

October 2000

LM2479

120V Triple Bias Clamp

General Description

The LM2479 is an Integrated 120V triple bias clamp circuit for DC recovery of each of the AC coupled outputs of a CRT driver. It is well matched with the DAC outputs of the LM126X family of pre-amplifiers. Each amplifier has its gain internally set to -18. The IC is packaged in an industry standard 8 lead molded DIP package.

- High input impedance
- Single supply operation
- Matched to the LM126X family of preamplifiers

Recommended Applications

- CRT monitors requiring DC restoration at the cathodes

Features

- Wide range integrated triple bias clamp

Block Diagrams

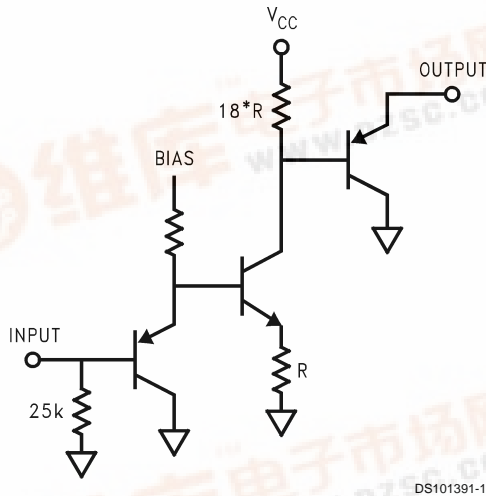


FIGURE 1. Simplified Schematic (One Channel)

Package Pinout

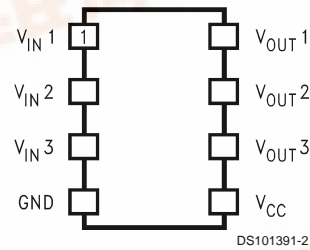


FIGURE 2. LM2479 Package Pinout
Order Number LM2479NA
NS Package Number: N08E

LM2479 120V Triple Bias Clamp



Absolute Maximum Ratings (Note 1)

If Military/Aerospace specified devices are required, please contact the National Semiconductor Sales Office/ Distributors for availability and specifications.

Supply Voltage, V_{CC}	+130V
Input Voltage, V_{IN}	0V to 5V
Storage Temperature Range, T_{STG}	-65°C to +150°C
Lead Temperature (Soldering, <10sec.)	300°C

ESD Tolerance, Machine Model

200V

Limits of Operating Ranges (Note 3)

V_{CC}	110 to 125
V_{OUT} , $V_{CC} = 120V$	50 to 120V
Ambient Temperature Range, T_A	0 to 70°C

DC CLAMP ELECTRICAL CHARACTERISTICS TARGETS AND LIMIT

Unless otherwise noted: $V_{CC} = +120V$, $V_{IN} = 2.25V_{DC}$, $T_A = 25^\circ C$.

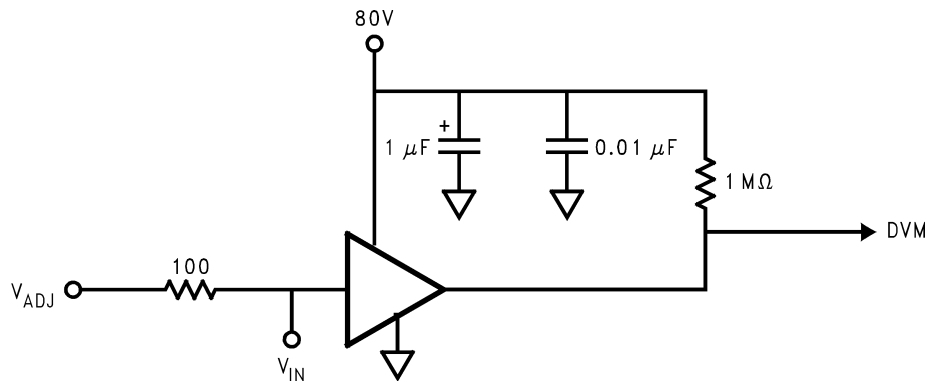
Symbol	Spec Parameter	Conditions	Min	Typ	Max	Units
I_{CC}	Supply Current	All channels		2.3	3.5	mA
V_{OUT}	DC Output Voltage		83	87	91	V_{DC}
$V_{OUT-Range}$	Output Voltage Range	V_{IN} Range = 1.0V - 4.0V		53		V
A_V	DC Voltage Gain		-16	-18	-20	
LE	Linearity Error	See Note 1		5		%
R_{IN}	Input Resistance			24K		Ω

Note 1: Linearity Error is the variation in DC gain from $V_{IN} = 1.0V$ to $V_{IN} = 4.0V$.

