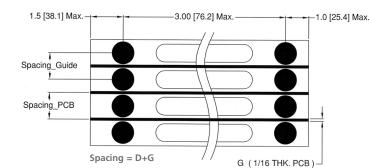
# CIRC-O-GIDE™

# Snap-In Button-Style Card Guides

- 35 Standard configurations
- Precision Molded for rigidity, strength and heat resistance from 94V-O UL rated materials
- Improves PCB and system cooling
- Supports any spacing, any length and any PCB thickness

## 8.145 Min.





CIRC-O-GIDEs provide the ultimate design flexibility and installed reliability by eliminating the continuous length of the conventional card guide. Retention is firm and there are no special tools or fixtures required for installation.

#### **Mounting Information:**

Snap-in metal plates: 0.047" - 0.090" (1.2mm - 2.3mm) thick Hole Size: 0.172" (4.4mm) diameter +0.003" (0.08mm), - 0.001" (0.03mm), 11/64th drill

#### **Material Specifications:**

UL Rated 94V-O, Black, 10% Glass Filled 6 Nylon per ASTM D4066 PA210G10 Oxygen Index: +28% UL File #E84658

Circ-O-Gide

#### **Application Notes:**

Spacing equals the CIRC-O-GIDE™ diameter plus the channel gap of 0.076" (1.9mm) for 1/16th PCBs, 0.102" (2.6mm) for 3/32nd PCBs and 0.130" (3.3mm)for 1/8th PCBs.

Ø.172 <sup>+.003</sup>
Mounting Footprint

Circ-O-Gide						
Part No.	PCB Spacing*	T ±.005 (.13)	D ±.003 (.08)	Price Code		
312-078	.312 (7.9)	.078 (2.0)	.236 (6.0)	F		
312-109	.312 (7.9)	.109 (2.8)	.236 (6.0)	F		
312-125	.312 (7.9)	.125 (3.2)	.236 (6.0)	F		
312-156	.312 (7.9)	.156 (4.0)	.236 (6.0)	G		
312-187	.312 (7.9)	.187 (4.8)	.236 (6.0)	G		
400-078	.400 (10.2)	.078 (2.0)	.324 (8.2)	G		
400-109	.400 (10.2)	.109 (2.8)	.324 (8.2)	G		
400-125	.400 (10.2)	.125 (3.2)	.324 (8.2)	G		
400-156	.400 (10.2)	.156 (4.0)	.324 (8.2)	Н		
400-187	.400 (10.2)	.187 (4.8)	.324 (8.2)	Н		
500-078	.500 (12.7)	.078 (2.0)	.424 (10.8)	Н		
500-109	.500 (12.7)	.109 (2.8)	.424 (10.8)	н		
500-125	.500 (12.7)	.125 (3.2)	.424 (10.8)	Н		
500-156	.500 (12.7)	.156 (4.0)	.424 (10.8)	1		
500-187	.500 (12.7)	.187 (4.8)	.424 (10.8)			
600-078	.600 (15.2)	.078 (2.0)	.524 (13.3)	1		
600-109	.600 (15.2)	.109 (2.8)	.524 (13.3)	1		
600-125	.600 (15.2)	.125 (3.2)	.524 (13.3)	1		
*Spacing f	*Spacing for 1/16" (1.6) PCBs					

PCB т D Price ±.005 (.13) ±.003 (.08) Code Part No. Spacing\* 600-156 .600 (15.2) .156 (4.0) .524 (13.3) J 600-187 .600 (15.2) .187 (4.8) 524 (13.3) 750-078 .750 (19.1) .078 (2.0) .674 (17.1) J 750-109 .750 (19.1) .109 (2.8) .674 (17.1) .750 (19.1) .125 (3.2) .674 (17.1) 750-156 .750 (19.1) .156 (4.0) .674 (17.1) 750-187 .750 (19.1) .187 (4.8) .674 (17.1) К 800-078 .800 (20.3) .078 (2.0) .724 (18.4) J 800-109 .800 (20.3) .109 (2.8) .724 (18.4) 800-125 .800 (20.3) .125 (3.2) .724 (18.4) J .156 (4.0) .800 (20.3) 800-156 .724 (18.4) К .800 (20.3) .187 (4.8) 800-187 724 (18.4) Κ 1000-078 1.00 (25.4) .078 (2.0) .924 (23.5) К 1000-109 1.00 (25.4) .109 (2.8) .924 (23.5) Κ 1000-125 1.00 (25.4) .125 (3.2) .924 (23.5) К 1000-156 1.00 (25.4) .156 (4.0) .924 (23.5) К .924 (23.5) 1000-187 1.00 (25.4) .187 (4.8) Κ

