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JEDEC TYPE NO. 7639

TUBE TYPE LA16-2

The LA16-2 is a travelling wave tube of unpackaged construction for use as a low power, broadband amplifier in the band 11.5 to 18 Gc/s.

MECHANICAL INFORMATION

Base	Terminal connector
Envelope	Glass
Maximum overall length	16.93" (430mm)
Maximum overall diameter	1.259" (32mm)
Cathode	Indirectly heated
Mounting position	Any

HEATER RATINGS

Heater voltage	6.3 Volts
Heater current	400 mAmps

When the minimum noise factor is required the heater voltage specified with the tube should be used. The required heater voltage will lie in the range 6.0 to 9.0V and should be set to  $\pm 250\text{mV}$  of the value stated.

MAXIMUM RATINGS (absolute values)

Maximum collector voltage	1.85 kVolts
Maximum collector current	450 $\mu\text{Amps}$
Maximum collector dissipation	800 mWatts
Maximum helix voltage	1.75 kVolts
Maximum helix current	45 $\mu\text{Amps}$
Maximum anode 2 voltage	200 Volts
Maximum anode 2 current	20 $\mu\text{Amps}$
Maximum anode 1 voltage	350 Volts
Maximum anode 1 current	20 $\mu\text{Amps}$
Maximum focus electrode voltage	-120 Volts
Maximum focus electrode current	10 $\mu\text{Amps}$
Maximum input signal	300 mWatts
Maximum heater-cathode voltage	50 Volts

## CHARACTERISTICS

	Min.	Max.	
Frequency band	11.5	18	Go/s
Gain (low power level)	20	-	dB
Noise factor	-	28	dB
Saturation power output	3.0	-	mWatts
Attenuation (at cathode current = 0mA)	40	-	dB

## OPERATING CONDITIONS

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

Frequency	15 Go/s
Collector voltage	1.7 kVolts
Helix voltage	1.6 kVolts
Anode 2 voltage	150 Volts
Anode 1 voltage	320 Volts
Focus electrode voltage	-100 Volts
Collector current	350 $\mu$ Amps
Gain	22 dB
*Noise factor (broadband)	26 dB
Power output	10 $\mu$ Watts

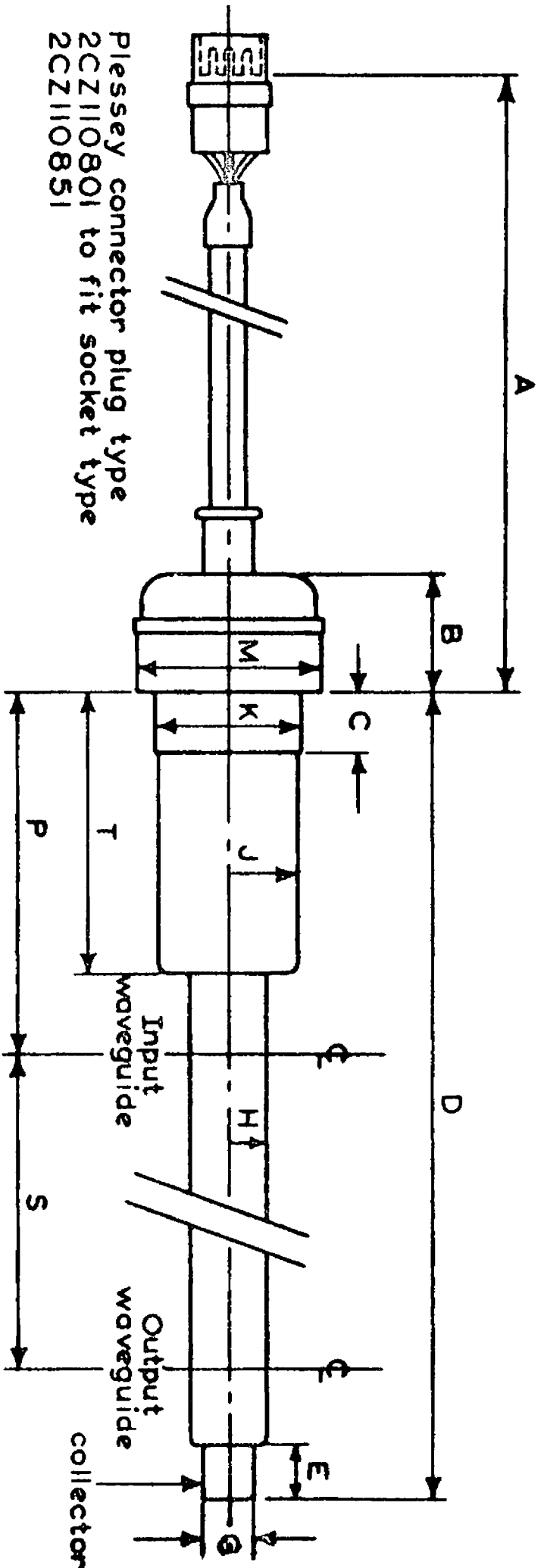
## NOTE

\*Using a solenoid of approved design, up to 6 dB improvement in noise factor can be obtained.

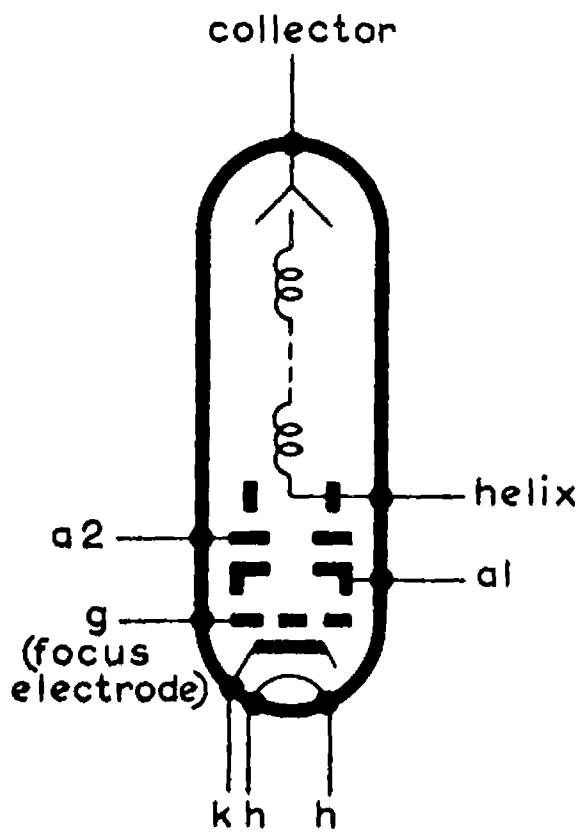
## DIMENSIONS

Waveguide dimensions 0.622 x 0.311ins. 15.78 x 7.90mm.

	Inches	Millimetres	
A	4.331	110	min.
B	1.299	33	max.
C	0.650	16.5	max.
D	12.598	320	max.
E	0.394	10	min.
G	0.081	2.05	max.
H	0.108	2.75	max.
J	0.472	12	max.
K	1.063	27	max.
M	1.259	32	max.
P	2.614 $\pm$ 0.008	66.5 $\pm$ 0.2	
S	8.130 $\pm$ 0.004	206.5 $\pm$ 0.1	
T	1.898	48.2	max.



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



Connections viewed looking at plug

