ARINC 600 Rack and Panel Filter Connectors TBKAD

TBKAD/E connectors represent a major milestone in presenting a new rack and panel connector for support of the air transportation market.

High mating forces of pluggable modules in a rack have been reduced by approximately two-thirds. Filter adaptations include either single module of tandem (dual) module with crimp piggyback rear release contacts.

In the ARINC 600 connector series, size 22 contacts are the only size that utilize the Pos-Align connector construction feature. The hooded socket extends from its receptacle insulator in the filter design.

- Low insertion force contacts.
- Non-environmental versions.
- Polarizing posts that are removable from the mating face.
- Field replaceable inserts for size 22 and power contacts.
- Field replaceable filter modules with size 22 contacts.
- Up to 800 size 22 contacts in one connector.
- Crimp piggy back and pi contacts for filter module.
- Uses standard DPX crimp, insertion/extraction tooling.
- Waveguide connections available.

Performance and Material Specifications

MATERIALS AND FINISHES		BKAD	SPECIFICATIONS
Shell	Material	Aluminum Alloy	QQ-A-591/A380
	Finish	Clear chromate over cadmium	QQ-P-416
Insulator	Material	Thermoplastic	N/A
Contacts	Material	Copper alloy	AA-C-533
	Finish	Gold over nickel	
	Termination	Crimp	N/A
Ground Spring	Material	Coper alloy	
	Finish	Gold	

ELECTRICAL DATA (Size #16, Size #20 and Size #22)

Filter Description		Low Freq.	Mid Freq.	Std Freq.	High Freq.
Catalog Indicator		L	M	T	H
Voltage Rating			200 VDC-120 VAC rms 400 Hz		
Current Rating (amp DC)			15 amp size 16, 7.5 size 20, 5.0 amp size 22		
Insulation Resistance, 2 min. electrification time max. at 25˚C			5,000 megohms min. @ 100 VDC		
DWV, sea level, with 500 microamps max. charge/discharge		300V DC size 22 500V DC size 16 & 20	500VDC	500VDC	500VDC
Capacitance at 1 KHz 0.1 V rms Picofarads		32000 45000	8000 12000	3300 5000	850 1300
Attenuation per MIL-STD-220 @ 25˚C with no applied voltage or current	Freq. MHz				
	0.1	2 min.	-	-	-
	1.0	10 min.	2 min.	-	-
	2	16 min.	7 min.	2 min.	-
	10	40 min.	18 min.	8 min.	2 min.
	100	60 min.	55 min.	45 min.	30 min.
	500 to 1000	60 min.	60 min.	55 min.	45 min.
Filter Type/Construction		Pi	Pi	Pi	Pi

Consult factory for higher or mixed attenuation values and higher voltage ratings.

How to Order

TBKA D 2 100 M 4 80 81 *

** FILTER CONNECTOR SERIES
CLASS
SHELL SIZE
CONNECTOR LAYOUT DESCRIPTION
CAPACITANCE INDICATOR
SHELL STYLE
CONNECTOR MOUNTING MODIFIER
POLARIZING POSITION
SPECIAL MODIFIER

FILTER CONNECTOR SERIES
TBKA (Per ARINC 600)
* * Consult factory for availability.

CLASS
D - Non-environmental
(rear release, crimp contacts)

CONNECTOR LAYOUT DESCRIPTION
Three digit number contained within the shell layout indicates total number of contacts available

Connector Layout	Shell Size	Shell Cavity Identification A	B	C	D	E	F
-060	1	-	60	-			
-A060	1	60	-	-			
-120	1	60	60	-			
-100	2	-	-	100			
-300	2	150	150	-			
-400	2	150	150	100			
-600	3	150	150	-	150	150	-
-800	3	150	150	100	150	150	100

SHELL SIZE
1-Max. contact capacity - 125
2-Max. contact capacity - 400
3-Max. contact capacity - 800

CAPACITANCE INDICATOR
L - 32,000-45,000 PF
M - 8,000-12,000 PF
T - 3,300-5,000 PF
H -850-1,300 PF

SHELL STYLE
3-Plug (rack side) consult factory
4-Receptacle (box side)

CONNECTOR MOUNTING MODIFIER
00-Standard design .148 dia. holes
01-With #6-32 ESMA (#12 NCFMA2-62) clinch nuts

Connector Size	# of Clinch Nuts Receptacle
1	4
2	6
3	10

02-Size 1 receptacle only - less 3 printed circuit board mounting lugs
03-With #4-40 ESMA (#22 NCFMA2-40) clinch nuts

