

FEATURES

- **Redundant Switching Network** Provides full 1 for 2 redundancy for *Stellar* HPAs at power levels up to 600 W per channel.
- **Integral 600 W Load** Provides termination for unused HPA in hot standby mode. Cooling for the load is via natural convection.
- **RS422/RS485** serial port for remote control.
- **Interconnections** Includes all RF and electrical interconnects between the HPAs and the controller.

There are two variants; the N6144A that includes a 3 dB hybrid, and the N6144 with no hybrid. Both variants comprise an RF assembly and a separate controller.

SPECIFICATION

Electrical

Prime power	99 to 264 V 47 to 65 Hz 150 W max switching 15 W nom
Power factor	0.96 min

Microwave

Frequency range	13.75 to 14.5 GHz
Power handling	600 W/channel max
Switching time	200 ms typ
Input section	see block diagram
Input VSWR:	
input 1 to output 1	1.5:1 max
input 2 to output 2	1.5:1 max
input 2 to output 3	1.5:1 max
input 1 to output 3	1.75:1 max
Output VSWR:	
output 1	1.5:1 max
output 2	1.5:1 max
output 3	1.75:1 max
Insertion loss:	
input 1 to output 1	2.75 dB max
input 2 to output 2	2.75 dB max
input 2 to output 3	2.75 dB max
input 1 to output 3	4.25 dB max
Isolation between inputs	50 dB min

Output section	see block diagram
Input VSWR:	
N6144	1.15:1 max
N6144A	1.20:1 max
Output VSWR:	
N6144	1.15:1 max
N6144A	1.20:1 max
Insertion loss N6144	
input 1 to output	0.6 dB max
input 2 to output	0.6 dB max
input 3 to output	0.8 dB max
Insertion loss N6144A	
input 1 to output	3.6 dB max
input 2 to output	3.6 dB max
input 3 to output	3.8 dB max
Integral loads power	600 W max
Isolation between outputs	70 dB min

Mechanical

Controller dimensions:	
height	133 mm (3U) (5.25 inches)
width	483 mm (19.0 inches)
depth (maximum)	360 mm (14.2 inches)
RF assembly dimensions	see outline
Controller to RF assembly lead length	2 m
Controller to HPA lead length	2 m

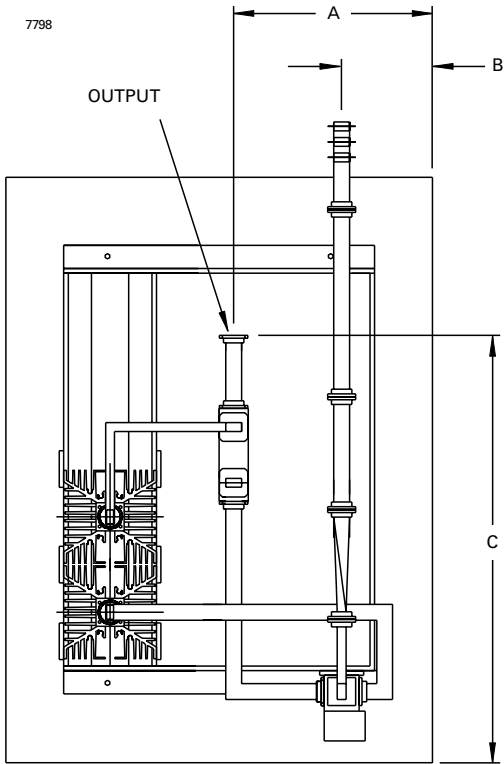
Connectors

Prime power	IEC 320
RS 422/RS 485	9-pin 'D'-type socket
HPA 1, HPA 2 and HPA 3 interface	9-pin 'D'-type plug
RF inputs	SMA female
RF output(s)	WR 75

Environmental

Operating temperature	-20 to +50 °C
EMC	EEC 89/336
Cooling	natural

OUTLINE (All dimensions nominal)