Note 2: Absolute Maximum Ratings indicate limits beyond which damage to the device may occur.

Note 3: Operating Ratings indicate conditions for which the device is functional, but do not guarantee specific performance limits. For guaranteed specifications and the test conditions, see the Electrical Characteristics. The guaranteed specifications apply only for the test conditions listed. Some performance characteristics may change when the device is not operated under the listed test conditions.

Note 4: All voltages are measured with respect to GND, unless otherwise specified.

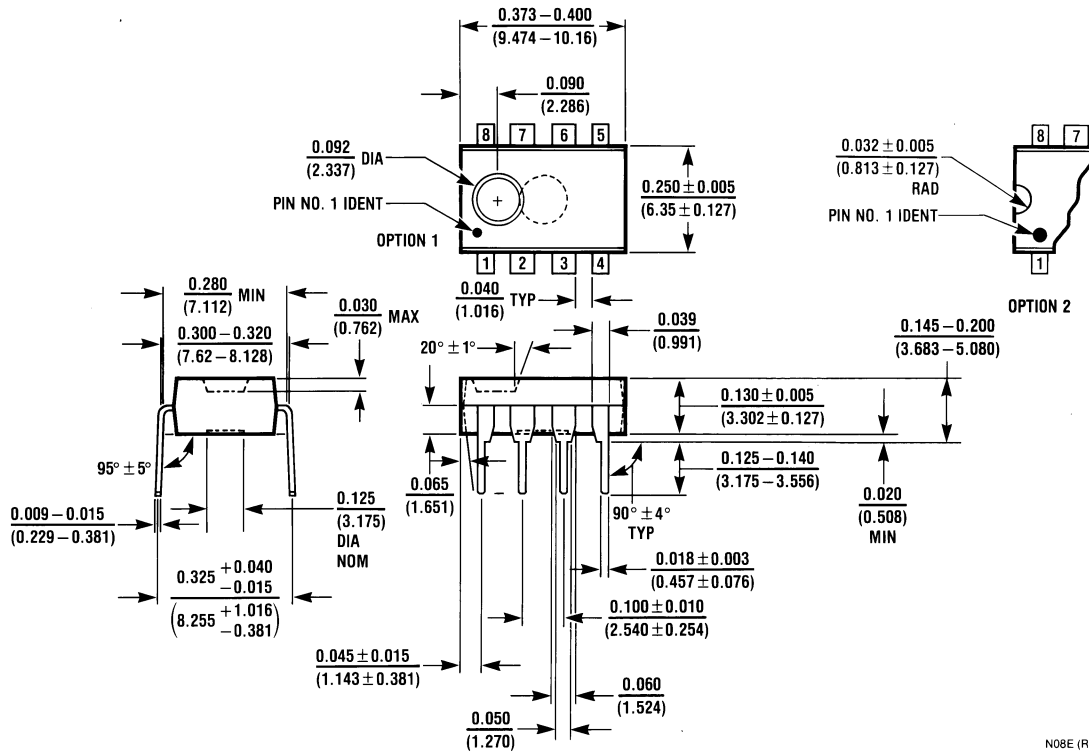
Test Circuit

DS101391-3

FIGURE 3. Test Circuit (One Channel)

Figure 3 shows the test circuit for evaluation of the LM2479 Clamp Amplifier. A high impedance VM (>100M Ω) is used for DC measurements at the output.

Physical Dimensions inches (millimeters) unless otherwise noted



Note: Information contained in this data sheet is preliminary and may be subject to change without notice.

Molded Dual-In-Line Package (N)
NS Package Number N08E
Order Number LM2479NA

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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