LA 25CS-DC
100 to 500 MHz LINEAR AMPLIFIER

Linear RF Power For Industrial, Laboratory, Communication and Medical Applications.

FEATURING:

- **100 MHz to 500 MHz**
- **40 W Linear**
- **50 W Saturated**
- **Linear Output of 25 W with h3 - 25 dBc**
- **DC Input Power 36 to 76 VDC**

INTRODUCTION

Amplifier Model LA 25CS-DC is a robust source of RF power for ultrasonic, laser modulation, RFI/EMI, plasma generation, laboratory and general industrial applications. It is DC supply version of LA25CS. Featuring leading edge solid state design in all RF amplifier stages, this unit provides everything for a reliable RF power delivery system. It reflects the ongoing T&C commitment to provide RF power products of the highest quality.

OPERATION

The LA 25CS produces 40 W of linear power over a frequency range from less than 100 MHz to more than 500 MHz, with low harmonic and intermodulation distortion. It operates over the entire frequency range without band switching or adjustments. Gain is rated at 47 dB with a typical gain flatness of ±1 dB.

The LA 25CS is compatible with most signal and function generators, computer synthesizer cards and accurately reproduces all waveforms within its output and bandwidth limits.

The Forced-air cooling system and the internal power supply are designed to permit operation over a wide range of temperature and DC voltage range.

The LA 25CS is built to endure a +2 dBm input. The unit amplifies AM, FM, SSB, pulse and other complex modulations with <-25 dBc (h3) harmonic distortion and exceptional power stability.

RELIABILITY

T&C amplifiers and generators are designed to be reliable, compact and light in weight. The use of conservatively rated components ensures high reliability and eliminates the need for periodic calibration.

Class Of Operation
Class A

Frequency Of Operation
100 MHz to 500 MHz

RF Power Output
50 W saturated

Small Signal Gain
47 dB ±1 dB

RF Input Drive
Typically –40 dBm to +1 dBm

Input Drive Source
Signal or function generator, analog computer input capable of up to 1 Vp-p @ 50 Ohm within amplifier output and bandwidth limits.

Input and Output Impedance
50 Ohm

Input VSWR
2:1 max

Output VSWR
3:1 max

Load Mismatch
All phase angles

Harmonic Level @ 25 Watts
Better than - 25 dBc for all harmonics,

RF Connectors
N Female: Front Panel

Typical Third Order Intercept
+58 dBm

DC Power Source
36 to 76 VDC

DC Power Connection
2 position heavy duty terminal block, screw #10. Reversed Polarity Internally protected. Fused with 10A standard fuse.

Cooling
Forced air

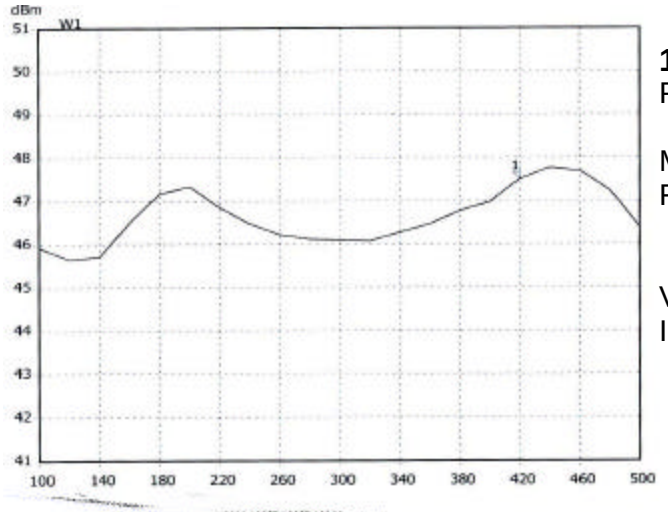
Dimensions
H 95mm x W 480 mm x L 420mm
(3.75” x 19” x 16.5”)

Weight
8 kg, (17.5 lbs.)

Mounting
Stand alone unit. Front Panel fits 19” Rack Mount, 3 Units high.

Operating Temperature
0° to 35° C ambient air

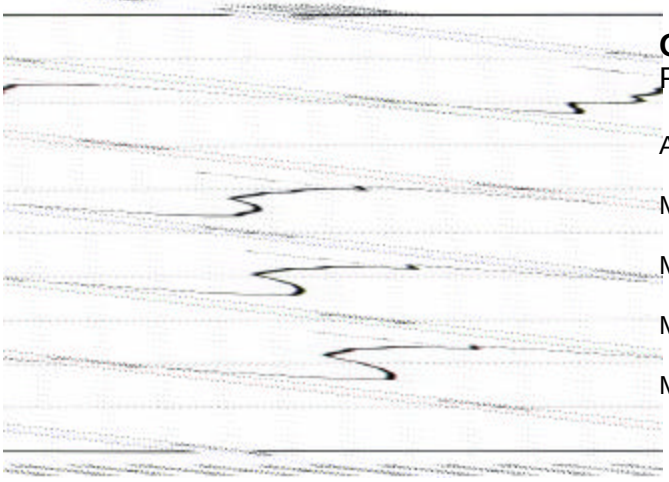
LA 25CS Performance Charts



1 dB compression characteristic
P out = f (F opr) at P in = const = ~ 1.5 dBm

Marker “1”:
F opr. = 420 MHz,

V dc = 27.8V,
I module = 5A



Output characteristics
P out = f (F opr) at P in = const

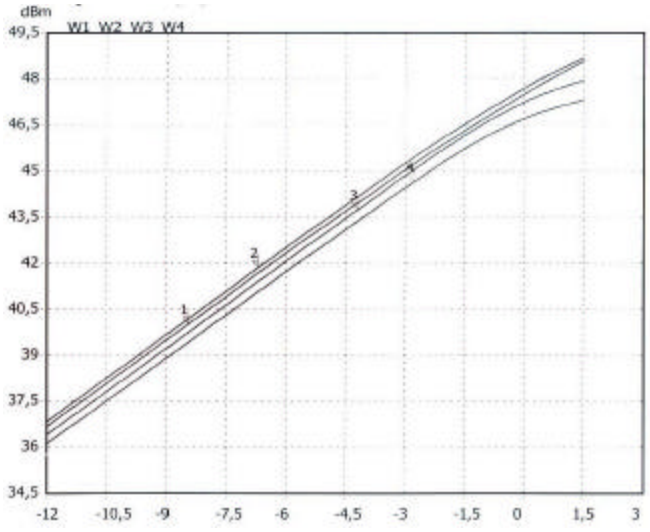
All Markers at 420 MHz

Marker “1”: P in = -12 dBm, P out = 36.66 dBm

Marker “2”: P in = -8 dBm, P out = 40.35 dBm

Marker “3”: P in = -4 dBm, P out = 44 dBm

Marker “4”: P in = 1.8 dBm, P out = 48.8 dBm



Amplifier Gain characteristics
Gain = f (P in and F opr)

Marker “1”: P in = -8.45 dBm, P out = 40.03 dBm @ 420 MHz,

Marker “2”: P in = -6.67 dBm, P out = 41.88 dBm @ 440 MHz

Marker “3”: P in = -4.19 dBm, P out = 43.75 dBm @ 480 MHz

Marker “4”: P in = -2.8 dBm, P out = 44.65 dBm @ 500 MHz

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