\*Spacing for 1/16" (1.6) PCBs

# **CONDUCTIVE INSERTS**<sup>™</sup> Stainless Steel Channel Inserts for Card Guides

- Stainless steel per MIL-S-5059
- Fully conductive with less than  $10\Omega$  resistance over 8.0" (203mm)
- Compatible with most of Bivar's standard card guides
- Retrofit compatible, does not require new foot print

0.006" stainless steel channel inserts are available to convert all Nylon card guides to fully conductive grounding planes. Inserts snap over the mounting pylon and form a 0.075" wide conductive floor in all Bivar card guides.

The conductive Insert is an excellent way to answer growing concerns in EMI (electromagnetic interference), RFI (radio frequency interference), and EMC (electromagnetic contamination) grounding applications. Bivar's Conductive Insert card guides offer a very efficient and cost-effective alternative to metal and metalized card guides. Stainless steel will not corrode or oxidize, has a long shelf life, and will not react with most chemicals and solvents used in the assembly process.

#### **Material Specifications:**

301 Stainless steel per MIL-S-5059 1/2 Hard, Rockwell 36.0

#### **Application Notes:**

Compatible with: ECON-O-GIDE<sup>®</sup> TEMP-O-GIDE<sup>®</sup> GRIP-O-GIDE<sup>®</sup> COMP-O-GIDE<sup>™</sup> NARR-O-GIDE<sup>™</sup> STAT-O-GIDE<sup>™</sup>

#### **Ordering Instructions:**

Add suffix "CI" to any standard Bivar card guide part number to indicate the fully conductive version:

Standard	With Conductive Insert
E-650	E-650-CI
FR-750	FR-750-CI
DC-800	DC-800-CI
SSD-300	SSD-300-CI
SDC-300	SDC-300-CI
N-450-2	N-450-2-CI
S-450	S-450-CI



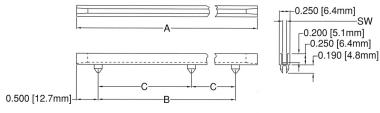


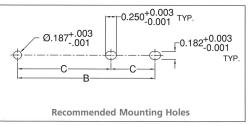
## GRIP-O-GIDE™

# Deep Channel Card guides for <sup>1</sup>/<sub>16</sub><sup>th</sup>, <sup>3</sup>/<sub>32</sub><sup>nd</sup> and <sup>1</sup>/<sub>8</sub><sup>th</sup> PCBs

- Deep Channel (0.200") for severe duty, high shock and vibration environments
- Precision Molded for rigidity, strength and heat resistance from 94V-O UL rated materials
- Stainless Steel Conductive Inserts available for all sizes (see page 13)
- Three channels widths for 1/16<sup>th</sup>, 3/32<sup>nd</sup> and 1/8<sup>th</sup> PCBs
- Available in a Static Dissapative 94V-O rated material







