

# Surface Mount Low Pass Filter

# SALF-116

## Typical Performance Data

| FREQ.<br>(MHz) | INSERTION LOSS<br>(dB) |          |          | INPUT RETURN LOSS<br>(dB) |          |          | OUTPUT RETURN LOSS<br>(dB) |          |          |
|----------------|------------------------|----------|----------|---------------------------|----------|----------|----------------------------|----------|----------|
|                | @ -40° C               | @ +25° C | @ +85° C | @ -40° C                  | @ +25° C | @ +85° C | @ -40° C                   | @ +25° C | @ +85° C |
| 1              | 0.06                   | 0.04     | 0.06     | 42.51                     | 46.90    | 43.55    | 43.03                      | 46.94    | 43.76    |
| 10             | 0.09                   | 0.07     | 0.09     | 38.41                     | 40.60    | 38.86    | 41.84                      | 44.77    | 41.94    |
| 20             | 0.12                   | 0.10     | 0.12     | 34.79                     | 35.68    | 34.54    | 46.47                      | 49.33    | 43.53    |
| 30             | 0.14                   | 0.13     | 0.15     | 31.73                     | 31.61    | 30.95    | 39.21                      | 40.09    | 38.24    |
| 40             | 0.16                   | 0.16     | 0.18     | 28.13                     | 27.72    | 27.58    | 30.42                      | 31.43    | 31.11    |
| 50             | 0.19                   | 0.19     | 0.21     | 24.49                     | 24.29    | 24.55    | 25.11                      | 26.09    | 26.23    |
| 60             | 0.22                   | 0.22     | 0.25     | 21.64                     | 21.70    | 22.23    | 21.71                      | 22.63    | 23.03    |
| 70             | 0.26                   | 0.26     | 0.29     | 19.92                     | 20.19    | 20.88    | 19.81                      | 20.65    | 21.21    |
| 80             | 0.29                   | 0.30     | 0.33     | 19.72                     | 20.14    | 20.96    | 19.54                      | 20.34    | 21.03    |
| 90             | 0.30                   | 0.32     | 0.35     | 21.93                     | 22.53    | 23.49    | 21.81                      | 22.61    | 23.51    |
| 100            | 0.32                   | 0.35     | 0.39     | 29.74                     | 30.95    | 31.13    | 33.39                      | 34.59    | 37.37    |
| 116            | 0.49                   | 0.53     | 0.58     | 17.38                     | 17.49    | 17.65    | 17.54                      | 17.87    | 18.02    |
| 120            | 0.56                   | 0.61     | 0.66     | 15.43                     | 15.58    | 15.83    | 15.35                      | 15.69    | 15.87    |
| 130            | 0.79                   | 0.86     | 0.93     | 13.33                     | 13.49    | 13.75    | 12.41                      | 12.58    | 12.62    |
| 142            | 1.90                   | 2.10     | 2.28     | 8.10                      | 8.00     | 7.85     | 6.75                       | 6.58     | 6.37     |
| 150            | 5.41                   | 5.70     | 5.94     | 2.88                      | 2.94     | 2.94     | 2.31                       | 2.32     | 2.29     |
| 160            | 12.63                  | 12.90    | 13.12    | 0.82                      | 0.91     | 0.96     | 0.61                       | 0.67     | 0.70     |
| 170            | 20.01                  | 20.26    | 20.47    | 0.37                      | 0.45     | 0.47     | 0.29                       | 0.33     | 0.36     |
| 182            | 28.13                  | 28.38    | 28.61    | 0.22                      | 0.28     | 0.30     | 0.20                       | 0.23     | 0.26     |
| 190            | 33.15                  | 33.43    | 33.67    | 0.18                      | 0.23     | 0.25     | 0.18                       | 0.19     | 0.23     |
| 205            | 41.89                  | 42.19    | 42.46    | 0.13                      | 0.18     | 0.19     | 0.17                       | 0.17     | 0.20     |
| 220            | 49.41                  | 49.71    | 49.96    | 0.12                      | 0.15     | 0.16     | 0.17                       | 0.15     | 0.19     |
| 280            | 55.82                  | 55.87    | 55.89    | 0.10                      | 0.13     | 0.13     | 0.20                       | 0.15     | 0.19     |
| 300            | 54.48                  | 54.62    | 54.72    | 0.10                      | 0.13     | 0.13     | 0.21                       | 0.15     | 0.19     |
| 380            | 52.00                  | 51.98    | 51.99    | 0.09                      | 0.12     | 0.13     | 0.23                       | 0.16     | 0.21     |
