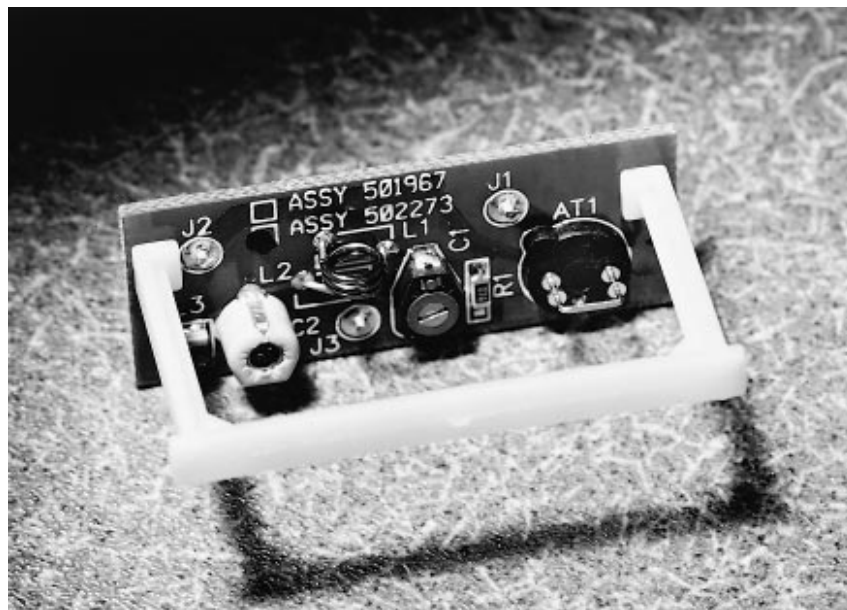


## Interstage Trim Networks for System Amplifier I, II, II+ and Line Extender I, II, III



22368

### DESCRIPTION

Scientific-Atlanta manufactures a broad line of interstage trim networks to meet the needs of the variety of advanced amplifiers and architectures being deployed today. These passive trim networks compensate for amplitude/frequency variations by superimposing a response that is opposite to that of the uncompensated cascade. Trim networks allow adjustment of an amplifier's frequency response to be as uniform as possible across the entire output spectrum. They can be adjusted, within limits, to cover a wide range of individual requirements.

There are two basic types of trim networks available, peak and dip trim networks. Peak networks operate as broad bandwidth tunable attenuators, while dip networks operate as narrow bandwidth tunable attenuators. Trim networks introduce 1 to 3 dB of flat loss in an amplifier station. This loss can be compensated for by reducing input or interstage pad values as necessary.

Trims are classified according to their operational characteristics (i.e., frequency, insertion loss, pad socket, peak or dip, and forward or reverse direction). The type and use factor for specific trim networks is determined by evaluating actual system frequency response. A broad selection of trim networks should be on hand at the outset of balance and alignment procedures.

## INTERSTAGE TRIM NETWORKS NAMING CONVENTIONS

Each trim network has been assigned a part number and descriptive title defining the operational characteristics of that particular network. The alphanumeric designation on the trim defines the network function. These functions are as follows:

- frequency
- insertion loss
- whether it has a pad socket
- which device it is intended to be used in
- signal direction it affects (forward or reverse)

### **Example:**

Interstage trim network model number LSP-2SDF equates to a trim that performs the following functions:

LSP = Low Single Peak

2 = 2 dB insertion loss

S = Pad Socket

D = Distribution Amplifier, System Amplifier I and II

F = Forward

The chart below outlines the abbreviated nomenclature used by Scientific-Atlanta for identifying and selecting interstage trim networks.

## NOMENCLATURE ABBREVIATION TABLE

| Band          | Number of Peaks | Trim Type | Loss     | Pad Socket    | Application                                   | Signal Direction |
|---------------|-----------------|-----------|----------|---------------|---|------------------|
| L = Low       | S = Single      | D = Dip   | 1 = 1 dB | N = No Socket | L = LEI                                       | F = Forward      |
| M = Mid       | D = Dual        | P = Peak  | 2 = 2 dB | S = Socket    | M = LEII (550 MHz)                            | R = Reverse      |
| H = High      | T = Triple      | ---       | 3 = 3 dB | ---           | D = Distribution Amp,<br>System Amp and LEIII | ---              |
| U = Universal | ---             | ---       | ---      | ---           | N = LEII (750 MHz)                            | ---              |
| N = Narrow    | ---             | ---       | ---      | ---           | ---   | ---              |
| D = Diplexer  | ---             | ---       | ---      | ---           | ---   | ---              |

## INTERSTAGE TRIM NETWORKS

| Part Number         | Name               | Description                                       | Module                    |
|---------------------|--------------------|---|---------------------------|
| 276754              | LDP-2SDF           | Low Frequency Dual Peak                           | DA / SA I / SA II / LEIII |
| 381101              | MDP-2SDF           | Mid-Frequency Dual Peak                           | DA / SA I / SA II / LEIII |
| 500221              | MSD-2SDF           | Mid-Frequency Single Dip                          | DA / SA I / SA II / LEIII |
| 500300              | MDP-3SDF           | Mid-Frequency Dual Peak                           | DA / SA I / SA II / LEIII |
| 501769              | HSP-3NDF           | High Frequency Single Peak                        | DA / SA I / SA II / LEIII |
| 506506              | HSP-3SDF           | High Frequency Single Peak                        | DA / SA I / SA II / LEIII |
| 536640 <sup>1</sup> | HSP-3SDF<br>w/ HPF | High Frequency Single Peak<br>w/ Low Pass Filter  | DA / SA I / SA II / LEIII |
| 536644 <sup>1</sup> | MSD-2SDF           | Mid-Frequency Single Dip                          | DA / SA I / SA II / LEIII |
| 541635              | HSP-2NNF           | High Frequency Single Peak                        | LEII - 750 MHz            |
| 541636              | MSD-2NNF           | Mid-Frequency Single Dip                          | LEII - 750 MHz            |
| 541637              | LDP-2NNF           | Low Frequency Dual Peak                           | LEII - 750 MHz            |
| 544125 <sup>2</sup> | HSP-2NNF<br>w/ HPF | High Frequency Single Peak<br>w/ High Pass Filter | LEII - 750 MHz            |
| 544126 <sup>2</sup> | MSD-2NNF<br>w/ HPF | Mid-Frequency Single Dip<br>w/ High Pass Filter   | LEII - 750 MHz            |
| 544127 <sup>2</sup> | LDP-2NNF<br>w/ HPF | Low Frequency Dual Peak<br>w/ High Pass Filter    | LEII - 750 MHz            |
| 501967              | LDP-2SMF           | Low-Frequency Dual Peak                           | LEII - 550 MHz            |
| 502273              | MDP-3SMF           | Mid-Frequency Dual Peak                           | LEII - 550 MHz            |
| 372728              | LDP-2SLF           | Low Frequency Dual Peak                           | LEI - 550 MHz             |

### Notes

<sup>1</sup> Pass band of Low Pass Filter is 51 to 750 MHz.

<sup>2</sup> Unique for 5-40 MHz upgrade of 750 MHz LEII with 5-30 split.

<sup>3</sup> Trims with pad sockets are shipped with a jumper installed.

## ORDERING INFORMATION

- Order interstage trim networks by part number.

## ADDITIONAL INFORMATION

- For additional information on interstage trim networks refer to the following application notes as needed:
  - #564214 - Distribution Amplifier / System Amplifier Trim Networks
  - #564215 - Line Extender Trim Networks
  - #564216 - Trunk Amplifier Trim Networks

# Interstage Trim Networks



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