
TOP VIEW

Remarks) Pin 2 and Pin 3 are connected internaly
        Do not connect to a outer circuit.

8. Dimensions

50 MAX

1PIN INDEX

MAX 10

20. 0 ±0. 3

0. 25

0. 5

5 ±0. 5

7. 62 7. 62

15. 24

4. 8   5. 08   5. 08

1 2 3 4   5 6   7 8

BOTTOM VIEW

MAX 10

3 ±0. 5

UNIT   : mm

SCALE :   1／1

ALLOWANCE :   ±０. ３

9. Instruction Manual

■　Operating Principles

    The circuit construction of LX285 is shown in Fig-1.
    The input stage is constructed with an operational amplifier and a rectifier circuit
    and a demodulator. The operational amplifier is used as a buffer one.
    The output stage is constructed with a demodulator and a filter.
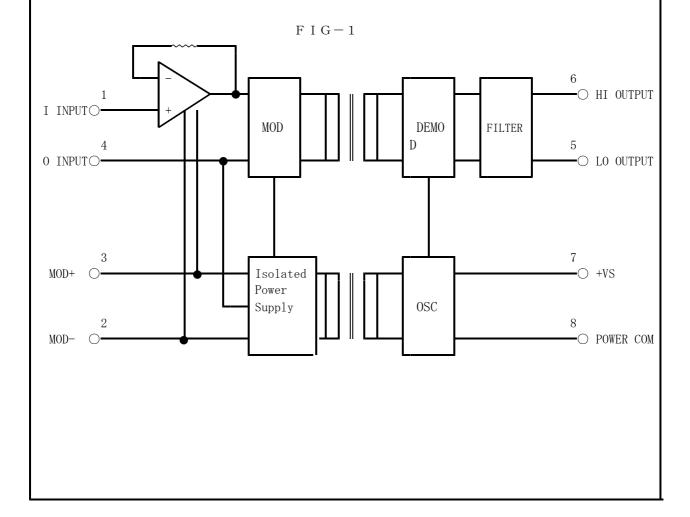   The power supply stage is constructed with a oscillator.

    When power supplies between PIN 7 and PIN 8, the oscillator will operate.
    Its signal is used for the demodulator and transferred to the input stage through
    the power transformer T2 for the modulator signal.
    At the same time its signal is used for the power supply of the operational amplifier
    after rectifying in the rectifier circuit.

    A input signal is modulated as amplitude wave in the demodulator through a buffer.
    The modulated signal is transferred to the output stage through a signal transformer T1,
    and is demodulated by the demodulator as an original signal.
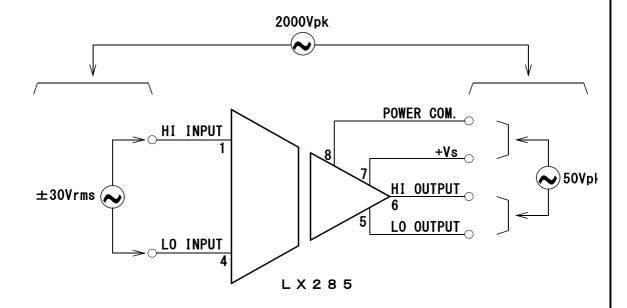   Finally this signal gets as the output through the filter.

                              Ｆ Ｉ Ｇ－１

■ Withstanding Voltage between PINs

The rating of common mode Input Voltage (Vcm)is specified for a peak value of a pulse wave,
a continuous AC and DC.
The rating of a continuous peak is applied from DC up to the frequency at the normal
Output Power.

The rating of common mode Input Voltage (Vcm)is shown in Fig -2 for the each PIN
in case of a continuous Input.

Fig-2

■ Adjustment of Offset

The adjustment of an offset voltage for this model can be done as for the connection Fig-3.
with using a well regulated power supply of ±１５Ｖ.電源電圧が変動
This offset depends on the regulation of power supply.
In case of no need for the adjustment of an offset voltage PIN5 and PIN8
shall be connected as for Fig-4.

FIG-3

FIG- 4