

# Surface Mount Low Pass Filter

SCLF-8+

## 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            | 0.06                   | 0.21     | 0.10     | 40.80                     | 35.09    | 39.57    | 39.38                      | 31.71    | 37.23    |
| 2.0            | 0.10                   | 0.25     | 0.14     | 32.09                     | 37.47    | 33.51    | 31.13                      | 27.78    | 31.11    |
| 3.0            | 0.13                   | 0.28     | 0.18     | 25.75                     | 28.69    | 26.50    | 25.27                      | 23.61    | 25.39    |
| 3.1            | 0.14                   | 0.29     | 0.19     | 25.29                     | 27.97    | 25.99    | 24.85                      | 23.29    | 24.95    |
| 4.0            | 0.20                   | 0.35     | 0.25     | 22.58                     | 23.55    | 22.87    | 22.28                      | 21.53    | 22.35    |
| 4.1            | 0.21                   | 0.36     | 0.25     | 22.42                     | 23.25    | 22.68    | 22.15                      | 21.50    | 22.21    |
| 5.0            | 0.24                   | 0.39     | 0.29     | 22.54                     | 22.05    | 22.50    | 22.33                      | 22.66    | 22.37    |
| 5.1            | 0.24                   | 0.39     | 0.30     | 22.71                     | 22.05    | 22.63    | 22.52                      | 23.02    | 22.55    |
| 6.0            | 0.26                   | 0.42     | 0.33     | 23.80                     | 22.34    | 23.44    | 24.14                      | 26.10    | 24.12    |
| 6.1            | 0.28                   | 0.43     | 0.33     | 23.58                     | 22.24    | 23.23    | 23.98                      | 25.81    | 23.97    |
| 7.2            | 0.38                   | 0.54     | 0.45     | 18.81                     | 19.32    | 18.75    | 19.76                      | 19.40    | 19.66    |
| 7.5            | 0.41                   | 0.59     | 0.49     | 18.22                     | 18.89    | 18.17    | 19.46                      | 18.96    | 19.39    |
| 8.0            | 0.48                   | 0.66     | 0.57     | 17.89                     | 18.49    | 17.77    | 20.33                      | 19.76    | 20.29    |
| 9.0            | 1.50                   | 1.75     | 1.69     | 7.58                      | 7.77     | 7.43     | 8.12                       | 7.93     | 7.95     |
| 9.2            | 2.21                   | 2.50     | 2.44     | 5.54                      | 5.78     | 5.43     | 5.89                       | 5.75     | 5.78     |
| 10.4           | 10.59                  | 11.05    | 10.94    | 0.79                      | 1.26     | 0.87     | 0.85                       | 0.87     | 0.89     |
| 10.8           | 13.82                  | 14.27    | 14.18    | 0.50                      | 0.98     | 0.59     | 0.54                       | 0.57     | 0.58     |
| 11.0           | 15.38                  | 15.84    | 15.74    | 0.42                      | 0.89     | 0.50     | 0.46                       | 0.49     | 0.50     |
| 11.2           | 16.89                  | 17.36    | 17.25    | 0.34                      | 0.82     | 0.44     | 0.41                       | 0.43     | 0.44     |
| 11.7           | 20.55                  | 20.97    | 20.90    | 0.27                      | 0.72     | 0.35     | 0.29                       | 0.33     | 0.34     |
| 12.0           | 22.60                  | 23.03    | 22.93    | 0.24                      | 0.67     | 0.32     | 0.27                       | 0.30     | 0.30     |
| 12.1           | 23.26                  | 23.69    | 23.60    | 0.23                      | 0.67     | 0.32     | 0.25                       | 0.29     | 0.30     |
| 12.5           | 25.82                  | 26.24    | 26.17    | 0.21                      | 0.61     | 0.29     | 0.23                       | 0.25     | 0.26     |
| 12.9           | 28.29                  | 28.70    | 28.63    | 0.20                      | 0.57     | 0.26     | 0.20                       | 0.23     | 0.24     |
| 13.6           | 32.31                  | 32.72    | 32.65    | 0.17                      | 0.52     | 0.24     | 0.19                       | 0.21     | 0.21     |
| 14.0           | 34.46                  | 34.84    | 34.80    | 0.16                      | 0.50     | 0.23     | 0.17                       | 0.21     | 0.20     |
| 14.3           | 36.04                  | 36.43    | 36.38    | 0.17                      | 0.48     | 0.22     | 0.17                       | 0.19     | 0.19     |
