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 SAN CARLOS
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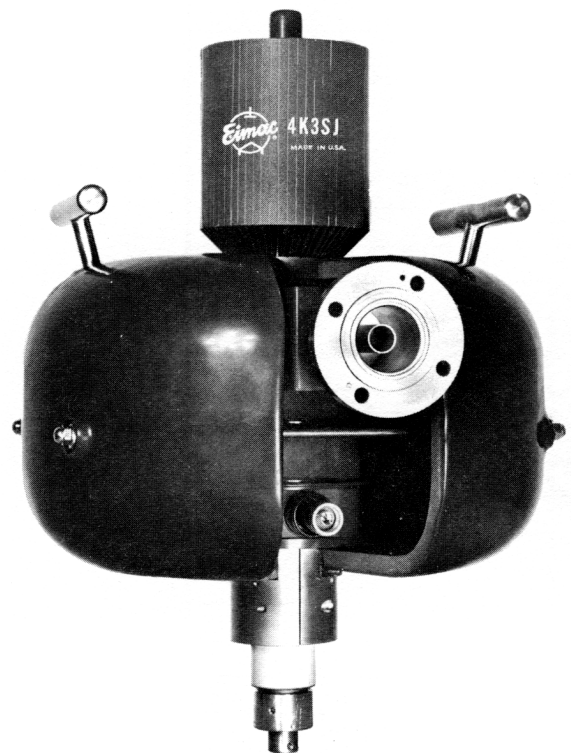
4K3SJ

**POWER AMPLIFIER
 S-BAND KLYSTRON**

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

Frequency	- - - - -	1700-2400 MHz
Minimum Output Power	- - - - -	1 kW
Minimum Power Gain	- - - - -	40 db
Cathode: Impregnated Unipotential		
Starting Time	- - - - -	3 minutes
Heater: Voltage		
Current	- - - - -	4.5 amperes
Maximum Starting Current	- - - - -	9 amperes

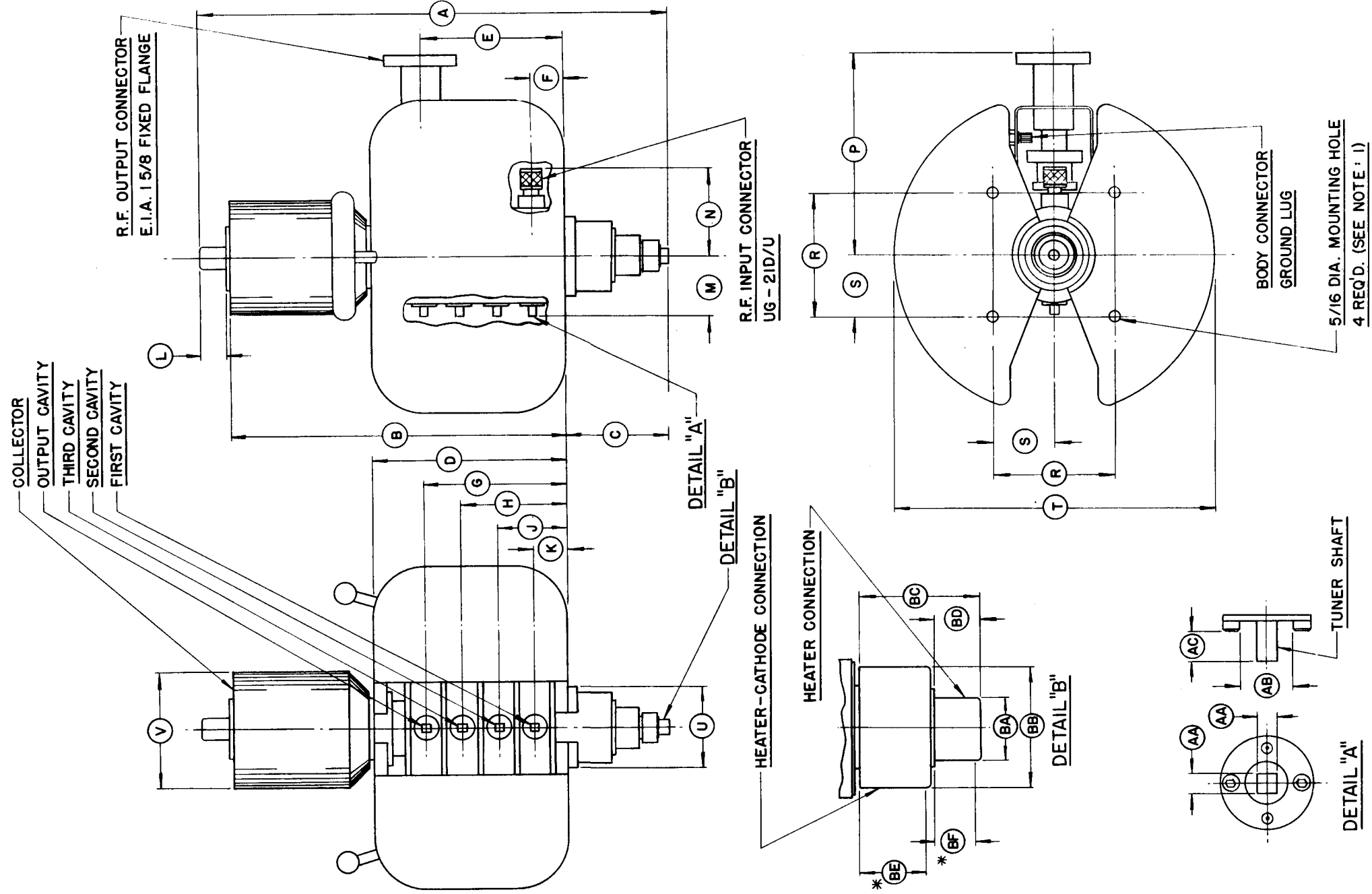


4K3SJ

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DIMENSIONAL DATA			
REF.	NOM.	MIN.	MAX.
A			19.000
B	13.475		
C	4.544		
D			7.874
E	5.320		
F	1.470		
G	5.320		
H	4.370		
J	2.920		
K	1.470		
L			.750
M	2.472		
N	3.475		
P	7.910		
R		4.888	5.012
S		2.444	2.506
T			13.196
U			3.042
V	4.383		
AA		.248	.252
AB		.647	
AC		.340	
BA		.740	.760
BB		1.485	1.505
BC		1.450	1.490
BD		.530	
BE		.830	
BF		.450	



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

4K3SJ KLYSTRON

**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 H ₂ O
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	- - - - -	1 $\frac{5}{8}$ 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 milliwatts
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.