| 400            | 51.56                  | 51.56    | 51.58    | 0.10                      | 0.12     | 0.13     | 0.23                       | 0.16     | 0.21     |
| 500            | 50.79                  | 50.82    | 50.76    | 0.09                      | 0.12     | 0.13     | 0.25                       | 0.17     | 0.23     |
| 600            | 51.79                  | 51.88    | 51.77    | 0.09                      | 0.12     | 0.14     | 0.25                       | 0.17     | 0.24     |
| 700            | 57.79                  | 58.28    | 58.31    | 0.09                      | 0.13     | 0.14     | 0.26                       | 0.18     | 0.25     |
| 800            | 54.83                  | 54.31    | 53.86    | 0.10                      | 0.14     | 0.16     | 0.26                       | 0.20     | 0.26     |
| 825            | 49.90                  | 49.55    | 49.10    | 0.10                      | 0.13     | 0.16     | 0.27                       | 0.20     | 0.27     |
| 850            | 46.13                  | 45.86    | 45.50    | 0.09                      | 0.13     | 0.16     | 0.27                       | 0.21     | 0.27     |
| 900            | 39.45                  | 39.24    | 38.88    | 0.10                      | 0.15     | 0.17     | 0.27                       | 0.22     | 0.29     |
| 1000           | 25.13                  | 24.77    | 24.12    | 0.17                      | 0.24     | 0.29     | 0.38                       | 0.37     | 0.47     |
| 1100           | 23.94                  | 24.38    | 24.66    | 0.17                      | 0.23     | 0.27     | 0.38                       | 0.34     | 0.42     |
| 1200           | 32.52                  | 32.79    | 32.85    | 0.12                      | 0.19     | 0.24     | 0.31                       | 0.30     | 0.39     |
| 1300           | 42.12                  | 42.70    | 42.93    | 0.12                      | 0.21     | 0.27     | 0.35                       | 0.37     | 0.47     |
| 1400           | 37.93                  | 37.52    | 37.09    | 0.14                      | 0.24     | 0.32     | 0.50                       | 0.57     | 0.70     |
| 1500           | 23.79                  | 23.61    | 23.35    | 0.19                      | 0.31     | 0.41     | 1.40                       | 1.71     | 1.98     |
| 1600           | 19.09                  | 19.32    | 19.58    | 0.26                      | 0.39     | 0.50     | 2.73                       | 2.83     | 2.90     |
| 1700           | 24.94                  | 25.22    | 25.70    | 0.25                      | 0.40     | 0.53     | 0.77                       | 0.78     | 0.91     |
| 1800           | 31.88                  | 32.33    | 32.87    | 0.26                      | 0.42     | 0.57     | 0.52                       | 0.55     | 0.70     |
| 1900           | 48.17                  | 45.48    | 43.33    | 0.30                      | 0.47     | 0.64     | 0.46                       | 0.52     | 0.68     |
| 2000           | 28.61                  | 27.83    | 27.24    | 0.34                      | 0.54     | 0.74     | 0.46                       | 0.55     | 0.73     |
| 2100           | 21.07                  | 20.42    | 19.91    | 0.43                      | 0.67     | 0.90     | 0.50                       | 0.62     | 0.84     |
| 2200           | 15.26                  | 14.58    | 14.01    | 0.66                      | 1.00     | 1.36     | 0.64                       | 0.84     | 1.13     |
| 2300           | 9.73                   | 8.96     | 8.44     | 1.38                      | 2.19     | 3.31     | 1.06                       | 1.49     | 2.05     |
| 2400           | 4.71                   | 4.86     | 6.92     | 4.55                      | 9.71     | 16.87    | 2.66                       | 3.51     | 3.29     |
| 2500           | 5.00                   | 9.64     | 8.43     | 8.61                      | 15.52    | 22.62    | 2.87                       | 1.90     | 2.37     |
| 2600           | 7.17                   | 10.40    | 8.16     | 6.84                      | 7.91     | 14.27    | 1.66                       | 1.81     | 3.04     |
| 2700           | 6.53                   | 4.22     | 4.29     | 11.30                     | 13.57    | 9.46     | 2.77                       | 4.31     | 4.35     |
| 2800           | 3.86                   | 4.44     | 4.90     | 4.84                      | 4.90     | 5.03     | 3.15                       | 3.13     | 3.22     |
| 2900           | 4.92                   | 5.27     | 5.66     | 3.15                      | 3.72     | 4.14     | 2.31                       | 2.55     | 2.76     |
| 3000           | 5.54                   | 5.74     | 6.05     | 2.31                      | 2.89     | 3.33     | 1.78                       | 2.06     | 2.29     |