| 15.0           | 39.55                  | 39.93    | 39.89    | 0.14                      | 0.44     | 0.19     | 0.15                       | 0.17     | 0.18     |
| 15.1           | 40.02                  | 40.39    | 40.37    | 0.14                      | 0.44     | 0.19     | 0.15                       | 0.18     | 0.18     |
| 15.8           | 43.29                  | 43.63    | 43.62    | 0.14                      | 0.40     | 0.18     | 0.15                       | 0.17     | 0.17     |
| 16.5           | 46.52                  | 46.64    | 46.69    | 0.12                      | 0.36     | 0.16     | 0.13                       | 0.14     | 0.15     |
| 17.2           | 49.27                  | 49.77    | 49.55    | 0.12                      | 0.34     | 0.16     | 0.12                       | 0.13     | 0.14     |
| 18.0           | 52.61                  | 52.63    | 52.83    | 0.12                      | 0.32     | 0.15     | 0.12                       | 0.12     | 0.14     |
| 19.0           | 56.38                  | 56.89    | 56.47    | 0.11                      | 0.30     | 0.14     | 0.11                       | 0.11     | 0.13     |
| 20.0           | 59.41                  | 60.19    | 60.37    | 0.10                      | 0.27     | 0.13     | 0.12                       | 0.11     | 0.12     |
| 30.0           | 88.61                  | 101.93   | 86.56    | 0.07                      | 0.16     | 0.09     | 0.08                       | 0.08     | 0.08     |
| 40.0           | 88.30                  | 92.50    | 106.92   | 0.06                      | 0.12     | 0.08     | 0.06                       | 0.06     | 0.06     |
| 40.1           | 92.20                  | 84.84    | 93.90    | 0.05                      | 0.11     | 0.07     | 0.05                       | 0.06     | 0.07     |
| 50.0           | 90.43                  | 86.99    | 85.95    | 0.05                      | 0.10     | 0.07     | 0.05                       | 0.07     | 0.08     |
| 60.0           | 86.31                  | 84.66    | 89.40    | 0.06                      | 0.09     | 0.08     | 0.05                       | 0.07     | 0.07     |
| 62.9           | 84.74                  | 89.16    | 80.36    | 0.06                      | 0.09     | 0.07     | 0.05                       | 0.06     | 0.06     |
| 70.0           | 85.56                  | 81.17    | 94.53    | 0.06                      | 0.08     | 0.07     | 0.05                       | 0.05     | 0.07     |
| 80.0           | 82.65                  | 84.42    | 80.65    | 0.06                      | 0.09     | 0.08     | 0.05                       | 0.05     | 0.07     |
| 90.0           | 85.54                  | 81.95    | 81.98    | 0.06                      | 0.09     | 0.07     | 0.05                       | 0.06     | 0.06     |
| 100.0          | 80.26                  | 80.07    | 78.23    | 0.05                      | 0.08     | 0.07     | 0.06                       | 0.06     | 0.07     |
| 200.0          | 72.80                  | 76.33    | 72.17    | 0.05                      | 0.10     | 0.09     | 0.06                       | 0.08     | 0.09     |
| 300.0          | 68.69                  | 70.76    | 68.86    | 0.06                      | 0.12     | 0.12     | 0.07                       | 0.11     | 0.11     |
| 400.0          | 66.26                  | 65.72    | 65.04    | 0.07                      | 0.14     | 0.15     | 0.07                       | 0.12     | 0.14     |
| 500.0          | 55.97                  | 54.72    | 53.61    | 0.09                      | 0.18     | 0.20     | 0.13                       | 0.24     | 0.32     |
| 600.0          | 37.88                  | 41.73    | 45.69    | 0.17                      | 0.26     | 0.28     | 0.41                       | 0.39     | 0.36     |
| 700.0          | 46.86                  | 45.79    | 48.01    | 0.16                      | 0.30     | 0.37     | 0.19                       | 0.31     | 0.36     |
| 800.0          | 44.23                  | 43.91    | 42.64    | 0.27                      | 0.48     | 0.60     | 0.34                       | 0.49     | 0.61     |
| 900.0          | 36.64                  | 36.65    | 36.47    | 0.76                      | 1.23     | 1.62     | 0.86                       | 1.32     | 1.76     |
| 1000.0         | 35.07                  | 40.13    | 43.75    | 2.86                      | 2.35     | 1.95     | 2.70                       | 2.21     | 1.84     |

