

**KLYSTRON****KS7-85**

Frequency: 7Gc/s. band. Mechanical tuning.

Power output: 50mW minimum.

Construction: All metal, coaxial output probe.

Application: Local oscillator, signal generator.

This data should be read in conjunction with GENERAL OPERATIONAL RECOMMENDATIONS—MICROWAVE DEVICES: INTRODUCTION and REFLEX KLYSTRONS which precede this section of the handbook.

**CHARACTERISTICS**

|  | Min. | Max. |             |
|--|------|------|-------------|
| Mechanical tuning range  | 6.5  | 7.5  | Gc/s        |
| Electronic tuning range, between half power points at any frequency in the mechanical tuning range | 25   | —    | Mc/s        |
| Power output at 7Gc/s $\pm$ 20Mc/s (principal mode)  | 85   | —    | mW          |
| Power output at any other frequency in the band  | 50   | —    | mW          |
| Reflector voltage for maximum power output at 7Gc/s $\pm$ 20Mc/s                                   | -100 | -175 | V           |
| Reflector voltage range, inclusive of electronic tuning range                                      | -60  | -215 | V           |
| Frequency change with temperature  | —    | 500  | kc/s per °C |

**CATHODE**

Indirectly heated

|       |     |    |
|-------|-----|----|
| $V_h$ | 6.3 | V  |
| $I_h$ | 500 | mA |

**OPERATING CONDITIONS IN SPECIFIED MOUNT**

|   |      |         |
|---|------|---------|
| $f$   | 7.0  | Gc/s    |
| $V_{\text{resonator}}$                            | 300  | V       |
| $I_{\text{resonator}}$                            | 24   | mA      |
| $V_{\text{reflector}}$                            | -140 | V       |
| $I_{\text{reflector}}$                            | 1.0  | $\mu$ A |
| Electronic tuning range between half power points | 38   | Mc/s    |
| $P_{\text{out}}$                                  | 100  | mW      |

**COOLING**

Natural

**ABSOLUTE RATINGS**

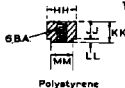
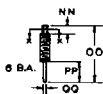
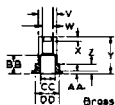
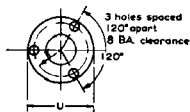
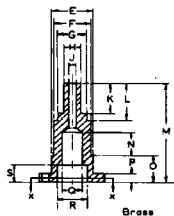
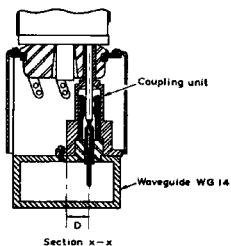
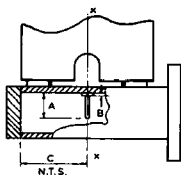
|                                |              |    |
|--------------------------------|--------------|----|
| $V_{\text{resonator max.}}$    | 350          | V  |
| $I_{\text{resonator max.}}$    | 37           | mA |
| $V_{\text{reflector max.}}$    | -1.0 to -400 | V  |
| $V_{h-k \text{ max.}}$         | -150         | V  |
| $T_{\text{amb (shell) max.}}$  | 110          | °C |
| $T_{\text{coaxial line max.}}$ | 90           | °C |

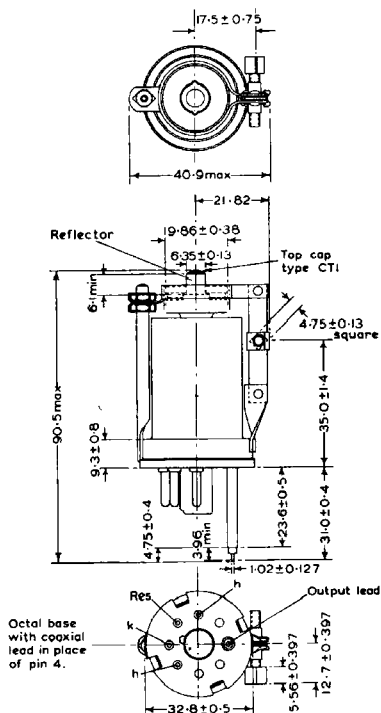
**OPERATING NOTE**

The prescribed tuning range is covered by five turns of the mechanical tuning screw. ←

|    | <i>Inches</i> | <i>Millimetres</i> |
|----|---------------|--------------------|
| A  | 0.370 ± 0.005 | 9.398 ± 0.127      |
| B  | 0.045         | 1.143              |
| C  | 0.315         | 8.001              |
| D  | 0.333         | 8.458              |
| E  | 0.5625        | 14.287             |
| F  | 0.5           | 12.7               |
| G  | 0.390         | 9.90               |
| H  | 0.25          | 6.350              |
| J  | 0.145         | 3.683              |
| K  | 0.475         | 12.065             |
| L  | 0.568         | 14.427             |
| M  | 1.5           | 38.1               |
| N  | 0.5           | 12.7               |
| O  | 0.375         | 9.525              |
| P  | 0.125         | 3.175              |
| Q  | 0.314         | 7.976              |
| R  | 0.468         | 11.887             |
| S  | 0.250         | 6.350              |
| T  | 0.375         | 9.525              |
| U  | 1.000         | 25.4               |
| V  | 0.281         | 7.137              |
| W  | 0.15          | 3.81               |
| X  | 0.1           | 2.54               |
| Y  | 0.53          | 13.462             |
| Z  | 0.125         | 3.175              |
| AA | 0.020         | 0.508              |
| BB | 0.250         | 6.350              |
| CC | 0.250         | 6.350              |
| DD | 0.312         | 7.925              |
| EE | 0.136         | 3.454              |
| FF | 0.015 × 0.313 | 0.381 × 7.950      |
| GG | 0.438         | 11.131             |
| HH | 0.468         | 11.887             |
| JJ | 0.230         | 5.842              |
| KK | 0.292         | 7.417              |
| LL | 0.062         | 1.575              |
| MM | 0.375         | 9.525              |
| NN | 0.088         | 2.235              |
| OO | 0.750         | 19.05              |
| PP | 0.325         | 8.255              |
| QQ | 0.040         | 1.016              |
| RR | 0.040 × 0.186 | 1.016 × 4.724      |
| SS | 0.010 × 0.180 | 0.254 × 4.572      |
| TT | 0.095         | 2.413              |

6309





6331

All dimensions in mm