CW Immune Pseudo DC-Coupled DLVA

AFH- 3218A 2.0-18.0 GHz

62 dB Dynamic Range
-42 dBm to +20 dBm and CW Immunity

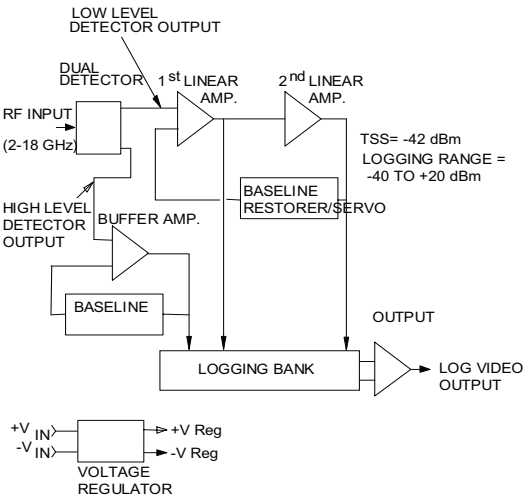
Exceptional Log Linearity Over Temperature and Frequency

Fast Recovery From + 20 dBm

Single Diode Detector Circuit

Extended Dynamic Range

+20 dBm Capability



SPECIFICATIONS

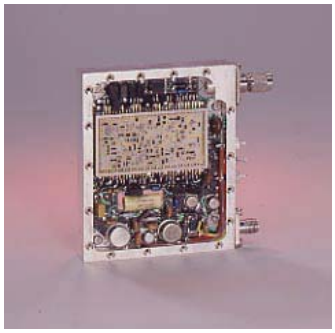
Frequency Range	2.0- 18.0 GHz
Flatness @ -23 dBm	±1.0 dB
VSWR	3.0:1 max.
Tangential Signal Sensitivity (TSS)	-42 dBm min.
Logging Range	-40 dBm to +20 dBm
Log Slope	50 mV/dB
Log Linearity	±0.5 dB(-40 dBm to +20 dBm)
Output Stability (-54°C to +85°C)	±1.0 dB
Pulse Width Range	50 nsec. to 100 µsec.
Duty Factor*	70% max.
Rise Time	20 nsec. max.
Recovery Time (to within ± 1 dB for ± 1.5 dB accuracy @+15 dBm input)	500 nsec. max.
Video Load	100 Ohms
Power (no signal)	+15V ±5% 110 mA max. +15V ±5% 130 mA max.
Operating Temperature	-54°C to +85°C
Size (excluding connectors)	2.90" x 2.30" x 0.50"
Conncectors	SMA and Pins

*Recovery time is included in D.F. definition:
D.F. (Effective)= (Signal Pluse Width + Recovery Time ÷ Period)

AVAILABLE OPTIONS

Other wide-band frequency ranges down to 0.5 HGz or narrower and designs with optimized characteristics.
Log Slope to 80 mV/dB@100 OHMS load

40 mV/dB@50 Ohms load



DESCRIPTION The Microphase Pseudo DC-Coupled DLVA's serve an essential function in modern radar and electronic warfare systems. This logarithmic amplifier compresses a much larger input dynamic range into a small output dynamic range. The most common applications within radar and EW systems are direction finding and power monitoring. This DLVA is comparable to a sophisticated, extended range, DC-Coupled DLVA with even better baseline stability vs. temperature for pulse widths less than 200 µsec., and duty factors under 70%.

ADVANTAGES The Microphase model AFH 3218-A Pseudo DLVA has a single diode detecting circuit which overcomes linearity and recovery problems of conventional extended range DLVA's. CW immunity allows detection of low level pulses buried in overpowering CW signals. CW signals are eliminated beyond a pre-set time interval measured from the leading edge, yielding unobstructed access to small signals, i.e., processing a -40 dBm pulse-train hidden in a superimposed -20 dBm CW signal. You get excellent electrical performance, environmental stability and mechanical reliability. Very compact and rugged, all of our products are 100% tested, and readily available.

These units can be designed to your specification. Please contact Microphase for your special design requirements.