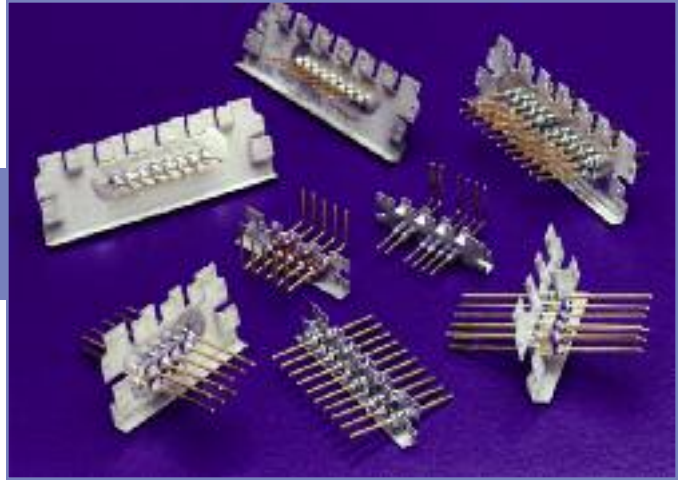
api technologies corp.
Spectrum Control

Easy Mate Filter Plates



API's Spectrum Control brand developed an EMI/RFI filter plate, Easy Mate, which simplifies installation and eliminates the need for mounting hardware. The Easy Mate, **patented**, is designed to "snap" into the chassis of electronic systems, reducing the labor required to complete a plate installation. The drawing on page FA4 shows the Easy Mate design.

These plates are available in two lengths and in both standard density centers (.100") and high-densitycenters (2mm). Standard density Easy Mate plates offer up to 26 lines per plate in a double row configuration, while high-density plates offer up to 32 lines. Custom sizes for Easy Mate plates are available.

Easy Mate Advantages

- Reduces installation time and overall cost
- Eliminates mounting hardware and prepwork
- Flexibility for 1 or 2 rows and standard density centers (.100") or high density centers (2mm)
- Improves overall quality and reliability
- Multiple dimpled finger ground contacts provides excellent long term EMI filtering from 5 MHz to 18 GHz
- Outperforms surface mount devices
- Maximize real estate on PCB
- Mixed capacitance values and schematics
- Ideal for isolation of electronic compartments
- Available in RoHS compliant versions

Ordering Information

Example: **52-898-206-BA2**

The part number shown represents an Easy Mate filter plate with 2 rows, 6 filters per row. Filters are C style with a capacitance value of 100pF. The plate length is 1.092", and the leads are bent 90° to the right side.

52 - **898** - **2** **06** - **B** **A** **2**

Filter Plates

898 Easy Mate Standard Density

960 Easy Mate Hi-density *

No. of Rows
1 = 1 row
2 = 2 rows

No. of Filters

Number of Lines per Row
If less than 10, use a 0 (zero) first.

Filter Designation
A - T from table on page 118. ***

Plate Length
A - 1.092 (27.74mm)
B - 1.812 (46.02mm)

Lead Configuration
0 - Straight
1 - 90° (left)
2 - 90° (right)
3 - 90° (both)