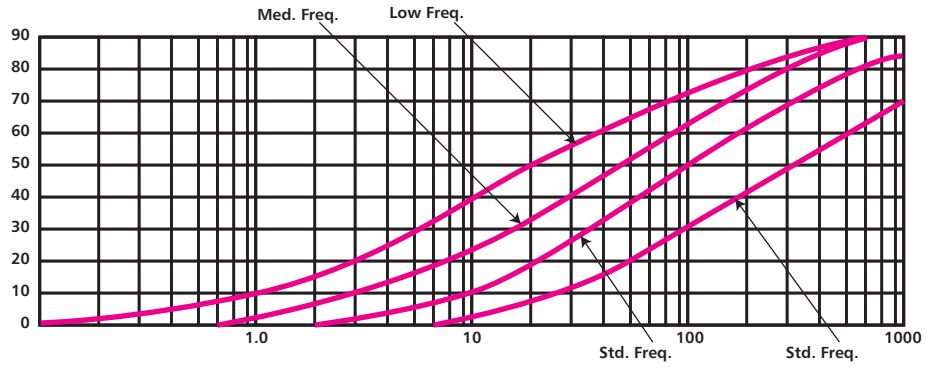
Connector Size	# of Clinch Nuts Receptacle
1	4
2	6
3	10

08-Size 2 and 3 receptacle only-with #4-40 ESMA (#22 NCFMA2-40) clinch nuts (all mounting holes)
09-Size 2 and 3 receptacle only-with #6-32 ESMA (#12 NCFMA2062) clinch nuts (all mounting holes)
23-with floating eyelets (.048 min. radial float) 4 corner holes per connector
Consult factory if other modifications are required.

POLARIZING POSITION
01 thru 99 (per ARINC 600)
Blank-Polarizing posts or keys not installed but supplied with connector

SPECIAL MODIFIER
Consult factory

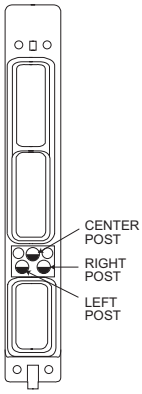
Typical Filter Performance



Dimensions shown in inch (mm)
Specifications and dimensions subject to change

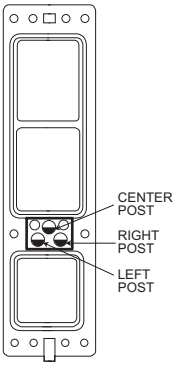
Polarization (Engaging End)

BKA*1



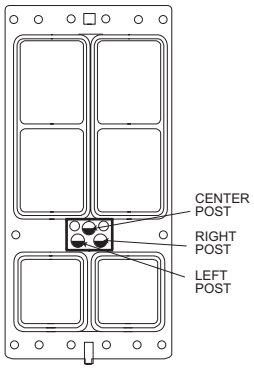
RECEPTACLE

BKA*2

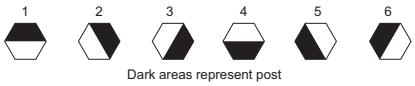


RECEPTACLE

BKA*3



RECEPTACLE



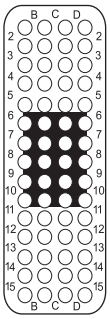
Dark areas represent post

RECEPTACLE SHELL

Position	Left Post	Center Post	Right Post	Position	Left Post	Center Post	Right Post
01	4	4	4	51	6	3	2
02	4	4	3	52	6	3	1
03	4	4	2	53	6	3	6
04	4	4	1	54	6	3	5
05	4	4	6	55	1	3	4
06	4	4	5	56	1	3	3
07	5	4	4	57	1	3	2
08	5	4	3	58	1	3	1
09	5	4	2	59	1	3	6
10	5	4	1	60	1	3	5
11	5	4	6	61	2	3	4
12	5	4	5	62	2	3	3
13	6	4	4	63	2	3	2
14	6	4	3	64	2	3	1
15	6	4	2	65	2	3	6
16	6	4	1	66	2	3	5
17	6	4	6	67	3	3	4
18	6	4	5	68	3	3	3
19	1	4	4	69	3	3	2
20	1	4	3	70	3	3	1
21	1	4	2	71	3	3	6
22	1	4	1	72	3	3	5
23	1	4	6	73	4	2	4
24	1	4	5	74	4	2	3
25	2	4	4	75	4	2	2
26	2	4	3	76	4	2	1
27	2	4	2	77	4	2	6
28	2	4	1	78	4	2	5
29	2	4	6	79	5	2	4
30	2	4	5	80	5	2	3
31	3	4	4	81	5	2	2
32	3	4	3	82	5	2	1
33	3	4	2	83	5	2	6
34	3	4	1	84	5	2	5
35	3	4	6	85	6	2	4
36	3	4	5	86	6	2	3
37	4	3	4	87	6	2	2
38	4	3	3	88	6	2	1
39	4	3	2	89	6	2	6
40	4	3	1	90	6	2	5
41	4	3	6	91	1	2	4
42	4	3	5	92	1	2	3
43	5	3	4	93	1	2	2
44	5	3	3	94	1	2	1
45	5	3	2	95	1	2	6
46	5	3	1	96	1	2	5
47	5	3	6	97	2	2	4
48	5	3	5	98	2	2	3
49	6	3	4	99	2	2	2
50	6	3	3				

