The EIMAC 4K3SJ is an air cooled, permanent magnet focused, power-amplifier klystron designed to operate at frequencies from 1700 to 2400 MHz. It will deliver a minimum output power of 1 kilowatt with minimum power gain of 40 decibels. The 4K3SJ is intended for use in applications where light weight and compactness are essential.

FEATURES

- PERMANENT MAGNET FOCUSING
- FOUR INTEGRAL CAVITIES
- LOW NOISE LEVEL
- FIXED INPUT AND OUTPUT COUPLING
- TWO LIFTING HANDLES FOR EASE OF HANDLING
- INSTANT FAULT RECYCLING

CHARACTERISTICS

ELECTRICAL

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>1700-2400 MHz</td>
</tr>
<tr>
<td>Minimum Output Power</td>
<td>1 kW</td>
</tr>
<tr>
<td>Minimum Power Gain</td>
<td>40 db</td>
</tr>
<tr>
<td>Cathode: Impregnated Unipotential</td>
<td></td>
</tr>
<tr>
<td>Starting Time</td>
<td>3 minutes</td>
</tr>
<tr>
<td>Heater: Voltage</td>
<td>6 volts</td>
</tr>
<tr>
<td>Current</td>
<td>4.5 amperes</td>
</tr>
<tr>
<td>Maximum Starting Current</td>
<td>9 amperes</td>
</tr>
</tbody>
</table>

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NOTES:
1. KEEP MAGNETIC MATERIALS AT LEAST SIX INCHES AWAY FROM MAGNET. OTHER MAGNETS SHOULD BE AT LEAST TWELVE INCHES DISTANT.
2. DIMENSIONS ARE IN INCHES.
3. (*) MINIMUM CONTACT.
MECHANICAL

Operating Position (preferred) - - - - - - - - - - Vertical, cathode down
Cavity Tuning Torque (maximum) - - - - - - - - - - - 12 inch pounds
Cooling - - - - - - - - - - Forced Air (20°C at sea level)
Collector Flow - - - - - - - - - - - 200 cfm
Collector Pressure Drop - - - - - - - - - - 1.5 inches H₂O

Body and cathode seals require cooling only at higher temperatures or lower pressures.

Maximum Dimensions:
Length - - - - - - - - - - - 18.4 inches
Width - - - - - - - - - - - 13.25 inches
Depth - - - - - - - - - - - 14 inches

RF Input Coupling - - - - - - - - - - - UG-21 D/U Connector
RF Output Coupling - - - - - - - - - - - 1½ inch, 50-ohm line
Weight (Klystron and Magnet) - - - - - - - - - - - 85 pounds

MAXIMUM RATINGS

DC BEAM VOLTAGE - - - - - - - - - - 7.0 KILOVOLTS
DC BEAM CURRENT - - - - - - - - - - 0.6 AMPERE
DC BEAM INPUT POWER - - - - - - - - - - 4 KILOWATTS
COLLECTOR DISSIPATION - - - - - - - - - - 4 KILOWATTS
CATHODE SEAL TEMPERATURE - - - - - - - - - - 150 DEGREES C
LOAD VSWR - - - - - - - - - - 2:1

TYPICAL OPERATION – TUNED FOR MAXIMUM EFFICIENCY

Frequency - - - - - - - - 1700 2000 2400 megahertz
Output Power - - - - - - - - 1.17 1.08 1.03 kilowatts
Driving Power - - - - - - - - 20 25 30 milliowatts
Gain - - - - - - - - - - - 47.6 46.3 45.3 decibels
DC Beam Voltage - - - - - - - - 6 6 6.2 kilovolts
DC Beam Current - - - - - - - - 0.54 0.54 0.56 ampere
Beam Power Efficiency - - - - - - - - 36.2 33.4 31.8 percent
3 db Bandwidth - - - - - - - - 4 4.5 6 megahertz

For additional data or information regarding a specific application, write to EIMAC, Division of Varian, 301 Industrial Way, San Carlos, California.