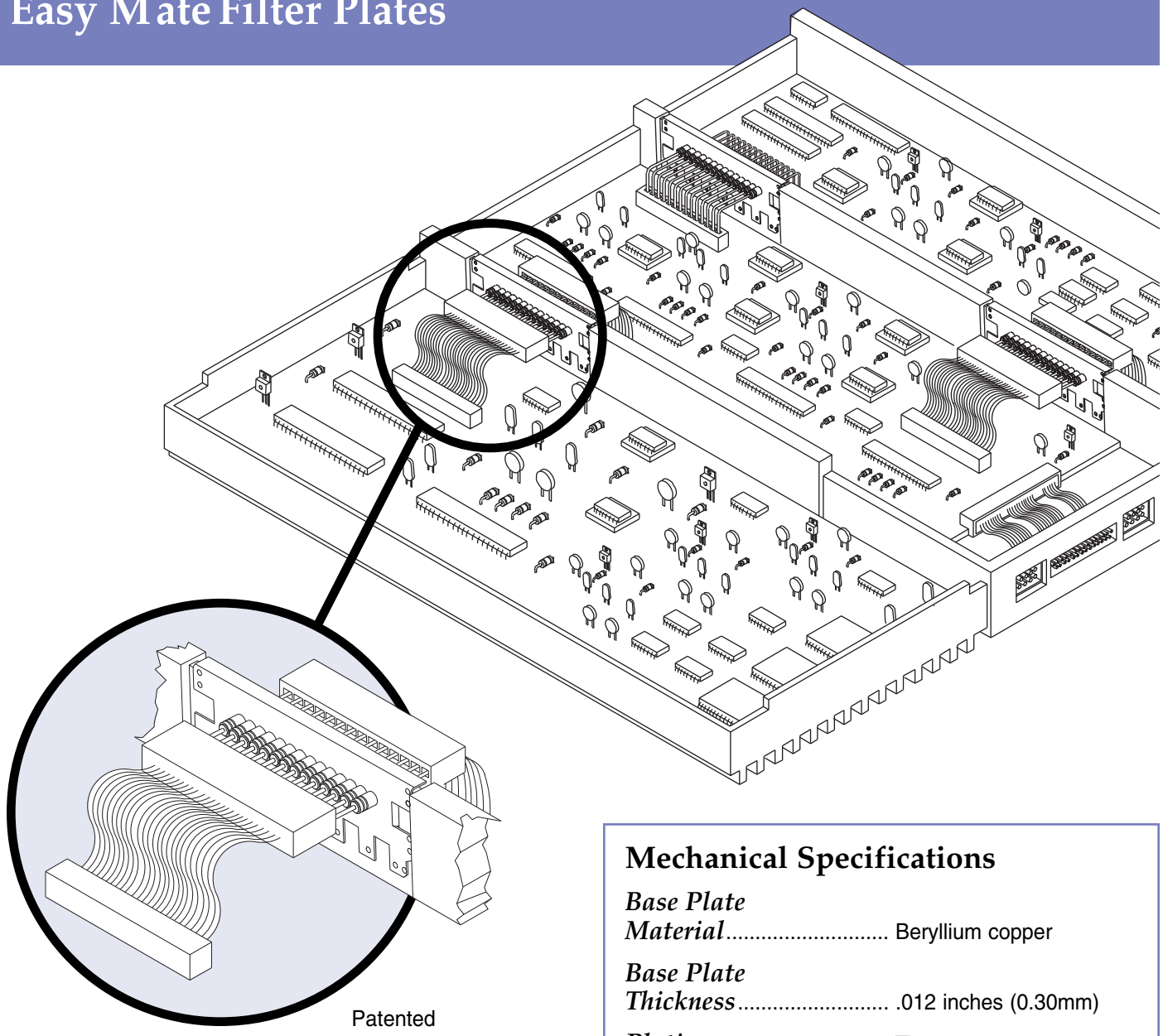
* *Maximum capacitance up to 4000pF C style filter*

** *Replace "–" with "F" for RoHS complaint version*

*** *To request selective line filtering, a mechanical configuration or material specification not shown in this catalog, please complete and forward the design inquiry form on page FA18. We will review your request and provide you with a part number.*

api technologies corp.
Spectrum Control

Easy Mate Filter Plates



Patented

Soldering to Filter Terminals

- Use a temperature controlled soldering iron with tip temperature of 525 ± 10° F (275 ± 5° C).
- Use an SN 63 RMA flux core solder.
- Make mechanical wire connection.
- Use heat sink next to filter body where possible.
- Clean soldering iron tip.
- Clip end of solder—remove 0.5" (12.7mm) to expose flux for soldering.
- Apply soldering iron to wire/flag junction at wetted solder tip region of iron (Wetted Bridge Method). Immediately apply solder. Dwell time for soldering iron tip on product should be 3-5 seconds maximum. (For non-RoHS versions only)

