**LINEAR OUTPUT HALL EFFECT TRANSDUCER**

**CATALOG LISTING**

**SS94A2**

**OPERATING CHARACTERISTICS**

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>MIN</th>
<th>TYP</th>
<th>MAX</th>
<th>UNITS</th>
<th>CONDITIONS/REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPPLY VOLTAGE</td>
<td>6.6</td>
<td>8.0</td>
<td>12.6</td>
<td>VOLTS</td>
<td>-40°C TO +125°C</td>
</tr>
<tr>
<td>SUPPLY CURRENT</td>
<td>13</td>
<td>30</td>
<td>mA</td>
<td>MAX 12.6 V MIN -40°C</td>
<td></td>
</tr>
<tr>
<td>OUTPUT CURRENT</td>
<td>1</td>
<td>mA</td>
<td></td>
<td>SINKING OR SOURCING</td>
<td></td>
</tr>
<tr>
<td>OUTPUT SPAN</td>
<td>625 Vc</td>
<td>5.0</td>
<td>5.10</td>
<td>mV/g</td>
<td>8.0 Vc @ 25°C</td>
</tr>
<tr>
<td>SENSITIVITY</td>
<td>4.90</td>
<td>-1.5</td>
<td>-0.8</td>
<td>% OF SPAN</td>
<td>DIFF FROM STR LINE THRU -500 AND +500</td>
</tr>
<tr>
<td>LINEARITY</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
<td>VOLTS</td>
<td>25°C</td>
</tr>
<tr>
<td>VOUT @ 0 GAUSS</td>
<td>3.960</td>
<td>4.000</td>
<td>4.040</td>
<td>VOLTS</td>
<td>25°C</td>
</tr>
<tr>
<td>TEMP ERR-NULL</td>
<td>-0.2</td>
<td>+0.2</td>
<td>%/°C</td>
<td>-40°C TO +125°C</td>
<td></td>
</tr>
<tr>
<td>TEMP ERR-GAIN</td>
<td>-0.2</td>
<td>+0.2</td>
<td>%/°C</td>
<td>-40°C TO +125°C</td>
<td></td>
</tr>
</tbody>
</table>

**BLOCK DIAGRAM CURRENT SINKING OR SOURCING OUTPUT**

- HALL SENSOR
- AMPLIFIER
- OUTPUT (O)
- VS (+)
- V-(−)

**NOMINAL TRANSFER CHARACTERISTICS AT 8.0 VDC**

- VOUT
- OUTPUT VOLTAGE
- 6.5 VOLTS
- 4 VOLTS
- 1.5 VOLTS

NOTES:

1. CENTERLINE OF HALL CELL

2. THE + MAGNETIC FLUX IS IN THIS DIRECTION (THIS ASSUMES THE CONVENTION THAT THE DIRECTION OF THE EXTERNAL FLUX OF A MAGNET IS FROM THE NORTH TO THE SOUTH POLE OF THE MAGNET)

3. THE DEVICE CANNOT BE DAMAGED BY MAGNETIC OVERDRIVE

4. OUTPUT TYPE - RATIOMETRIC

5. THE OUTPUT IS CLAMPED AT 9.0 VDC MINIMUM, 9.5 VDC TYPICAL

6. THIS SIDE COATED WITH CONDUCTIVE MATERIAL WHICH IS ELECTRICALLY CONNECTED TO (−) TERMINAL