The 533C series RF Drivers are designed to operate with Isomet 110MHz AO modulators and compact Q-switches for the proportional (analog) control of laser beam intensity.

The driver includes a crystal oscillator, a wideband balanced diode mixer and RF power amplifier. The mixer is used to modulate the carrier amplitude under the control of the external modulation input. The resulting double sideband AM signal is subsequently amplified by a Class A MOSFET 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 533C-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
- **Analogue Input:** 0 - 1V * for 100% depth of modulation
  50 ohm input impedance
- **Frequency Accuracy:** ± 25ppm
- **Frequency Stability:** ± 25ppm
- **DC Power Input:**
  - 533C-L: +15Vdc regulated to ± 1%, < 400mA
  - 533C-2: +22 to +30Vdc regulated to ± 1%, < 500mA
  - 533C-4: +24/+28Vdc regulated to ± 1%, < 500mA
  - 533C-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

**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>533C-L</td>
<td>110MHz</td>
<td>6nsec</td>
<td>&gt;1.5 W</td>
<td>+15V</td>
</tr>
<tr>
<td>533C-2</td>
<td>110MHz</td>
<td>6nsec</td>
<td>&gt;2.0 W</td>
<td>+22 to +30V</td>
</tr>
<tr>
<td>533C-3</td>
<td>110MHz</td>
<td>6nsec</td>
<td>&gt;2.5 W</td>
<td>+24V</td>
</tr>
<tr>
<td>533C-6</td>
<td>110MHz</td>
<td>6nsec</td>
<td>&gt;5.5 W</td>
<td>+24V</td>
</tr>
</tbody>
</table>
533C-x Series
RF Driver

OUTLINE DRAWING

Dimensions: mm

* Options
Input BIAS: 0-5V modulation: 0-10V modulation:
Add Suffix: -B -V -X

(TTL compatible = 523C series)

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

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