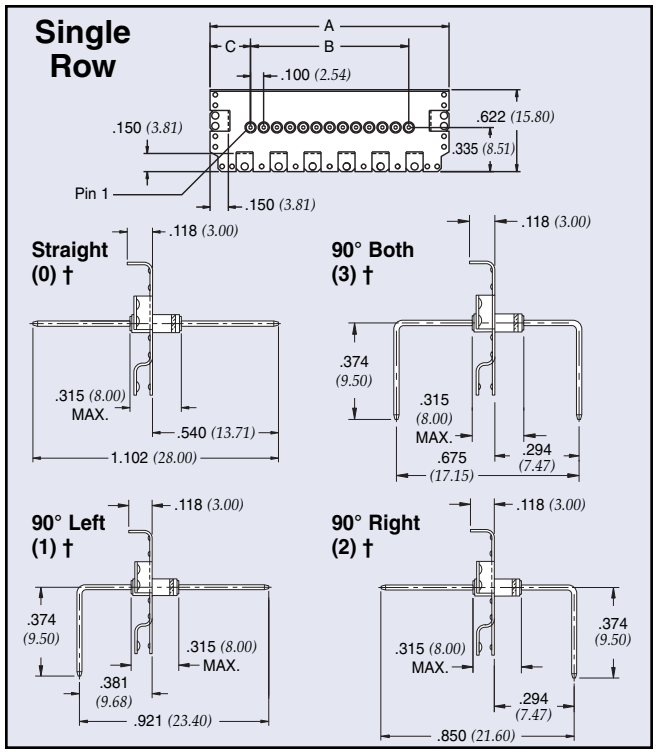
Mechanical Specifications

Base Plate Material	Beryllium copper
Base Plate Thickness	.012 inches (0.30mm)
Plating	Tin, RoHS version will be silver
Lead Material	Copper alloy
Lead Plating	Gold plate
Lead Diameter	ø .025" (.64mm) for 0.100" centers (2.54mm) ø .020 (.51mm) for 0.079" centers (2.00mm)
Current Rating	5 Amps for .025" ø (.64mm) 3 Amps for .020" ø (.51mm)

api technologies corp.
Spectrum Control

Easy Mate Filter Plates
Standard Density Centers .100"

Dimensions: inches and *(mm)*
Lead Spacing: .100" *(2.54 mm)*



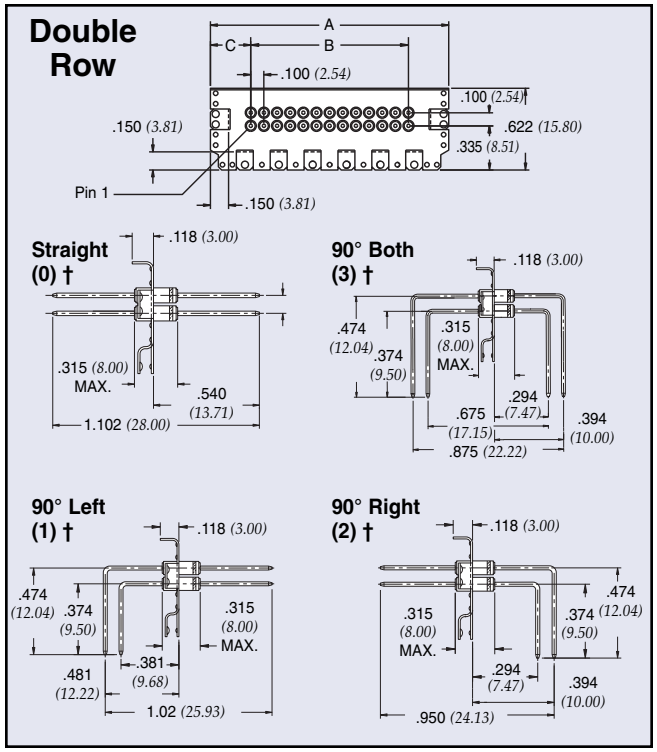
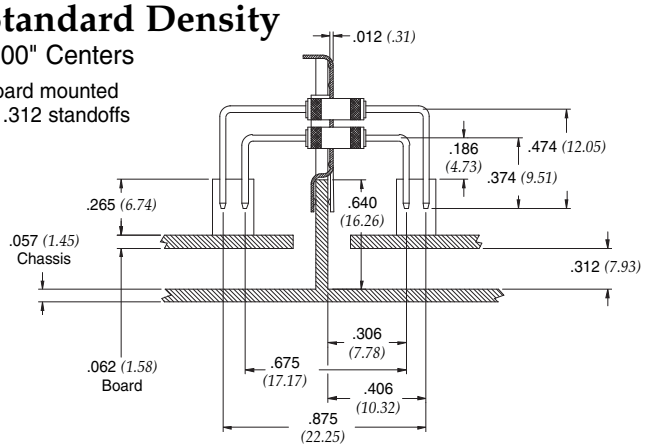


