

Line Extender Amplifier

Station Performance*

750 MHz, 31 dB Gain

6-LE97/31

| Notes | 6-LE97/31 | | Units |
|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| | Analog to 550 MHz Digital 550-750 MHz | Analog to 750 MHz | |
| Technology | Power Doubling | | Power Doubling |
| Bandwidth - Forward and Return | Check the Ordering Information for available bandsplits. For bandsplit-specific information, see page RF Amplifiers - 74. | | |
| Response Flatness (at operating gain and slope) | ± 0.75 | ± 0.75 | dB |
| Minimum Full Gain (with 6-2E750/OL equalizer) | 32 | 32 | dB |
| Typical Operating Gain--includes 1 dB equalizer loss with TGSC (without TGSC) | 27 (31) | 27 (31) | dB |
| Typical Operating Gain--includes 1 dB equalizer loss with AGC (without AGC) | 28 (31) | 28 (31) | dB |
| Gain Control Range | 6 | 6 | dB |
| Slope Control Range (cable at 750 MHz) | 1-7 | 1-7 | dB |
| Return Loss--Forward and Return (75-ohm reference at operating gain and slope) | a 14 | 14 | dB |
| Distortion at Referenced Level (per NCTA test methods; NTSC System M) | b | | |
| Referenced Output Level lowest forward frequency/550 MHz/750 MHz | 38/44/46 | ----- | dBmV |
| Referenced Output Level lowest forward frequency/550 MHz/750 MHz | ----- | 38/44/46 | dBmV |
| Number of Analog Channels (NTSC) | c | Check Ordering Information for available bandsplits. | |
| 26/45, 33/50, and 42/54 Splits | | 77 | 110 |
| 50/70 Split | | 74 | 107 |
| 65/85 Split | | 72 | 105 |
| Composite Triple Beat with AGC (without AGC) | c, d | -67 (-69) | -57 (-59) dB |
| Composite Triple Beat with TGSC (without TGSC) | c, d | -68 (-69) | -58 (-59) dB |
| Cross Modulation with AGC (without AGC) | c, d | -67 (-69) | -57 (-59) dB |
| Cross Modulation with TGSC (without TGSC) | c, d | -68 (-69) | -58 (-59) dB |
| Composite Second Order with AGC (without AGC) | d | -66 (-67) | -59 (-60) dB |
| Composite Second Order with TGSC (without TGSC) | d | -66 (-67) | -59 (-60) dB |
| DIN 45004B | e | 120 | 120 dBμV |
| Noise Figure, Full Gain (For system calculations, add 1 dB for equalizer loss.) | | ----- | 10 dB |
| Hum Modulation (at 6 amps maximum operating current) | | -65 | -65 dB |
| AC Bypass Current Damage Limit | | 15 | 15 A |
| AC Power Consumption | | | |
| 1-Way Manual | | | 19.4 W |
| 1-Way Automatic | | | 21.0 W |
| 2-Way Manual | | | 21.8 W |
| 2-Way Automatic | | | 23.4 W |
| AC Current Requirement--60 VAC | f | AC power consumption in watts divided by a factor of 43 = amps required | |
| AC Current Requirement--90 VAC | f | For ≤67 VAC: 1.03 x (AC power consumption in watts divided by voltage) = amps required. For 67-90 VAC: AC power consumption in watts divided by 65 = amps required. | |
| Amplifier Dimensions--Module Excluding Housing (length x width x height) | | 6.45 x 3.00 x 4.10 (16.38 x 7.62 x 10.41) in. (cm) | |
| Amplifier Weight--Module Excluding Housing | | 1.93 (0.88) lb (kg) | |
| Plug-in Circuits (Required ■ Optional □) | | | |
| Attenuator | | 9-A □ | 9-A □ |
| Equalizer | | 6-2E750 ■ | 6-2E750 ■ |
| Automatic Gain Control | | LE97/AGC □ | LE97/AGC □ |
| Thermal Control | | LE97-TGSC □ | LE97TGSC □ |
| Solid-state Surge Arrestor | | CBR-LE □ | CBR-LE □ |
| Return Amplifier | | 4-LER90 □ | 4-LER90 □ |

* All specifications are subject to change without notice. Measured in a 9-LH housing at 70° F ambient.

Notes:

- Specifications are typical for system performance calculations; individual module performance may vary.
- Distortion specifications are worst case for system performance calculations; individual module performance may vary.
- For performance using other channel spacing and loading schemes, see "Distortion Conversion Factors for International TV Standards" on page RF Amplifiers-1.
- Assumes digital signals are at a level 10 dB below analog signals.
- Intermodulation distortion = -60 dB [DIN 45004B, para 6.3: 3 tone test].
- Factor is based on Philips engineering studies of power supplies.