



**E I M A C**  
Division of Varian  
S A N C A R L O S  
C A L I F O R N I A

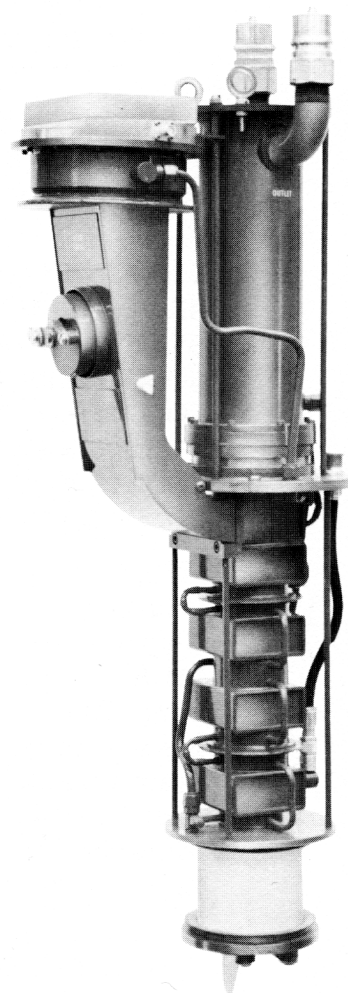
**5K70SH**  
S-BAND  
30 KW CW  
POWER AMPLIFIER  
KLYSTRON

The EIMAC 5K70SH power amplifier klystron was designed specifically for industrial heating applications. The outstanding characteristic of this klystron is its high efficiency at full power. The 5K70SH delivers 30 kilowatts output power at better than 50% efficiency at 2450 MHz with a minimum gain of 50 db.

An extra large cathode is used in the 5K70SH to assure long life. Five integral cavities are employed for high gain, and all are pre-tuned at the factory. Also, input and output couplings are factory adjusted. In short, no tuning of any kind is required.

The output "window," where microwave power is transferred from the vacuum within the klystron to the external waveguide, is made of beryllium oxide. This insulating material has extremely good heat-transfer and mechanical characteristics. It is virtually indestructible in this application.

A focusing electromagnet, Catalog Number H-226, has been designed for use with the 5K70SH. EIMAC Water Load WL-204 is recommended for use with this klystron.



## CHARACTERISTICS

### ELECTRICAL

|                                           |   |   |   |   |   |   |   |   |   |   |            |
|-------------------------------------------|---|---|---|---|---|---|---|---|---|---|------------|
| Heater: Voltage ( $\pm 5\%$ )             | - | - | - | - | - | - | - | - | - | - | 7.5 Vac    |
| Current (nominal)                         | - | - | - | - | - | - | - | - | - | - | 11.5 Aac   |
| Cathode: Oxide Coated                     |   |   |   |   |   |   |   |   |   |   |            |
| Heating Time                              | - | - | - | - | - | - | - | - | - | - | 5 Min      |
| Getter: Voltage                           | - | - | - | - | - | - | - | - | - | - | 4 Vac      |
| Current                                   | - | - | - | - | - | - | - | - | - | - | 24 Aac     |
| Power Gain                                | - | - | - | - | - | - | - | - | - | - | 50 db      |
| Output Power                              | - | - | - | - | - | - | - | - | - | - | 30 kW      |
| Frequency                                 | - | - | - | - | - | - | - | - | - | - | 2450 MHz   |
| Phase Shift as a Function of Beam Voltage | - | - | - | - | - | - | - | - | - | - | 0.0935 °/V |



## 5K70SH

## MECHANICAL

[illegible]

## ELECTROMAGNET POWER SUPPLY REQUIREMENTS

[illegible]

## MAXIMUM RATINGS

[illegible]

## TYPICAL OPERATION

[illegible]

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