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# Surface Mount Low Pass Filter

# SALF-116

## Typical Performance Data

| FREQ.<br>(MHz) | GROUP DELAY<br>(nsec) |          |          |
|----------------|-----------------------|----------|----------|
|                | @ -40° C              | @ +25° C | @ +85° C |
| 0.1            | 4.90                  | 5.21     | 5.13     |
| 1              | 5.19                  | 5.16     | 5.19     |
| 2              | 5.17                  | 5.05     | 5.13     |
| 3              | 5.13                  | 5.11     | 5.12     |
| 4              | 5.11                  | 5.09     | 5.15     |
| 5              | 5.13                  | 5.09     | 5.12     |
| 6              | 5.10                  | 5.06     | 5.11     |
| 7              | 5.09                  | 5.07     | 5.12     |
| 8              | 5.08                  | 5.07     | 5.10     |
| 9              | 5.09                  | 5.08     | 5.10     |
| 10             | 5.10                  | 5.07     | 5.11     |
| 11             | 5.09                  | 5.07     | 5.10     |
| 12             | 5.08                  | 5.07     | 5.09     |
| 13             | 5.08                  | 5.07     | 5.10     |
| 14             | 5.08                  | 5.07     | 5.10     |
| 15             | 5.10                  | 5.08     | 5.11     |
| 16             | 5.09                  | 5.07     | 5.10     |
| 17             | 5.10                  | 5.09     | 5.11     |
| 18             | 5.10                  | 5.09     | 5.11     |
| 19             | 5.11                  | 5.09     | 5.12     |
| 20             | 5.11                  | 5.11     | 5.12     |
| 21             | 5.12                  | 5.11     | 5.13     |
| 22             | 5.12                  | 5.11     | 5.14     |
| 23             | 5.12                  | 5.12     | 5.13     |
| 24             | 5.13                  | 5.12     | 5.14     |
| 25             | 5.14                  | 5.13     | 5.15     |
| 26             | 5.15                  | 5.14     | 5.15     |
| 27             | 5.16                  | 5.14     | 5.16     |
| 28             | 5.16                  | 5.15     | 5.16     |
| 29             | 5.16                  | 5.15     | 5.17     |
| 30             | 5.18                  | 5.18     | 5.19     |
| 31             | 5.19                  | 5.19     | 5.20     |
| 32             | 5.19                  | 5.19     | 5.20     |
| 33             | 5.21                  | 5.20     | 5.21     |
| 34             | 5.22                  | 5.22     | 5.24     |
| 35             | 5.23                  | 5.22     | 5.23     |
| 36             | 5.24                  | 5.24     | 5.26     |
| 37             | 5.25                  | 5.24     | 5.26     |
| 38             | 5.27                  | 5.26     | 5.28     |
| 39             | 5.26                  | 5.27     | 5.27     |
| 40             | 5.30                  | 5.28     | 5.30     |
| 45             | 5.36                  | 5.35     | 5.37     |
| 50             | 5.44                  | 5.43     | 5.45     |
| 60             | 5.62                  | 5.62     | 5.65     |
| 70             | 5.86                  | 5.85     | 5.88     |
| 80             | 6.20                  | 6.17     | 6.21     |
| 90             | 6.67                  | 6.64     | 6.69     |
| 100            | 7.31                  | 7.29     | 7.34     |
| 105            | 7.71                  | 7.68     | 7.72     |
| 110            | 8.14                  | 8.11     | 8.16     |
| 116            | 8.72                  | 8.68     | 8.77     |
| 120            | 9.22                  | 9.16     | 9.28     |
| 130            | 11.27                 | 11.13    | 11.41    |

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