Plate length (A)	No. of filtered lines per row	52-898-XXX-XXX B		C	
1.092 (27.74)	1	0	(0.00)	0.496	(12.60)
	2	0.1	(2.54)	0.496	(12.60)
	3	0.2	(5.08)	0.396	(10.06)
	4	0.3	(7.62)	0.396	(10.06)
	5	0.4	(10.16)	0.296	(7.52)
	6	0.5	(12.70)	0.296	(7.52)
1.812 (46.02)	1	0	(0.00)	0.906	(23.01)
	2	0.1	(2.54)	0.806	(20.47)
	3	0.2	(5.08)	0.806	(20.47)
	4	0.3	(7.62)	0.706	(17.93)
	5	0.4	(10.16)	0.706	(17.93)
	6	0.5	(12.70)	0.606	(15.39)
	7	0.6	(15.24)	0.606	(15.39)
	8	0.7	(17.78)	0.506	(12.85)
	9	0.8	(20.32)	0.506	(12.85)
	10	0.9	(22.86)	0.406	(10.31)
	11	1.0	(25.40)	0.406	(10.31)
	12	1.1	(27.94)	0.306	(7.77)
	13	1.2	(30.48)	0.306	(7.77)

Typical Mounting Applications

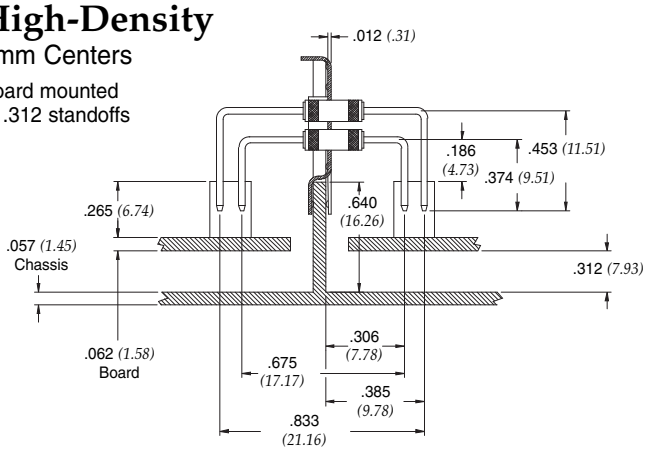
Standard Density
.100" Centers

Board mounted to .312 standoffs



High-Density
2mm Centers

Board mounted to .312 standoffs

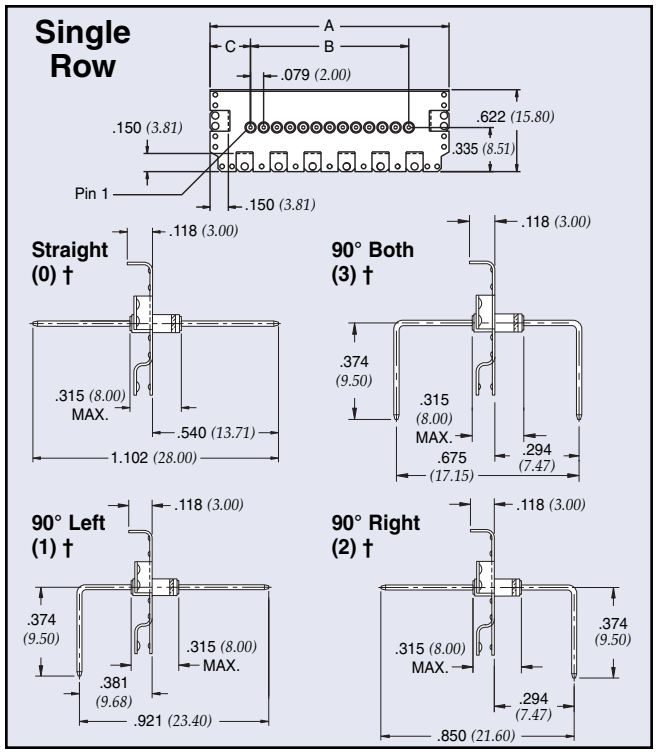


Patented
† Refers to lead configuration for part number/ordering information

api technologies corp.
Spectrum Control

Easy Mate Filter Plates
Hi-Density Centers 2mm

Dimensions: inches and *(mm)*
Lead Spacing: .079" *(2.00 mm)*



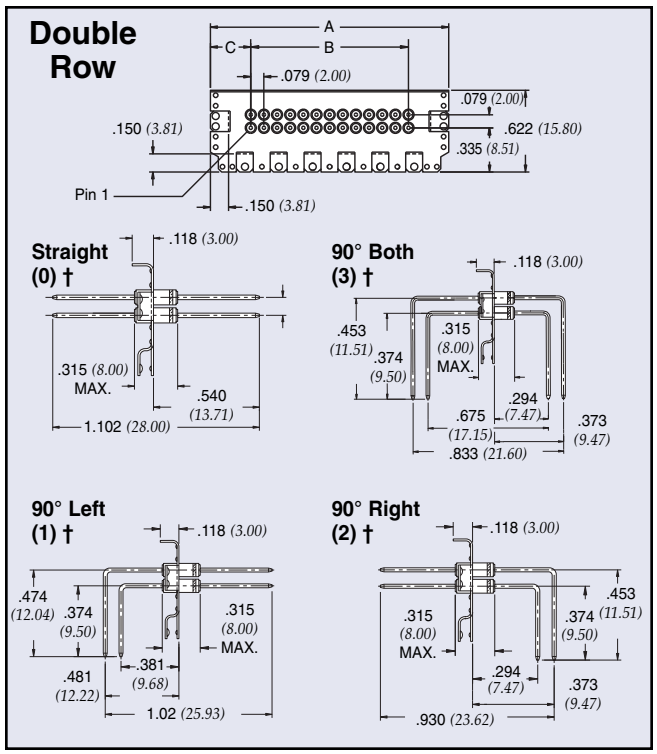
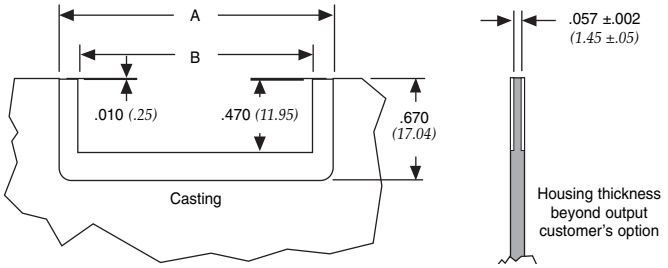


