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MULLARD LIMITED
Mullard House,
Torrington Place,
LONDON.W.C.1.,
England.

JEDEC TYPE NO. 7638

TUBE TYPE LA9-3

The LA9-3 is a travelling wave tube of unpackaged construction for use as a broadband low power amplifier in the 7 to 11.5 Gc/s. band.

MECHANICAL INFORMATION

Base	Terminal connector
Envelope	Glass
Maximum overall length	16.97" (426mm)
Maximum overall diameter	1.26" (32mm)
Cathode	Indirectly heated
Mounting position	Any

HEATER RATINGS

Heater voltage	6.3 Volts
Heater current	500 mAmps

MAXIMUM RATINGS (absolute values)

Maximum anode 1 voltage	200 Volts
Maximum anode 2 voltage	400 Volts
Maximum anode 1 current	10 μ Amps
Maximum anode 2 current	10 μ Amps
Maximum helix voltage	1.4 kVolts
Maximum helix current	50 μ Amps
Maximum focus electrode voltage	-100 Volts
Maximum focus electrode current	10 μ Amps
Maximum collector voltage	1.5 kVolts
Maximum collector current	600 μ Amps
Maximum collector dissipation	900 mWatts
Maximum input signal	500 mWatts
Maximum heater cathode voltage	50 Volts

CHARACTERISTICS

	Min.	Max.	
Frequency band	7.0	11.5	Gc/s
Gain (low power level)	20	-	dB
Noise factor	-	25	dB
Saturation power output	-	6.0	mWatts
Attenuation (cathode current = 0mA)	-	40	dB

OPERATING CONDITIONS

As an input amplifier using a periodic permanent magnet system of approved design.

Frequency	9 Gc/s
Focus electrode voltage	-70 Volts
Anode 1 voltage	155 Volts
Anode 2 voltage	135 Volts
Helix voltage	1.25 kVolts
Collector voltage	1.35 kVolts
Collector current	550 μ Amps
Gain ¹	27 dB
Noise factor (broadband)	23 dB
Power output	50 μ Watts
Input match in recommended mount v.s.w.r.	3.0
Output match in recommended mount v.s.w.r.	3.0

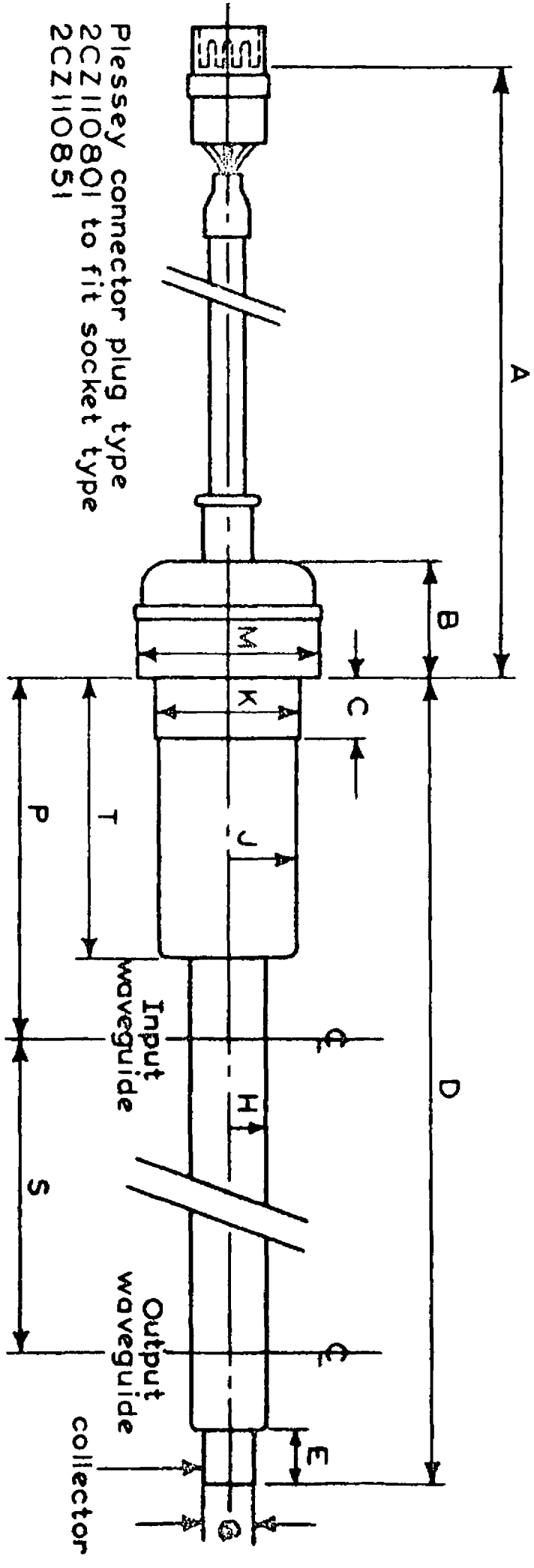
NOTE

Using a solenoid of approved design, up to 5dB improvement in noise factor can be obtained.

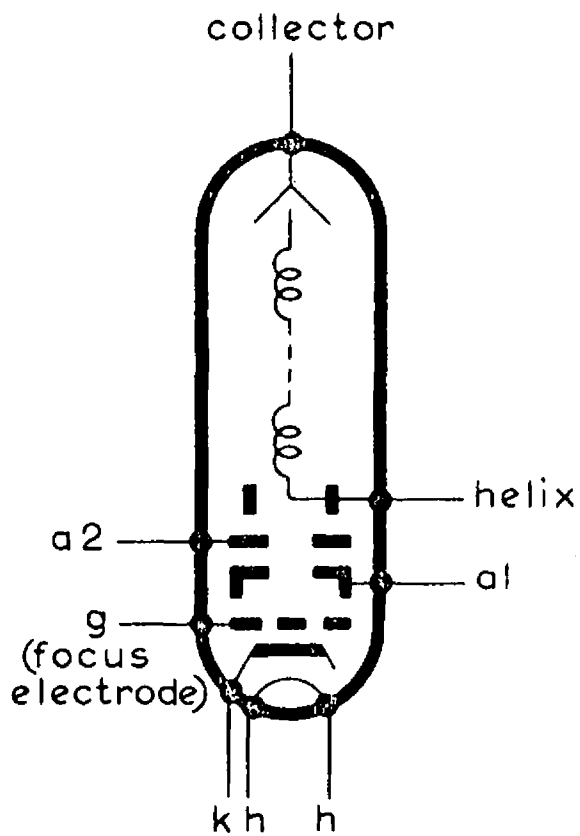
DIMENSIONS

Waveguide dimensions 0.900 x 0.079inches, 22.86 x 2.00mm.

	Inches	Millimetres	
A	4.331	110	min.
B	1.299	33	max.
C	0.650	16.5	max.
D	12.638	316	max.
E	0.394 $\pm$ 0.004	10	min.
G	0.167 $\pm$ 0.002	5.0 $\pm$ 0.05	
H	0.125	3.17	max.
J	0.441	12	max.
K	1.063	27	max.
M	1.260	32	max.
P	2.835 $\pm$ 0.008	72 $\pm$ 0.2	
S	8.150 $\pm$ 0.004	207 $\pm$ 0.1	
T	2.265	57.5	max.



Plessey connector plug type
 2CZ110801 to fit socket type
 2CZ110851



Connections viewed
looking at plug