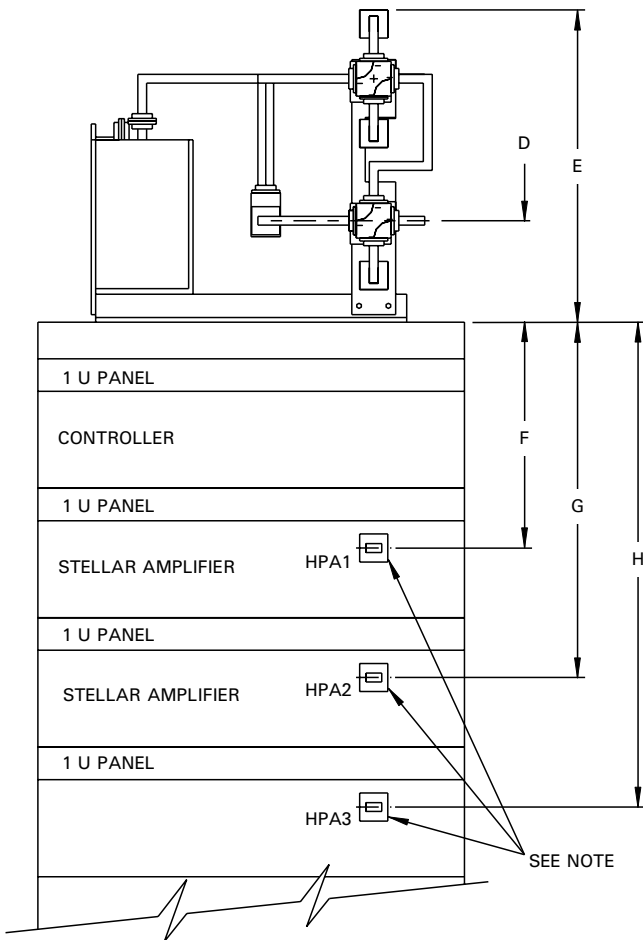


Ref	Millimetres	Inches
A	272	10.7
B	124	4.9
C	584	23.0
D	139	5.5
E	427	16.8
F	309	12.2
G	486	19.1
H	663	26.1

Inch dimensions have been derived from millimetres.

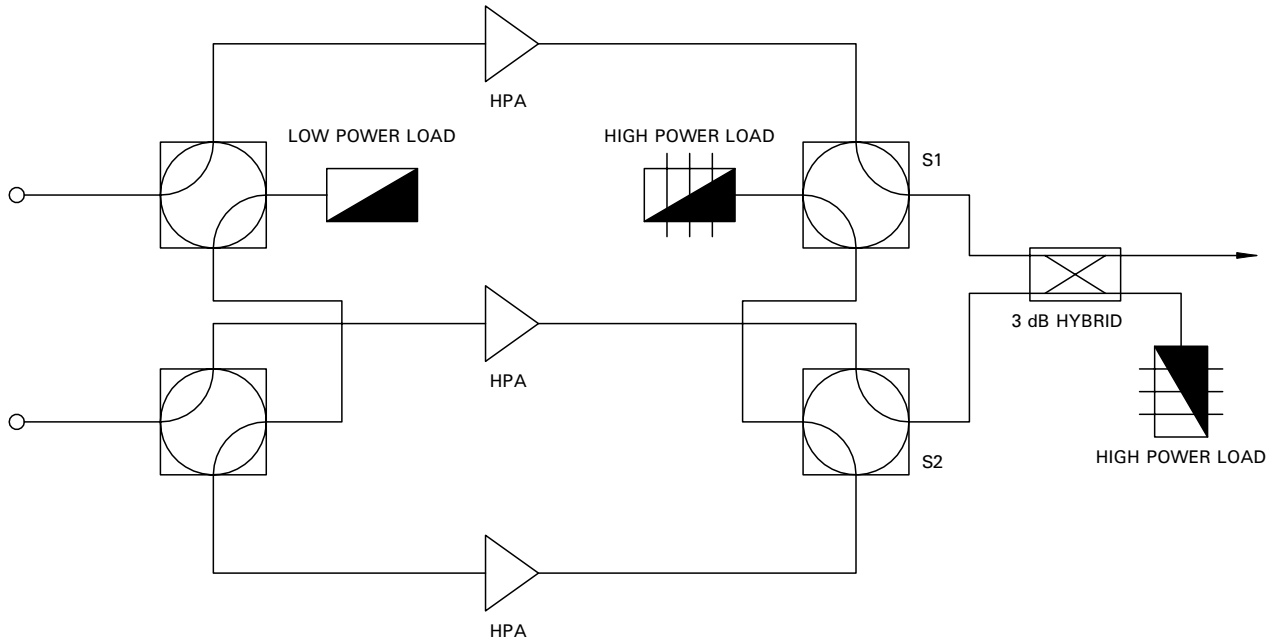
Outline Note

Waveguide flanges are shown to define interconnect positions only



BLOCK DIAGRAM

7797



DOCUMENTATION

Operation manual supplied with each unit.

HEALTH AND SAFETY HAZARDS

e2v technologies electronic devices are safe to handle and operate provided that the relevant precautions are observed. e2v technologies does not accept responsibility for damage or injury resulting from the use of electronic devices it produces.



High Voltage

Dangerous voltages are present within the TWT amplifier when operating normally. However, the equipment is designed so that personnel cannot come into contact with high voltage circuits unless covers are removed.



RF Radiation

All RF connectors must be correctly fitted before operation.

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