Plate length (A)	No. of filtered lines per row	52-960-XXX-XXX B	52-960-XXX-XXX C
1.092 *(27.74)*	2	0.079 *(2.00)*	0.463 *(11.77)*
	3	0.157 *(4.00)*	0.463 *(11.77)*
	4	0.236 *(6.00)*	0.385 *(9.77)*
	5	0.315 *(8.00)*	0.385 *(9.77)*
	6	0.394 *(10.00)*	0.306 *(7.77)*
	7	0.472 *(12.00)*	0.306 *(7.77)*
1.812 *(46.02)*	2	0.079 *(2.00)*	0.866 *(22.00)*
	3	0.157 *(4.00)*	0.787 *(20.00)*
	4	0.236 *(6.00)*	0.787 *(20.00)*
	5	0.315 *(8.00)*	0.709 *(18.00)*
	6	0.394 *(10.00)*	0.709 *(18.00)*
	7	0.472 *(12.00)*	0.630 *(16.00)*
	8	0.551 *(14.00)*	0.630 *(16.00)*
	9	0.630 *(16.00)*	0.551 *(14.00)*
	10	0.709 *(18.00)*	0.551 *(14.00)*
	11	0.787 *(20.00)*	0.472 *(12.00)*
	12	0.866 *(22.00)*	0.472 *(12.00)*
	13	0.945 *(24.00)*	0.394 *(10.00)*
	14	1.024 *(26.00)*	0.394 *(10.00)*
	15	1.102 *(28.00)*	0.315 *(8.00)*
	16	1.181 *(30.00)*	0.315 *(8.00)*

Easy Mate Chassis Cut-out Design
Patent Pending



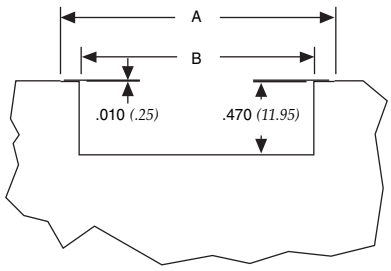
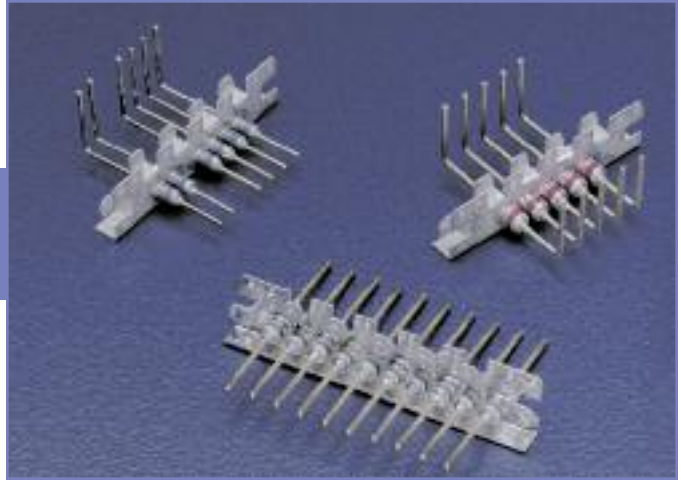


Plate Length	A	B
1.092 *(27.74)*	1.117 *(28.41)*	0.816 *(20.75)*
1.812 *(46.02)*	1.837 *(46.71)*	1.535 *(39.04)*

Patented
† Refers to lead configuration for part number/ordering information

api technologies corp.
Spectrum Control

Easy Mate Jr. Filter Plates



API's Spectrum Control brand has expanded its popular Easy Mate family by adding two more package sizes. These new sizes are lower profile and facilitate installation of feed-through filters into small hardware applications such as PCS linear power amplifiers and RF transmitters. The Easy Mate Jr. is available in two plate lengths, .990" and 1.240", and in standard (.100") and high density centers (2mm).