#### Grip-O-Gide 2-1/2" thru 8" Length:

S.W PCB DESC Part No. ±.062 (1.6) ±.032 (.81) ±.015 (.38) ±.005 (.13) Thickness DWG NO. DC-250 2 5 (63 5) 1 5 (38 1) 84101-01 DC-450 4.5 (114.3) 3.5 (88.9) 84101-02 .080 (2.0) 1/16 (1.6) DC-600 6.0 (152.4) 5.0 (127.0) 84101-03 84101-04 DC-800 8.0 (203.2) 7.0 (177.8) 3.5 (88.9) DC-450-102 4.5 (114.3) 3.5 (88.9) DC-600-102 6.0 (152.4) 5.0 (127.0) .102 (2.6) 3/32 (2.4) DC-800-102 8.0 (203.2) 7.0 (177.8) 3.5 (88.9) DC-450-130 4.5 (114.3) 3.5 (88.9) 84101-22 DC-600-130 6.0 (152.4) 5.0 (127.0) .132 (3.4) 1/8 (3.2) 84101-23 DC-800-130 8.0 (203.2) 3.5 (88.9) 84101-24 7.0 (177.8)

Rigid, strong and economical, GRIP-O-GIDEs provide the installed reliability that your most demanding products require. Retention is firm and there are no special tools or fixtures required for installation. Static dissapative materials are available by special order with surface resistivity of 105-109.

#### **Mounting Information:**

Snap-in metal plates: 0.047 "- 0.090" (1.2mm - 2.3mm) thick Hole Size: Front - 0.187" (4.7mm) diameter +0.003" (0.08mm) - 0.001" (0.03mm), 3/16th drill. Rear & Center - 0.250" (6.35mm) x 0.182" (4.62mm) + 0.003" (0.08mm), - 0.001" (0.03mm)

#### **Material Specifications:**

Handle: UL Rated 94V-O, Black, 10% Glass Filled 6 Nylon per ASTM D4066 PA210G10 Oxygen Index: +28% UL File #E84658

#### **Application Notes:**

Slotting or elongating of the second and third mounting hole is recommended to allow for length variations and to provide for easier assembly.

Prolonged pre-assembly exposure to high humidity can cause molded Nylon components to "grow" out of tolerance. Storage in a cool dry place is recommended. Open sealed vapor barrier bags at the time of production to assure optimum shelf life.

# NARR-D-GIDE™

# Narrow Width Press in Card guides

- 17 Standard Lengths from  $2-\frac{1}{2}$ " to  $8-\frac{1}{2}$ " in  $\frac{1}{2}$ " increments
- Precision Molded for strength and rigidity
- Stainless Steel Conductive Inserts available for all lengths (see page 13)
- Narrow width allows for higher densities and optimum air flow

NARR-O-GIDE, was introduced to meet the demand for tighter PCB packaging densities in modern card cages. Rigid, strong and economical, NARR-O-GIDEs provide the design flexibility and installed reliability that your most demanding products require. Retention is firm via a simple press-fit application and there are no special tools or fixtures required.

## **Mounting Information:**

Snap-in metal plates: 0.047 " - 0.085" (1.2mm - 2.2mm) thick Hole Size: Front - 0.125" (3.2mm) diameter + 0.003 (0.08mm) - 0.001 (0.03mm) Rear & Center - 0.120 (3.0mm) x 0.218 (5.50 mm)

### **Standard Material Specifications:**

UL Rated 94V-2 Natural, 6/6 Nylon per ASTM D4066 PA111 Oxygen Index: +28% UL File #E84658

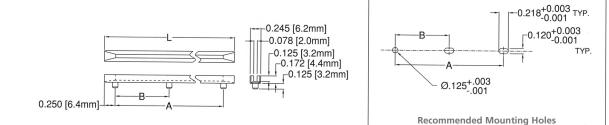
### **Optional 94V-O Material Specifications:**

UL Rated 94V-0, White (suffix 94V-0 WE) or Black (suffix 94V-0 BK), 6/6 Nylon per ASTM D4066 PA111. Subject to minimum order. Oxygen Index: +28% UL File #E84658

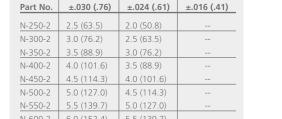
### **Application Notes:**

Slotting or elongating of the second and third mounting hole is recommended to allow for length variations and to provide for easier assembly.

Prolonged pre-assembly exposure to high humidity can cause molded Nylon components to "grow" out of tolerance. Storage in a cool dry place is recommended. Open sealed vapor barrier bags at the time of production to assure optimum shelf life.



