The 523C series Digital Modulation Drivers are designed to operate with Isomet 110MHz AO modulators and frequency shifters for digital (On:Off) control of the laser beam intensity.

Contained in these Drivers is a crystal oscillator, a wideband balanced diode ring modulator, and RF power amplifier. A high speed, balanced ring modulator is used to switch the carrier amplitude under the control of the modulation input. The resulting double sideband AM signal is subsequently amplified by a Class A MOSFET amplifier stage.

Efficient heat transfer from the driver is required. The mounting base must be attached to an external heat sink not exceeding a temperature of 70°C. The supply to the 523C-2 driver is internally regulated and thus will accept a wide DC power input range. The DC input is not internally regulated on C-L, C-4 and C-6 variants.

**SPECIFICATIONS**

- **Output impedance:** 50Ω Nominal
- **Load Mismatch VSWR:** 2:1 Max
- **RF On-Off Ratio:** >40dB
- **Digital Input:** TTL compatible
  - > 2.7V = RF ON, < 0.8V = RF OFF
  - (10mA input current)
- **Frequency Accuracy:** ± 0.003%
- **Frequency Stability:** ± 0.003%
- **DC Power Input:**
  - 523C-L: +15Vdc regulated to ±1%, < 400mA
  - 523C-2: +22 to +30Vdc regulated to ±1%, < 500mA
  - 523C-4: +24/+28Vdc regulated to ±1%, < 500mA
  - 523C-6: +24/+28Vdc regulated to ±1%, < 700mA
- **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>Centre Frequency</th>
<th>Minimum Rise Time</th>
<th>RF Drive Power</th>
<th>Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>523C-L</td>
<td>110MHz</td>
<td>6nsec</td>
<td>&gt;1.5 W</td>
<td>+15V</td>
</tr>
<tr>
<td>523C-2</td>
<td>110MHz</td>
<td>6nsec</td>
<td>&gt;2.0 W</td>
<td>+22 to +30V</td>
</tr>
<tr>
<td>523C-3</td>
<td>110MHz</td>
<td>6nsec</td>
<td>&gt;2.5 W</td>
<td>+24V</td>
</tr>
<tr>
<td>523C-6</td>
<td>110MHz</td>
<td>6nsec</td>
<td>&gt;5.5 W</td>
<td>+28V</td>
</tr>
</tbody>
</table>
523C-x Series
RF Driver

OUTLINE DRAWING

Mounting Flange to Heatsink
Apply Thermal Compound
Max. Temp 70deg C

Dimensions : mm