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## Typical Performance Data

| FREQ.<br>(MHz) | GROUP DELAY<br>(nsec) |          |          |
|----------------|-----------------------|----------|----------|
|                | @ -40° C              | @ +25° C | @ +85° C |
| 1.0            | 89.07                 | 89.13    | 89.50    |
| 1.1            | 89.53                 | 89.25    | 89.75    |
| 1.2            | 89.25                 | 89.77    | 89.73    |
| 1.4            | 89.18                 | 89.81    | 89.80    |
| 1.5            | 89.37                 | 89.80    | 89.97    |
| 1.6            | 89.56                 | 89.87    | 89.96    |
| 1.8            | 89.94                 | 90.03    | 90.23    |
| 2.0            | 90.10                 | 89.87    | 90.04    |
| 2.2            | 90.37                 | 90.89    | 91.09    |
| 2.4            | 91.05                 | 90.69    | 91.46    |
| 2.7            | 91.18                 | 91.57    | 91.74    |
| 2.9            | 92.09                 | 92.04    | 92.77    |
| 3.0            | 92.21                 | 91.88    | 91.79    |
| 3.3            | 93.13                 | 93.10    | 93.43    |
| 3.6            | 93.29                 | 93.49    | 93.67    |
| 4.0            | 95.62                 | 95.34    | 95.65    |
| 4.4            | 97.03                 | 97.37    | 97.46    |
| 4.8            | 99.27                 | 99.27    | 99.32    |
| 5.0            | 100.02                | 100.37   | 100.37   |
| 5.1            | 100.68                | 101.02   | 101.14   |
| 5.2            | 101.78                | 101.73   | 102.05   |
| 5.8            | 106.66                | 106.89   | 107.29   |
| 6.0            | 108.36                | 108.49   | 108.85   |
| 6.1            | 109.24                | 109.49   | 109.81   |
| 6.3            | 111.51                | 111.89   | 112.31   |
| 7.0            | 120.69                | 120.85   | 121.38   |
| 7.1            | 121.84                | 122.42   | 122.78   |
| 8.0            | 146.29                | 147.18   | 147.83   |
| 8.1            | 150.87                | 151.14   | 151.95   |
| 8.4            | 166.45                | 167.06   | 168.19   |
| 9.0            | 196.04                | 196.28   | 197.11   |
| 9.2            | 198.33                | 198.42   | 198.29   |
| 10.0           | 151.72                | 150.71   | 149.41   |
| 10.1           | 142.96                | 142.13   | 140.95   |
| 11.0           | 83.54                 | 83.27    | 83.42    |
| 11.1           | 80.31                 | 79.96    | 80.07    |
| 12.0           | 53.41                 | 54.05    | 53.59    |
| 12.5           | 45.40                 | 45.32    | 44.71    |
| 13.0           | 38.65                 | 38.66    | 38.57    |
| 13.4           | 34.61                 | 35.28    | 34.49    |
| 14.0           | 29.24                 | 29.73    | 29.55    |
| 14.7           | 25.76                 | 24.99    | 24.52    |
| 15.0           | 23.61                 | 23.00    | 23.49    |
| 16.0           | 20.50                 | 19.85    | 21.10    |
| 16.1           | 19.00                 | 19.10    | 21.10    |
| 17.0           | 12.08                 | 18.83    | 16.95    |
| 18.0           | 11.43                 | 21.60    | 20.16    |
| 19.0           | 16.52                 | 7.03     | 2.50     |
| 20.0           | 2.52                  | 3.18     | 2.90     |
| 21.0           | 8.93                  | 47.63    | 8.41     |
| 22.0           | 16.72                 | 0.56     | 16.87    |
| 23.0           | 16.37                 | 26.86    | 39.66    |
| 24.0           | 8.05                  | 7.21     | 49.62    |
| 25.0           | 40.31                 | 20.80    | 7.35     |

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