The Series 220 Driver is designed to operate with Isomet acousto-optic modulators for digital control of laser beam intensity. For this mode of operation, an on-off gated source of RF energy is required at a selected frequency and power level.

Contained in the 220 Driver are a free running quartz crystal stabilized oscillator, a gain control, a fast acting RF switch, and a broadband class-A power amplifier. Under control of the TTL compatible digital input, the RF switch gates the oscillator to the power amplifier. The particular choice of circuit design results in a clean RF output with minimum overshoot and ringing and virtually no RF leakage in the off condition. The rise and fall times are negligible compared to the compatible modulator.

**SPECIFICATIONS**

- Output impedance: 50Ω Nominal
- Load Mismatch VSWR: 2:1 Max
- RF On-Off Ratio: 40dB
- Digital Input: TTL compatible, Positive logic
  - RF on > +2.75V (15mA), RF Off ≤ 0.3V
- Frequency Accuracy: ± 0.005%
- Frequency Stability: ± 0.003%
- DC Power Input: +28Vdc regulated to ±0.25%
  - (Supplied by the User)
  - 200mA for 0.75W models,
  - 400mA for 1W models,
  - 500mA for 1.6W models.
- Temperature Range: 0°C to 60°C ambient, temperature at mounting face must not exceed 70°C.
- Mounting Orientation: Any
- Dimensions: See Outline, reverse side.

**PERFORMANCE**

<table>
<thead>
<tr>
<th>Model</th>
<th>Center Frequency</th>
<th>Rise Time</th>
<th>RF Drive Power</th>
<th>Use With Modulator</th>
</tr>
</thead>
<tbody>
<tr>
<td>222E-1</td>
<td>80MHz</td>
<td>5ns</td>
<td>&gt;.75W</td>
<td>1205C-1</td>
</tr>
<tr>
<td>222A-1</td>
<td>80MHz</td>
<td>5ns</td>
<td>&gt;1W</td>
<td>1205C-1,-2</td>
</tr>
<tr>
<td>223A-1</td>
<td>110MHz</td>
<td>5ns</td>
<td>&gt;1W</td>
<td>1206C</td>
</tr>
<tr>
<td>225A-1</td>
<td>200MHz</td>
<td>3ns</td>
<td>&gt;1W</td>
<td>1250C</td>
</tr>
<tr>
<td>221A-2*</td>
<td>40MHz</td>
<td>10ns</td>
<td>&gt;1.6W</td>
<td>1201E-1, 1201E-2</td>
</tr>
<tr>
<td>222A-2</td>
<td>80MHz</td>
<td>5ns</td>
<td>&gt;1.6W</td>
<td>1205C-2 (830nm)</td>
</tr>
</tbody>
</table>

*The 221A-2 may be used with RFA-105 to produce 8W of drive power for the 1201E-2 at 1.06µm, or with RFA-1150 to produce 50W for the 1207B at 10.6µm.
220 Series
Digital RF Driver

OUTLINE DRAWING

Dimn:mm
(1”=25.4mm)

Mounting Face
[Must not Exceed 70degC]

4mm dia. (2)
Mounting hole

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
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Quality Assured.
In-house: RF & Digital design
Software Development
OEM manufacture