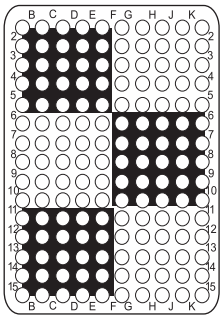
Contact Arrangements (Receptacle-Engaging Face Shown)

Size 1

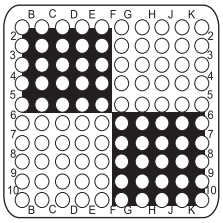


60
60 #22
SHELL CAVITY A or B
NOT TOOLED

Sizes 2 & 3



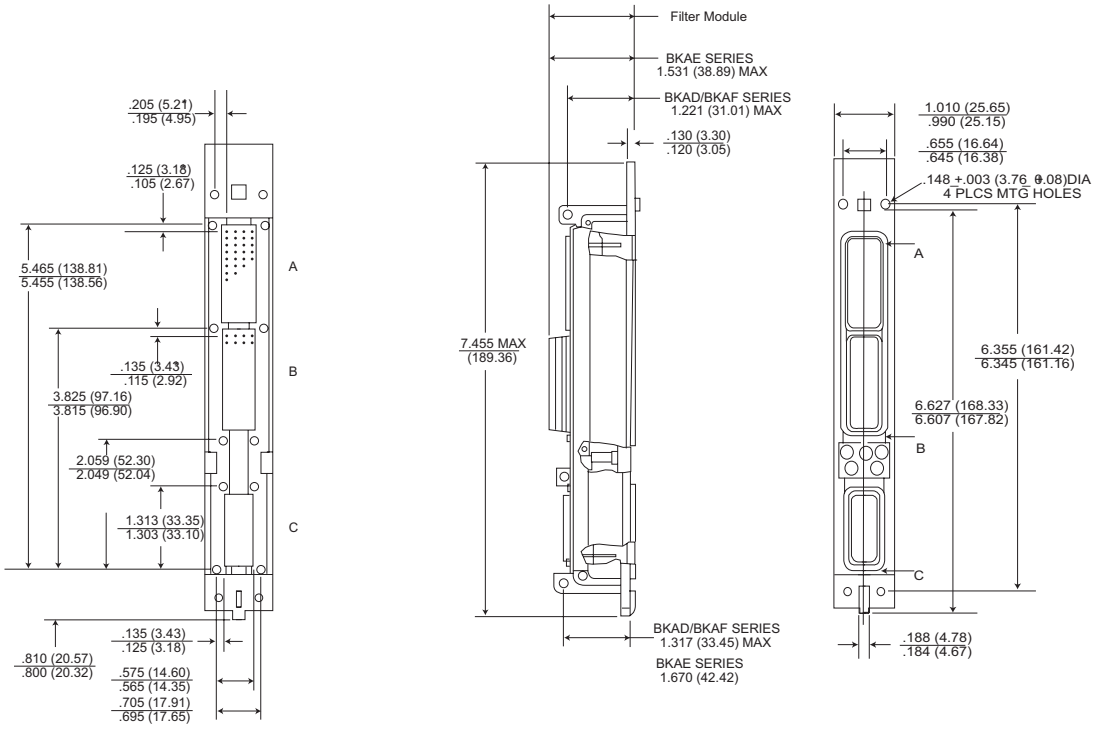
150
150 #22
SHELL CAVITY A, B, D, or E



100
100 #22
SHELL CAVITY C or F
NOT TOOLED Dimensions shown in inch (mm)

