

Filter Plate Filter Selection

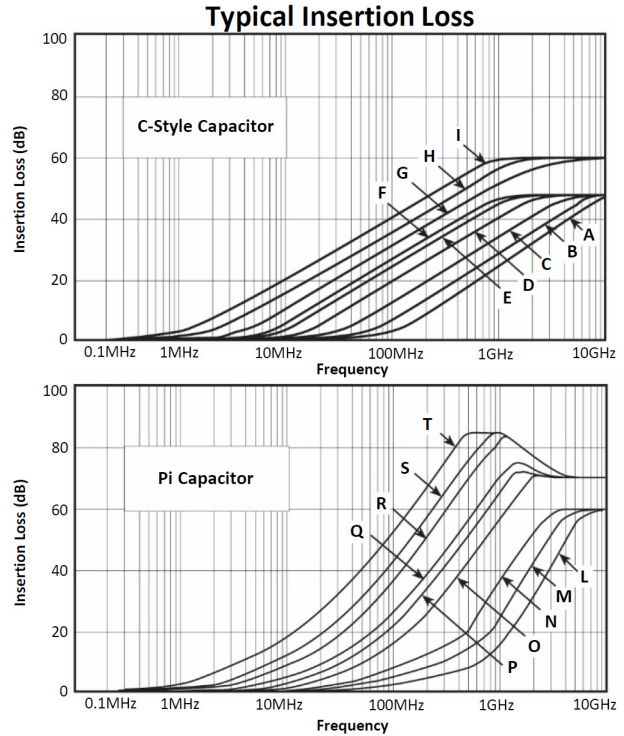
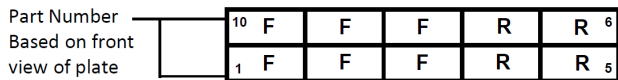
EMI Filter Performance

The electrical characteristics table and insertion loss graphs indicate the performance of feedthrough capacitors and Pi type filters. Utilize this information to specify the EMI filtering components included in your filter plate.

Custom Filtering

APItech filter plates are engineered to accommodate selective line filtering. Several different types of filters may be specified in a single, easy to install filter plate, allowing you to facilitate a wide range of filtering requirements.

For select line filtering, provide a sketch indicating the filters and positions required. The example below represents a 10-pin, 2-row plate with six 1000 pF feedthrough capacitors and four 1700 pF Pi type filters.



| Filter Designation | Filter Circuits | Capacitance | | 3 dB Max Cut-off Frequency (MHz)* | Working Voltage DC - 55°C to +125°C | Minimum Insertion Loss – Decibels (dB) 50 ohm system per MIL-STD-220 (no load) | | | | | | | |
|--------------------|-----------------|-------------|-----------|-----------------------------------|-------------------------------------|---|--------|--------|--------|---------|---------|---------|-------|
| | | Value | Tolerance | | | 5 MHz | 10 MHz | 20 MHz | 50 MHz | 100 MHz | 200 MHz | 500 MHz | 1 GHz |
| A | C | 68pF | ±20% | 77 | 100V | - | - | - | - | - | 3 | 10 | 16 |
| B | C | 100pF | ±20% | 53 | 100V | - | - | - | - | 1 | 6 | 14 | 19 |
| C | C | 135pF | +100/-0% | 23 | 100V | - | - | - | 1 | 5 | 10 | 16 | 20 |
| D | C | 470pF | ±20% | 11 | 100V | - | - | 2 | 7 | 13 | 19 | 25 | 27 |
| E | C | 820pF | ±20% | 6 | 100V | - | 2 | 6 | 12 | 18 | 24 | 30 | 33 |
| F | C | 1000pF | ±20% | 5 | 100V | - | 3 | 7 | 14 | 20 | 26 | 32 | 35 |
| G | C | 1500pF | ±20% | 3.5 | 100V | 1 | 4 | 10 | 16 | 22 | 29 | 36 | 37 |
| H | C | 2500pF | +100/-0% | 1.3 | 100V | 5 | 11 | 17 | 23 | 29 | 35 | 38 | 40 |
| I | C | 4000pF | +100/-0% | 0.8 | 100V | 9 | 15 | 21 | 27 | 34 | 38 | 42 | 46 |
| J | Insulated | 10pF | Max. | 635 | 100V | - | - | - | - | - | - | - | - |
| K | Grounded Insert | | | | | - | - | - | - | - | - | - | - |
| L | Pi | 68pF | ±20% | 65 | 100V | - | - | - | - | 1 | 6 | 17 | 23 |
| M | Pi | 100pF | ±20% | 46 | 100V | - | - | - | - | 2 | 9 | 22 | 28 |
| N | Pi | 135pF | +100/-0% | 25 | 100V | - | - | - | 1 | 6 | 17 | 26 | 34 |
| O | Pi | 470pF | ±20% | 11 | 100V | - | - | - | 9 | 18 | 22 | 36 | 43 |
| P | Pi | 820pF | ±20% | 6 | 100V | - | - | 4 | 13 | 23 | 31 | 45 | 52 |
| Q | Pi | 1000pF | ±20% | 5 | 100V | - | 2 | 7 | 16 | 24 | 36 | 51 | 59 |
| R | Pi | 1700pF | +100/-0% | 1.9 | 100V | 1 | 6 | 14 | 28 | 35 | 49 | 64 | 69 |
| S | Pi | 2500pF | +100/-0% | 1.3 | 50V | 4 | 9 | 16 | 28 | 41 | 54 | 70 | 70 |
| T | Pi | 5000pF | +100/-0% | 0.7 | 100V | 9 | 15 | 28 | 41 | 53 | 66 | 70 | 70 |

* 3dB cut-off frequency calculated at the maximum capacitance.
 ** For high-density centers (2mm) only C style filters are available, to maximum of 4000pF.