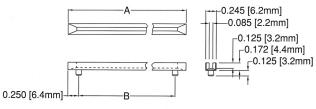
Narr-O-Gide 2-1/2" thru 8-1/2" Lengths					
Part No.	L ±.030 (.76)	A ±.024 (.61)	B ±.016 (.41)		
N-250-2	2.5 (63.5)	2.0 (50.8)			
N-300-2	3.0 (76.2)	2.5 (63.5)			
N-350-2	3.5 (88.9)	3.0 (76.2)			
N-400-2	4.0 (101.6)	3.5 (88.9)			
N-450-2	4.5 (114.3)	4.0 (101.6)			
N-500-2	5.0 (127.0)	4.5 (114.3)			
N-550-2	5.5 (139.7)	5.0 (127.0)			
N-600-2	6.0 (152.4)	5.5 (139.7)			
N-650-2	6.5 (165.1)	6.0 (152.4)			
N-700-2	7.0 (177.8)	6.5 (165.1)			
N-700-3	7.0 (177.8)	6.5 (165.1)	3.25 (82.5)		
N-750-2	7.5 (190.5)	7.0 (177.8)			
N-750-3	7.5 (190.5)	7.0 (177.8)	3.50 (88.9)		
N-800-2	8.0 (203.2)	7.5 (190.5)			
N-800-3	8.0 (203.2)	7.5 (190.5)	3.75 (95.2)		
N-850-2	8.5 (215.9)	8.0 (203.2)			
N-850-3	8.5 (215.9)	8.0 (203.2)	4.00 (101.6)		

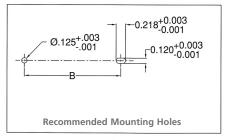


# STAT-D-GIDE™ Anti-Static Press-In Card Guides

- Static Dissipative. Surface Resistivity of 10<sup>5</sup> 10<sup>9</sup> ohms/square (ASTM D257)
- Narrow width (less than 1/4") allows maximum density and optimum air flow







STAT-O-GIDEs<sup>™</sup> Precision molded to tight tolerances from static dissipative material as defined by the Department of Defense Handbook 263 (DOD-HDBK-263), these guides are specifically designed to prevent ESD in applications requiring protection for static-sensitive devices.

#### **Mounting Information:**

Press-in metal plates: 0.048" / 0.085" (1.2) / (2.2) thick. U.S. sheet metal gauges 18/14 Hole size: Front - 0.125 (3.2) dia. + 0.003 (0.08) - 0.001 (0.3), Rear - 0.218" (5.5) x 0.120" (3.0) + 0.003 (0.08) - 0.001 (0.3)

#### **Material Specifications:**

6/6 Nylon with permanently bound-in electrical grade PAN fibers which prevent sluffing or transfer of conductive material. Gray in color. Static decay performance meets or exceeds both NFPA and MIL-B-81705B requirements.

#### **Oxygen Rating Index:**

Over 28%

#### **Standard Drawing Tolerances:**

(unless otherwise indicated) Fractions:  $\pm 1/64$  (.40) .XX =  $\pm .010$  (.254) .X =  $\pm 1/64$  (.40) .XXX =  $\pm .005$  (.127)

#### Note:

Slotting or elongating of 2nd mounting holes is recommended to allow for length variations in molding and assembly ease.

Stat-O-Gid	e	2-1/2" th Color: Gr	iru 8-1/2" Lengths ay
Part No.	±.	A 030 (.76)	B ±.024 (.61)
S-250	2.5	538 (63.5)	2.030 (51.6)
S-300	3.0	045 (76.2)	2.538 (64.5)
<u>S-350</u>	3.553 (88.9)		3.045 (77.3)
S-400	4.060 (101.6)		3.553 (90.2)
S-450	4.5	568 (114.3)	4.060 (103.1)
S-500	5.0	075 (127.0)	4.568 (116.0)
S-550	5.5	583 (139.7)	5.075 (128.9)
S-600	6.0	090 (152.4)	5.583 (141.8)
S-650	6.5	598 (165.1)	6.090 (154.7)
S-700	7.′	105 (180.5)	6.598 (167.6)
<u>S-750</u>	7.6	513 (193.4)	7.105 (180.5)
S-800	8.1	20 (206.2)	7.613 (193.4)
S-850	8.6	528 (219.2)	8.120 (206.2)