Specifications and dimensions subject to change

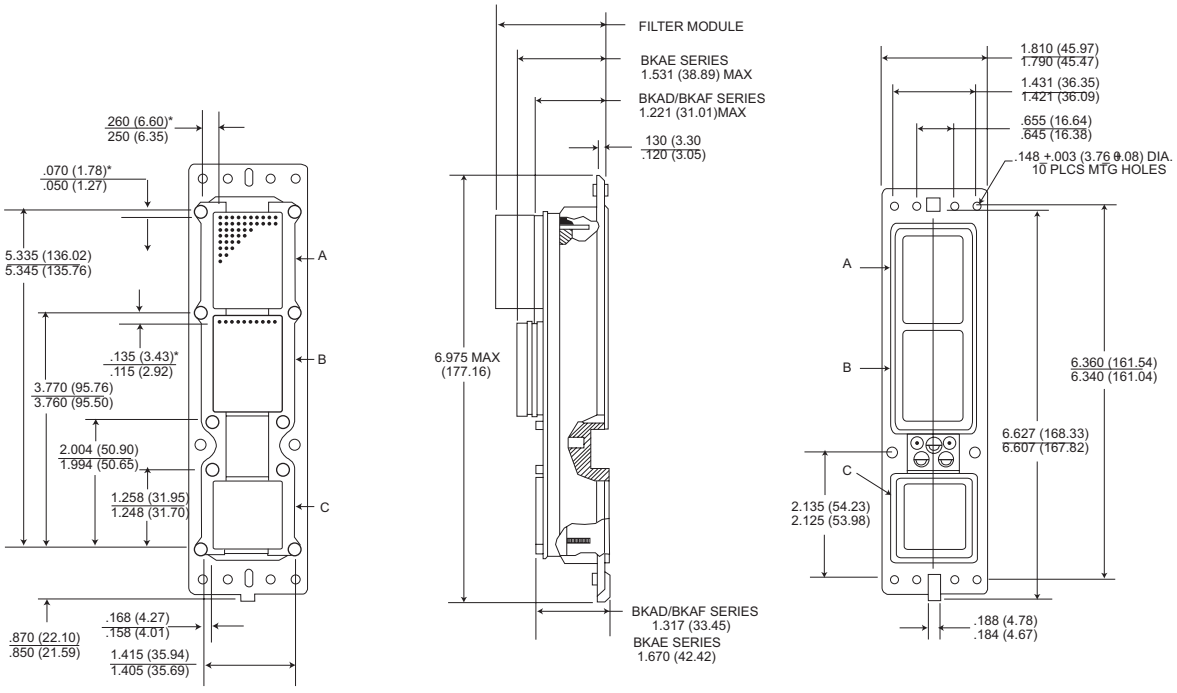
Size 1 Receptacle



Retainer Plate

* This dimension indicates distance from centerline of retaining screw to the centerline of first contact cavity.

