## 52301 INSTRUMENTATION AMPLIFIER (PRELIMINARY)



| Features:   | Applications:   |  |  |
|---|---|--|--|
| <ul> <li>+25°C to +180°C Operation</li> <li>Ultra-Low Voltage Drift</li> <li>Low Offset Voltage</li> <li>Low Nonlinearity</li> <li>Low Noise</li> <li>High CMR</li> <li>High Input Impedance</li> </ul> | <ul> <li>Amplification of signals from sources such as:<br/>Strain Gages<br/>Thermocouplers<br/>RTDs</li> <li>Low Level Signals</li> <li>Medical Instrumentation</li> </ul> |  |  |

## DESCRIPTION

The MII 52301 is a high accuracy hybrid-circuit instrumentation amplifier designed for signal conditioning requirements where very high performance is desired.

The input stage uses ultra-low drift, low noise technology to provide exceptional input characteristics.

| PARAMETER                 | +25°C |     | +18 | 80°C <sup>(1)</sup> |       |
|---------------------------|-------|-----|-----|---------------------|-------|
|                           | MIN   | MAX | MIN | MAX                 | UNITS |
| Gain Equation:            |       |     |     |                     |       |
| A, = 1 + 40K/Rg           |       |     |     |                     |       |
| Rated Output              |       |     |     |                     |       |
| Voltage                   | ±10   |     | ±10 |                     | V     |
| Current                   | 10    |     | 5   |                     | mA    |
| Input Offset Voltage      |       | ±8  |     | ±16                 | mV    |
| (vs Temp, 30 μV/°C)       |       |     |     |                     |       |
| Input Bias Current        |       |     |     |                     |       |
| Each Input                |       | 10  |     | 50                  | nA    |
| Offset                    |       | 10  |     | 50                  | nA    |
| (vs Temp, .3na/°C)        |       |     |     |                     |       |
| Input Voltage             |       |     |     |                     |       |
| Common Mode Voltage Range |       | ±10 |     | ±10                 | V     |
| CMRR: Gain = 100          | 60    |     | 40  |                     | dB    |
| Power Supply              |       |     |     |                     |       |
| Voltage                   | ±15   |     | ±15 |                     | V     |
| Current                   |       | 15  |     | 20                  | mA    |
| Dynamic Response          |       |     |     |                     |       |
| Full power Bandwidth      | 40    |     | 35  |                     | kHz   |
| Unity Gain Bandwidth      | .8    |     | .8  |                     | MHz   |
| (-3dB)                    |       |     |     |                     |       |
|                           |       |     |     |                     |       |

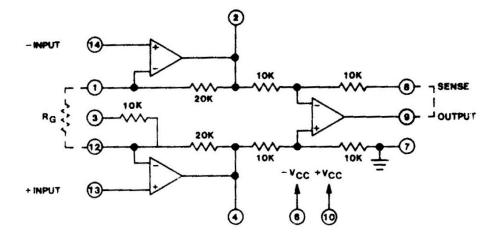
(1) 200°c operation is a possible option. Check with the Factory.

Micropac Industries cannot assume any responsibility for any circuits shown or represent that they are free from patent infringement. Micropac reserves the right to make changes at any time in order to improve design and to supply the best product possible.

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## .795 MII P/N PIN 1 INDICATOR 52301 Mii> MICROPAC 495 31757 Ά XXXX F.S.C.M. No. DATECODE SERIAL No. 52301 XXXX .140 PIN 1 INDICATOR .240 MIN. .250 MAX .050 R TYP .018 -.100 TYP. 00000000 T PIN 1 INDICATOR .300 .060 R Typ.





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