

GENERAL DESCRIPTION

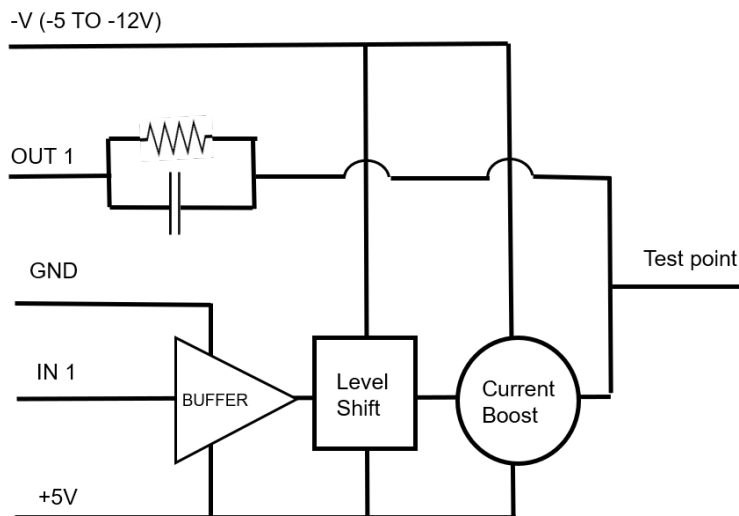
The NX120A2 is a driver featuring high speed and wide negative voltage range suited for driving PIN diode switches.

The driver is compatible with TTL/3.3V CMOS logic and supplies up to +/-25 mA to bias the diodes.

FEATURES

- Ultra high speed <10nS
- Hermetic packaged
- TTL/CMOS Compatible inputs

FUNCTION BLOCK DIAGRAM

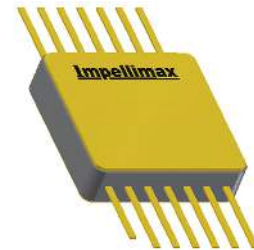


MECHANICAL

The NX120A2 consists of silicon BJT components wire bonded to an Alumina substrate with integrated TaN resistors. This is housed in a .375" x .375" hermetic flatpack for mounting into an integrated microwave assembly.

ECCN Code EAR99

NX120A2 is RoHS 3 (EU 2015/863) compliant.



PIN CONNECTIONS

- 1 -V (-5V to -12V)
- 2 OUT
- 3 Ground
- 4 Input
- 5 NC
- 6 NC
- 7 +5V
- 8 NC
- 9 NC
- 10 NC
- 11 Testpoint
- 12 NC
- 13 NC
- 14 NC

TRUTH TABLE

IN Out

0 -V

1 +V

ELECTRICAL SPECIFICATIONS

Vpos +5V, Vneg -12V, TEMP 25C, PRR 1MHz

NOTE: Tie all unused inputs high or low, but not floating.

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNITS |
|--------------------------|----------------------------|---------------------------------------|-------|-------|------|-------|
| ABSOLUTE MAXIMUMS | | | | | | |
| Vpos | Logic Supply Positive | | 0 | | +7 | V |
| Vneg | Supply Voltage Negative | | -30 | | 0 | V |
| To | Operating Temperature | | -54 | | +125 | Deg C |
| Ts | Storage Temperature | | -65 | | +150 | Deg C |
| INPUT | | | | | | |
| VI_hi | Voltage Input High | TTL | 2.5 | | 5.5 | V |
| VI_low | Voltage Input Low | TTL | 0 | .5 | .8 | V |
| OUTPUT | | | | | | |
| VO_hi | Voltage Out High | open load | 4.2 | 4.5 | 5 | V |
| VO_low | Voltage Out Low | open load | -11.2 | -11.5 | -12 | V |
| IO_hi | Current Out High | steady state into 1V diode load +/-5V | | 20 | | mA |
| IO_low | Current Out Low | steady state into 1V diode load +/-5V | | -20 | | mA |
| lopk | Current Peak Output | sink | | -100 | | mA |
| SUPPLY | | | | | | |
| IQC_pos | Quiescent Current Positive | 0.5MHz 50% duty cycle | | 1 | | mA |
| IQC_neg | Quiescent Current Negative | 0.5MHz 50% duty cycle | | 1 | | mA |
| DYNAMIC | | | | | | |
| Trise | Time Rise | | | 3 | | nS |
| Tfall | Time Fall | | | 3 | | nS |
| Td_rise | Delay Rise | | | 5 | | nS |
| Td_fall | Delay Fall | | | 5 | | nS |
| TSW_rise | Switching Speed Rise | 10pF load | | 8 | | nS |
| TSW_fall | Switching Speed Fall | 10pF load | | 9 | | nS |
| PRR | Pulse Repetition Rate | Max, 10pF load | | 1 | 10 | MHz |

ESD Sensitivity HBM Class1B

MECHANICAL SPECIFICATIONS

DRAWING NOT TO SCALE. DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE NOTED.

** Recommended backside to be electrically and thermally connected to ground. Recommended Bypassing +5V and -V supply with .1 uf . (01 uf min) to ground.

Shipping Packaging
Waffle Packs/trays
Package Code 2
Type: Housing; Lead Finish: Gold
Length .395 in MAX; Width .395 in MAX; Height .115 in MAX

MARKING SPECIFICATIONS

Logo: Impellimax
Part Number: NX120A2
Date Code: YYWW