## ECON-O-GIDE®

# Standard Snap-in Card Guides for <sup>1</sup>/16<sup>th</sup> PCBs

- 25 Standard Lengths from 2"-14" in  $\frac{1}{2}"$  increments
- Precision Molded for rigidity, strength and heat resistance from 94V-O UL rated materials
- Stainless Steel Conductive Inserts available for all lengths (see page 13)

ECON-O-GIDE is the industry standard by which all other snap-in card guides are judged. Rigid, strong and economical, ECON-O-GIDEs provide the design flexibility and installed reliability that your most demanding products require. Retention is firm and there are no special tools or fixtures required for installation. Locking ejectors can be used for positive PCB retention and insertion/extraction ease (see page 33 for details).

#### **Mounting Information:**

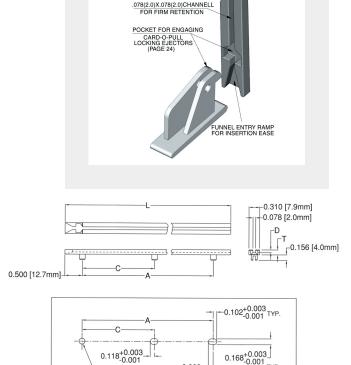
Snap-in metal plates: 0.047 " - 0.090 " (1.2mm - 2.3mm) thick Hole Size: Front - 0.172" (4.4mm) diameter + 0.003" (0.08mm) - 0.001" (0.03mm) 11/64th drill Center - 0.220" x 0.168" + 0.003" - 0.001" Rear - 0.235" x 0.168" + 0.003" - 0.001"

#### **Material Specifications:**

UL Rated 94V-0, Black, 10% Glass-Filled 6 Nylon per ASTM D4066 PA210G10 Oxvaen Index: +28% UL File #E84658

#### **Application Notes:**

Slotting or elongating of the second and third mounting hole is recommended to allow for length variations and to provide for easier assembly. Prolonged pre-assembly exposure to high humidity can cause molded Nylon components to "grow" out of tolerance. Storage in a cool dry place is recommended. Open sealed vapor barrier bags at the time of production to assure optimum shelf life.





Ø.172+.003

0.133+0.003

TYP

Econ-O-	Gide	2" thru 8" Len	gths
Part No.	L ±.062 (1.6)	A +.016(.41) 032(.81)	DESC DWG. NO.
E-200	2.0 (50.8)	1.016 (25.8)	-
E-250	2.5 (63.5)		84006-01
E-300	3.0 (76.2)	1.516 (38.5)	84006-02
E-350	3.5 (88.9)		84006-3
E-400	4.0 (101.6)		84006-4
E-450	4.5 (114.3)	3.016 (76.6)	84006-5
E-500	5.0 (127.0)	5.010 (70.0)	84006-6
E-550	5.5 (139.7)		84006-7
E-600	6.0 (152.4)	5.016 (127.4)	84006-8
E-650	6.5 (165.1)	5.010 (127.4)	84006-9
E-700	7.0 (177.8)		84006-10
E-750	7.5 (190.5)	6.031 (153.2)	84006-11
E-800	8.0 (203.2)		84006-12