Size 2 Receptacle

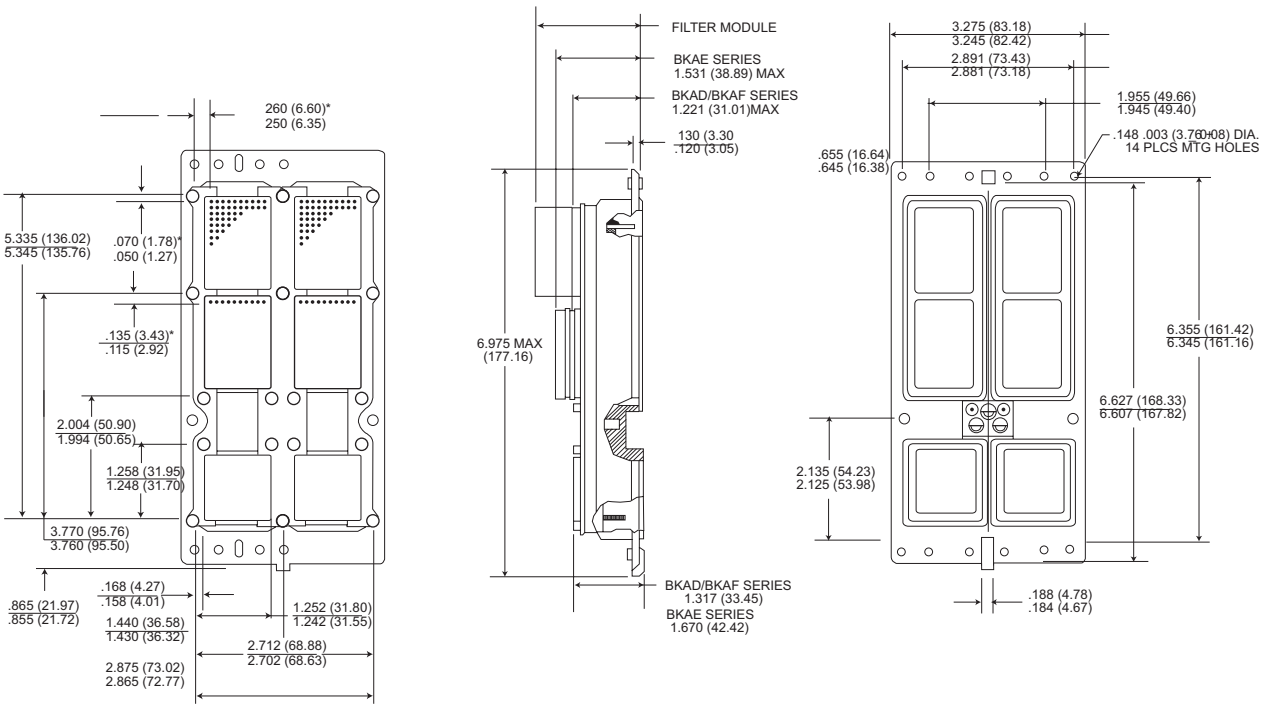


Retainer Plate

* This dimension indicates distance from centerline of retaining screw to the centerline of first contact cavity.

Dimensions shown in inch (mm)
Specifications and dimensions subject to change

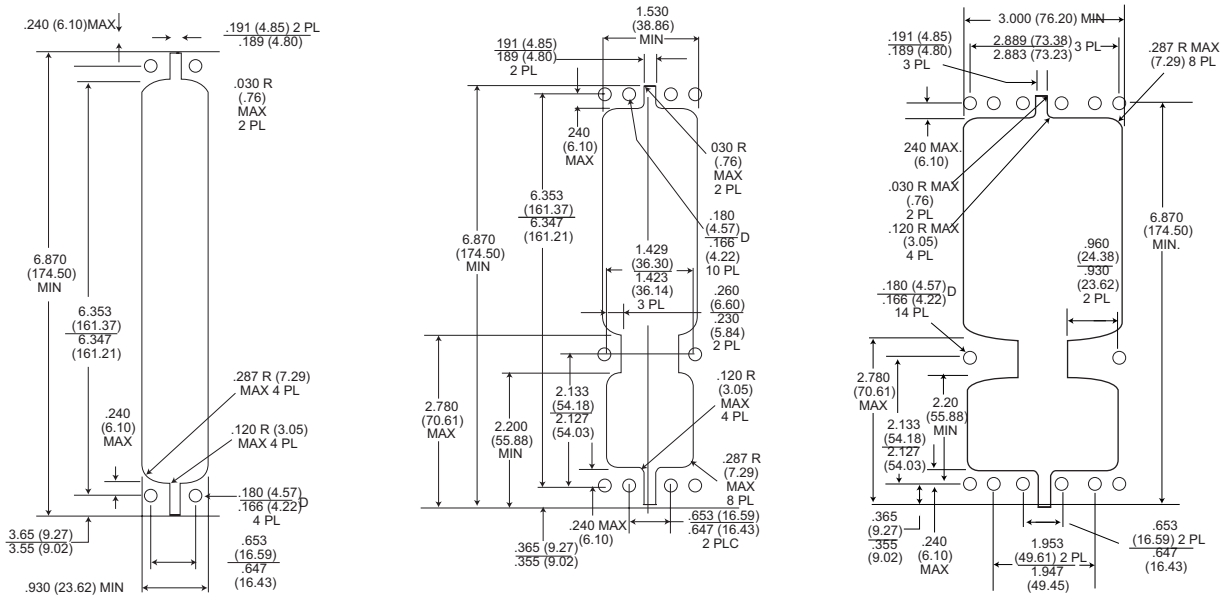
Size 3 Receptacle



Retainer Plate

* This dimension indicates distance from centerline of retaining screw to the centerline of first contact cavity.

Panel Cutouts



Size 1 Receptacle **Size 2 Receptacle** **Size 3 Receptacle**