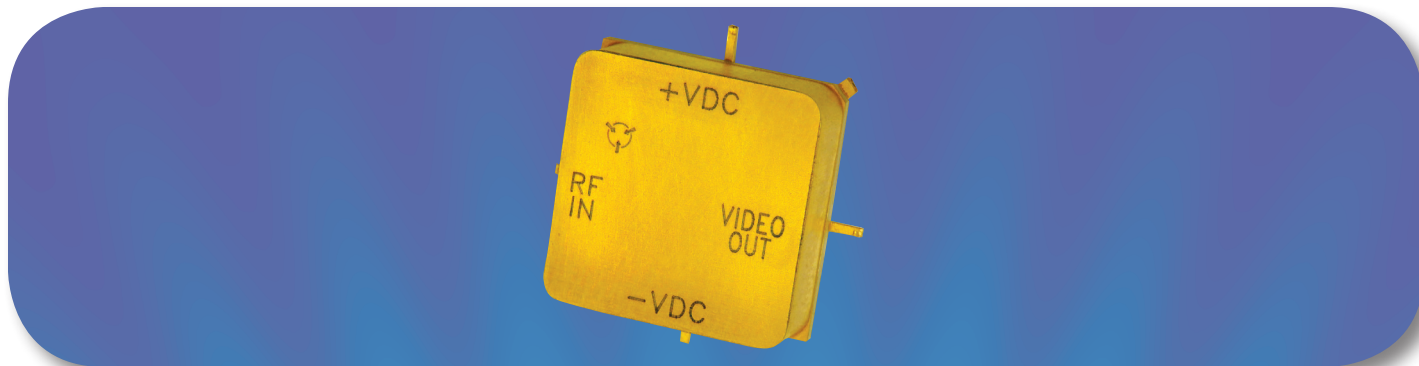


# HIGH-PERFORMANCE LOGARITHMIC AMPLIFIER



MODEL: MLS-0206



## APPLICATIONS

- ELINT radar warning receivers
- Weather radar
- Airport landing systems
- Channelized receivers (receive signal strength indicator)
- ESM systems
- EW systems

This 2 GHz to 6 GHz Surface-Mount Logarithmic Amplifier (Model MLS-0206) is just 0.45 inches x 0.45 inches. Manufactured using traditional MIC techniques, this device has a temperature range of -40 °C to +85 °C and is provided in a hermetic seam-welded package. The construction of the device promotes excellent RF and reliability performance, and it will meet MIL-STD-202 requirements for shock, vibration, humidity and altitude. Therefore, this new logarithmic amplifier is suitable both commercial and military applications, and space-qualified versions can be considered as well. The device has outstanding accuracy, and linearity, and its overall excellent RF performance is complemented by an internal regulation scheme.

## SPECIFICATIONS

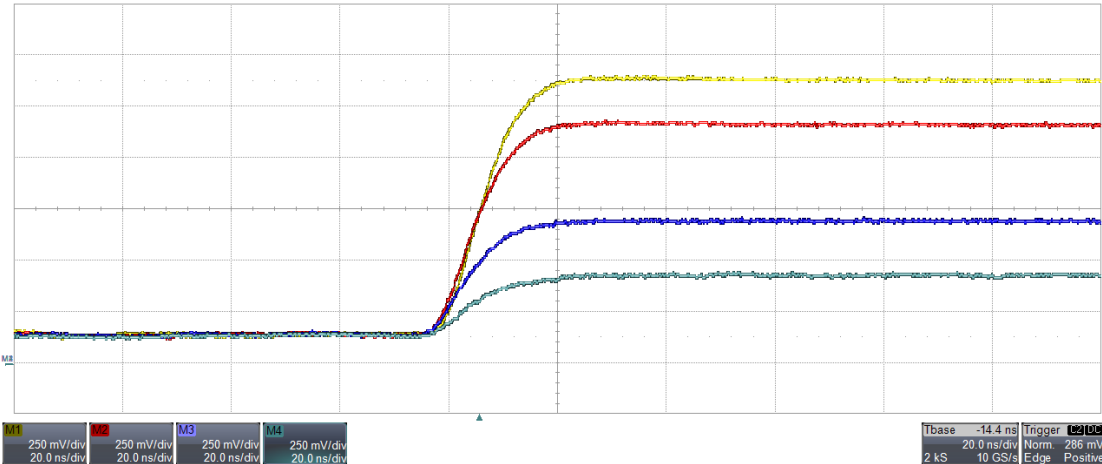
Frequency range	2 GHz to 6 GHz
Frequency flatness	< 1.5 dB at 25 °C
Input VSWR	< 1.75:1, typical
Logging slope	50 mV/dB nominal
Logging range	-50 dBm to 0 dBm to within $\pm 1.0$ dB linearity error
TSS	-53 dBm typical
Rise time <sup>1</sup>	17.5 nS (maximum)
Settling time	35 nS to within $\pm 1$ dB (maximum)
Recovery time	50 nS to within $\pm 2$ dB of offset voltage
Supply voltage	$\pm 8.0$ VDC to $\pm 15$ VDC at +73 mA/-22 mA with 0 dBm
Package size	Applied .45 square