Easy Mate Jr. Advantages

Reduces installation time and overall cost

- Eliminates mounting hardware and prepwork
- Increase flexibility with standard density centers (.100") or high density centers (2mm)
- Improves overall quality and reliability
- Multiple finger ground contacts provide excellent EMI filtering from 5 MHz to 18 GHz
- Outperforms surface mount devices
- Maximize real estate on PCB
- Mixed capacitance values and schematics
- Ideal for isolation of electronic compartments
- Available in RoHS compliant versions

Mechanical Specifications

Base Plate Material .....Beryllium copper

Base Plate Thickness .....010 inches (.25mm)

Plating.....Tin,
RoHS version will be silver

Lead Material.....Copper alloy

Lead Plating .....Gold plate

Lead Diameter.....ø .025" (.64mm)
for 0.100" centers (2.54mm)

ø .020 (.51mm)
for 0.079" centers (2.00mm)

Current Rating .....5 Amps for .025" ø (.64mm)
3 Amps for .020" ø (.51mm)

Ordering Information

Example: **52-978-106-BA2**

The part number shown represents an Easy Mate Jr. filter plate with 6 filters. Filters are C style with a capacitance value of 100pF. The plate length is .990", and the leads are bent 90° to the right side.

52 - ** **978** - **1** **06** - **B** **A** **2**

Filter Plates

978 Easy Mate Jr. Standard Density

979 Easy Mate Jr. High-density *

No. of Rows
1 = 1 row

No. of Filters

Number of Lines per Row
If less than 10, use a 0 (zero) first.

Filter Designation
A - T from table on page FA17. ***

Plate Length
A - .990 (25.15mm)
B - 1.240 (31.49mm)

Lead Configuration
0 - Straight
1 - 90° (left)
2 - 90° (right)
3 - 90° (both)

* *Maximum capacitance up to 4000pF C style filter*

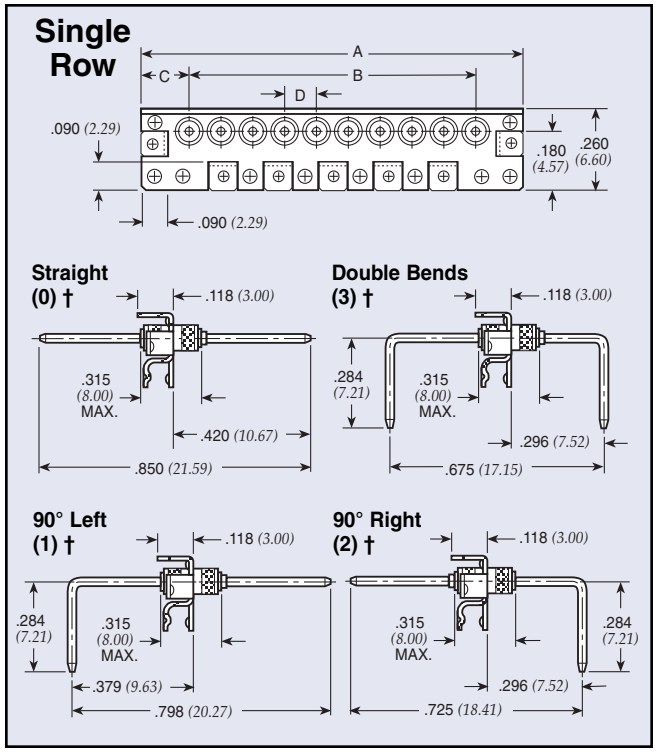
** *Replace "–" with "F" for RoHS complaint version*

*** *To request selective line filtering, a mechanical configuration or material specification not shown in this catalog, please complete and forward the design inquiry form on page FA18. We will review your request and provide you with a part number.*

