



UDL-502

Thin-Film Limiting Amplifier

5 to 500 MHz

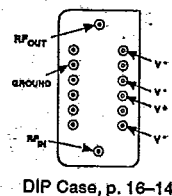
T-74-09-01

FEATURES

- Frequency Range: 5 to 500 MHz
- Output Power Flatness: ± 0.5 dB (Max.)
- Input Power Range: 30.0 dB
- Low Phase Shift Variation
- High Even-Harmonic Suppression

APPLICATIONS

- All FM Systems
- Communications
- Telemetry
- Radar Warning
- Measurement Systems



DIP Case, p. 16-14

DESCRIPTION

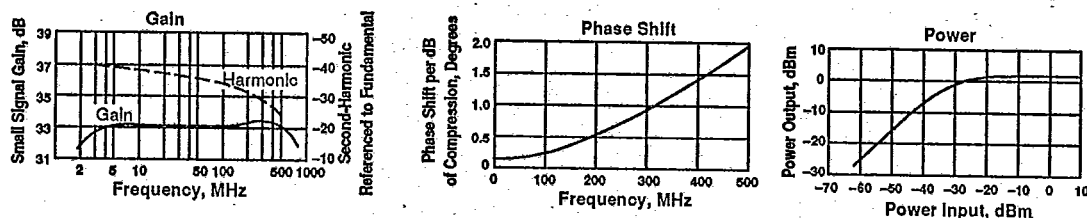
The UDL-502 is a three-stage bipolar RF limiting amplifier with 32 dB (typ) of small signal gain. Emitter-coupled pair design provides for even-harmonic suppression and low AM-to-PM

conversion. The RF signal is coupled through the amplifier by means of internal blocking capacitors.

ELECTRICAL SPECIFICATIONS (Measured in a 50-ohm system @ ± 15 VDC and -15 VDC nominal)

Symbol	Characteristic	Typical $T_c = 25^\circ\text{C}$	Guaranteed Specifications		Unit
			$T_c = 0^\circ$ to 50°C	$T_c = -55^\circ$ to $+85^\circ\text{C}$	
BW	Frequency Range	5-500	5-500	5-500	MHz
GP	Small Signal Gain (Min.)	32.0	30.0	—	dB
—	Saturated Output Power (Min.)	-2.0	-4.0	—	dBm
—	Saturated Flatness (Max.)	—	± 0.5	—	dB
—	VSWR Input/Output (Max.)	—	2.0:1	—	—
—	Even-Harmonic Suppression @ $P_{IN} = -50$ to $+7$ dBm	—	15.0	—	dBc
NF	Noise Figure (Max.)	—	11.0	—	dB
I_b	Bias Current	—	—	—	mA
	+15 VDC	60	—	—	mA
	-15 VDC	60	—	—	mA

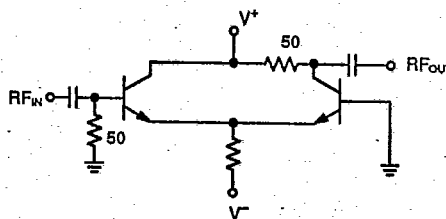
TYPICAL PERFORMANCE AT 25°C TEMPERATURE (@ ± 15 VDC unless otherwise noted)



MAXIMUM RATINGS

DC Voltage	+17 Volts
Continuous RF Input Power	+15 dBm
Operating Case Temperature	-55°C to $+85^\circ\text{C}$
Storage Temperature	-62°C to $+150^\circ\text{C}$
"R" Series Burn-In Temperature	$+85^\circ\text{C}$

SCHEMATIC (1 of 3 identical stages shown)



WEIGHT: (typical) 5.7 grams

Avantek, Inc. • 481 Cottonwood Drive, Milpitas, CA 95035 • Contact your local representative, distributor or field sales office for further information. Listings are in the back of this Data Book.