Notes: Faster rise time available.

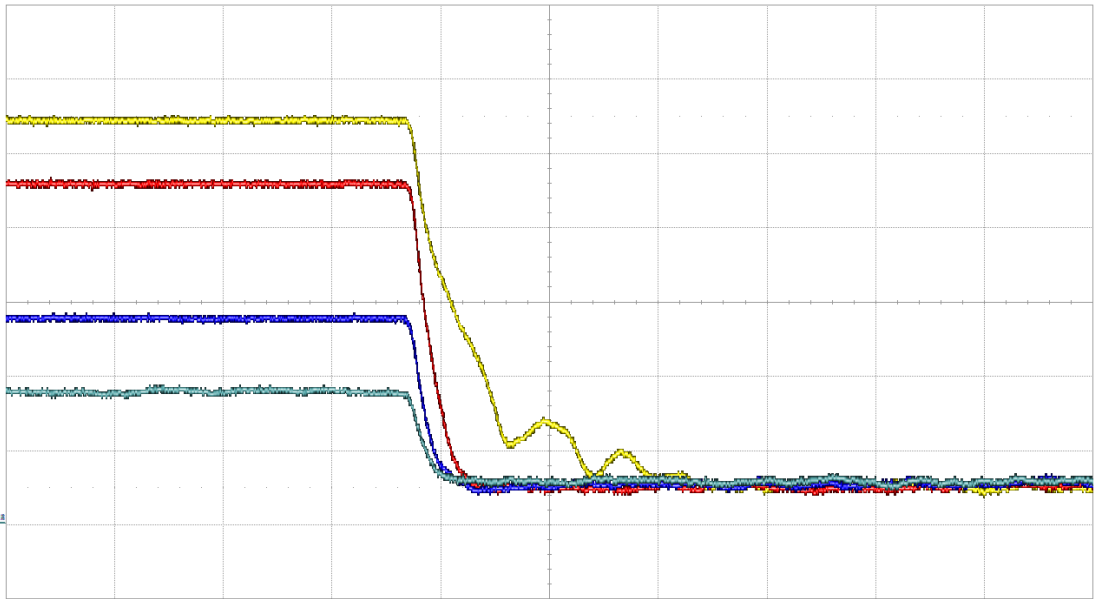


# HIGH-PERFORMANCE LOGARITHMIC AMPLIFIER

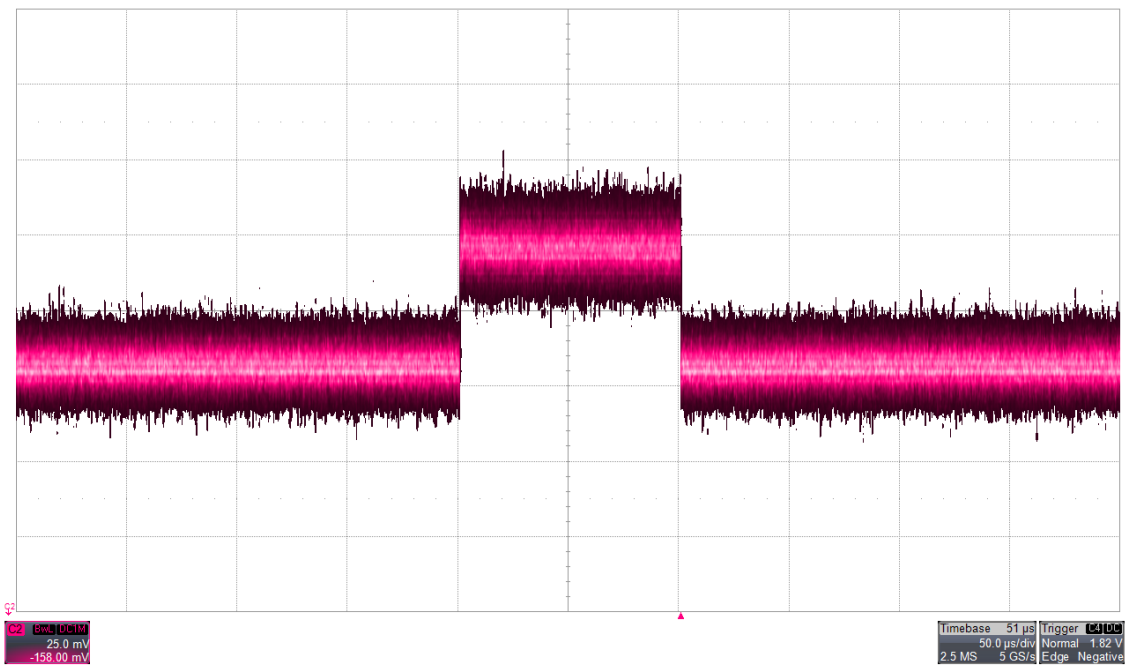
## RISE TIME 6 GHz



## FALL TIME 6 GHz

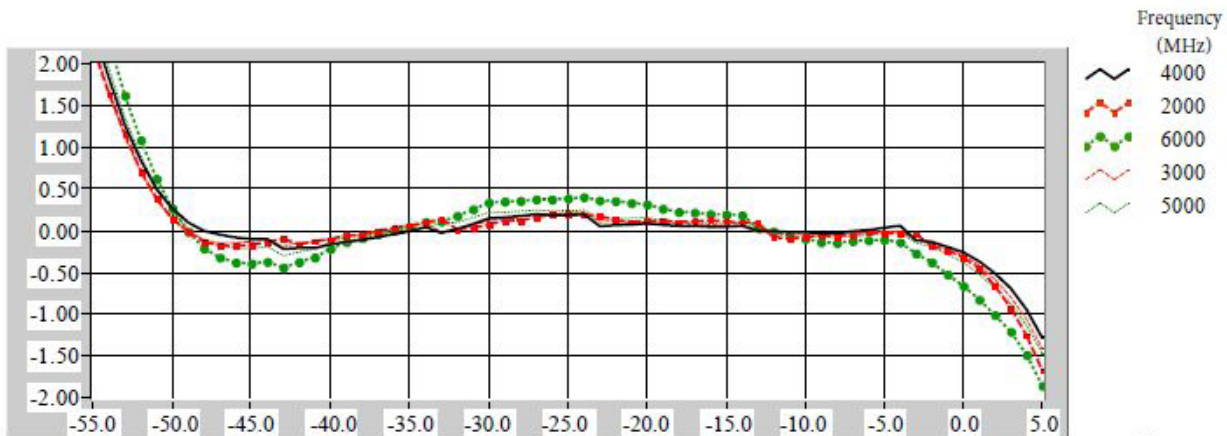


**TSS**  
**20 MHz, VBW, 6 GHz, -53 dBm**



# HIGH-PERFORMANCE LOGARITHMIC AMPLIFIER

## LOG LINEARITY ERROR ACROSS 2 TO 6 GHz BANDWIDTH BFSL -50 dBm to 0 dBm



Log Linearity Error (dB) Y Axis, Vs Input Power (dBm) X Axis



Video Output (V) Y Axis, Vs Input Power (dBm) X Axis



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