api technologies corp.
Spectrum Control

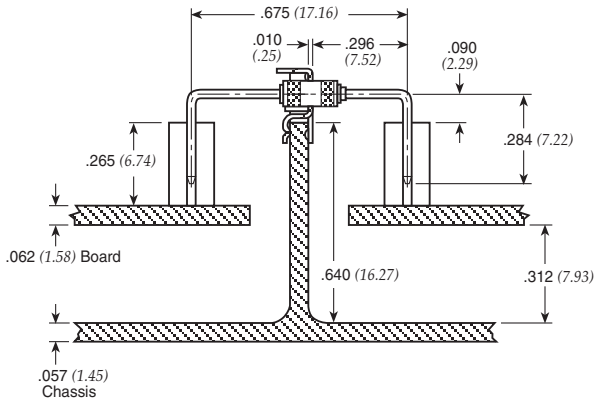
Easy Mate Jr. Filter Plates

Dimensions: inches and *(mm)*



† Refers to lead configuration for part number/ordering information

Typical Mounting Application



Standard Density Centers .100" (D)

Plate length (A)	No. of filtered lines per row	52-978-XXX-XXX B	52-978-XXX-XXX C
.990 *(25.15)*	2	0.1 *(2.54)*	0.395 *(10.03)*
	3	0.2 *(5.08)*	0.395 *(10.03)*
	4	0.3 *(7.62)*	0.295 *(7.49)*
	5	0.4 *(10.16)*	0.295 *(7.49)*
	6	0.5 *(12.70)*	0.195 *(4.95)*
	7	0.6 *(15.24)*	0.195 *(4.95)*
1.24 *(31.49)*	2	0.1 *(2.54)*	0.570 *(14.48)*
	3	0.2 *(5.08)*	0.470 *(11.94)*
	4	0.3 *(7.62)*	0.470 *(11.94)*
	5	0.4 *(10.16)*	0.370 *(9.40)*
	6	0.5 *(12.70)*	0.370 *(9.40)*
	7	0.6 *(15.24)*	0.270 *(6.86)*
	8	0.7 *(17.78)*	0.270 *(6.86)*
	9	0.8 *(20.32)*	0.170 *(4.32)*
	10	0.9 *(22.86)*	0.170 *(4.32)*

High Density Centers 2mm (D)

Plate length (A)	No. of filtered lines per row	52-979-XXX-XXX B	52-979-XXX-XXX C
.990 *(25.15)*	2	0.079 *(2.00)*	0.417 *(10.58)*
	3	0.157 *(4.00)*	0.417 *(10.58)*
	4	0.236 *(6.00)*	0.338 *(8.58)*
	5	0.315 *(8.00)*	0.338 *(8.58)*
	6	0.394 *(10.00)*	0.259 *(6.58)*
	7	0.472 *(12.00)*	0.259 *(6.58)*
1.24 *(31.49)*	2	0.079 *(2.00)*	0.580 *(14.75)*
	3	0.157 *(4.00)*	0.502 *(12.75)*
	4	0.236 *(6.00)*	0.502 *(12.75)*
	5	0.315 *(8.00)*	0.423 *(10.75)*
	6	0.394 *(10.00)*	0.423 *(10.75)*
	7	0.472 *(12.00)*	0.344 *(8.75)*
	8	0.551 *(14.00)*	0.344 *(8.75)*
	9	0.630 *(16.00)*	0.266 *(6.75)*
	10	0.709 *(18.00)*	0.266 *(6.75)*

Easy Mate Jr. Chassis Cut-out Design

Patented

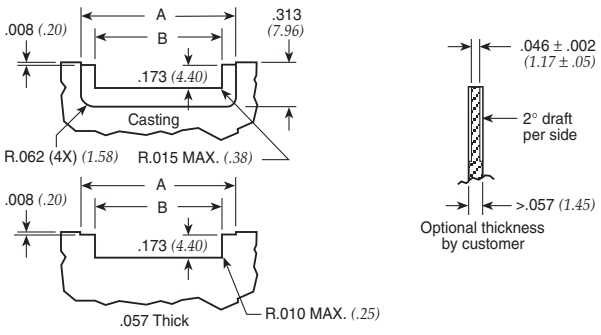


Plate Length	A	B
.990 *(25.15)*	1.015 *(25.78)*	0.834 *(21.18)*
1.24 *(31.49)*	1.265 *(32.13)*	1.084 *(27.53)*