#### Econ-O-Gide

Part No.	L ±.062 (1.6)	A +.016 (.41) 047 (1.2)	C +.016 (.41) 032 (.81)	D ±.005 (.13)	T ±.007 (.18)	DESC DWG. NO.
E-850	8.5 (215.9)					84006-13
E-900	9.0 (228.6)	7.531 (191.3)	3.766 (95.7)	.078 (2.0)	.141 (3.6)	84006-14
E-950	9.5 (241.3)					84006-15
E-1000	10.0 (254.0)					84006-16
E-1050	10.5 (266.7)	9.031 (229.4)	4.516 (114.7)	.078 (2.0)	.141 (3.6)	84006-17
E-1100	11.0 (279.4)					84006-18
E-1150	11.5 (292.1)					84006-19
E-1200	12.0 (304.8)	10.547 (267.9)	5.274 (134.0)	.093 (2.4)	.156 (4.0)	84006-20
E-1250	12.5 (317.5)					84006-21
E-1300	13.0 (330.2)					84006-22
E-1350	13.5 (342.9)	12.047 (306.0)	6.024 (153.0)	.093 (2.4)	.156 (4.0)	84006-23
E-1400	14.0 (355.6)					84006-24

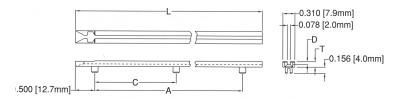
www.bivar.com

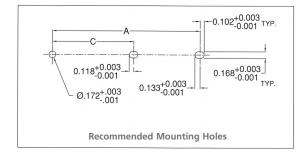
# TEMP-O-GIDE™

# Flame Retardant Card Guides for <sup>1</sup>/<sub>16</sub><sup>th</sup> PCBs

- 25 Standard Lengths from 2"- 14" in  $\frac{1}{2}$ " increments
- Precision Molded for rigidity, strength and heat resistance from flame retardant 94V-O UL rated materials
- Stainless Steel Conductive Inserts available for all lengths (see page 13)







Rigid, strong and economical, TEMP-O-GIDEs provide the design flexibility and installed reliability that your most demanding products require. Retention is firm and there are no special tools or fixtures required for installation. Locking ejectors can be used for positive PCB retention and insertion/extraction ease (see page 12-14 for details).

#### **Mounting Information:**

Snap-in metal plates: 0.047" - 0.090" (1.2mm - 2.3mm) thick Hole Size: 0.172" (4.4mm) diameter + 0.003" (0.08mm) -0.002" (0.06mm) x 0.232" (5.9mm) 1/64<sup>th</sup> drill Center - 0.220" x 0.168"+ 0.003"- 0.001" Rear - 0.235" x 0.168"+ 0.003"- 0.001"

#### Material Specifications:

UL Rated 94V-O, Rust colored, Flame Retardant 6/6 Nylon Oxygen Index: +28% UL File #E84658

#### **Application Notes:**

Slotting or elongating of the second and third mounting hole is recommended to allow for length variations and to provide for easier assembly.

Prolonged pre-assembly exposure to high humidity can cause molded Nylon components to "grow" out of tolerance. Storage in a cool dry place is recommended. Open sealed vapor barrier bags at the time of production to assure optimum shelf life.

Temp-O-Gide 2" thru 8" Lengths Temp-O-Gide 8-1/2" thru 14" Lengths										
Part No.	L ±.062 (1	.6)	A ±.032 (.81)	David	L ±.062 (	1.6)	A +.032 (.81)	C +.016 (.41)	D ±.005	T ±.007
FR-200	1.969 (50	,	.984 (25.0)	Part I	10.		047 (1.2)	032 (.81)	(.13)	(.18)"
FR-250	2.469 (62	.7)		FR-85	0 8.375 (21	12.7)				
FR-300	2.969 (75	.4)	1.484 (37.7)	FR-90	0 8.875 (22	25.4)	7.469 (189.7)	3.735 (94.9)	.078 (2.0)	.141 (3.6
FR-350	3.469 (88	.1)		FR-95	0 9.375 (23	38.1)				
FR-400	3.939 (10	0.0)		FR-10	00 9.875 (25	50.8)				
FR-450	4.438 (11	2.7)	2.969 (75.4)	FR-10	50 10.375 (26	53.5)	8.938 (227.0)	4.469 (113.5)	.078 (2.0)	.141 (3.6
FR-500	4.938 (12	5.4)	2.505 (75.4)	FR-11	00 10.875 (27	76.2)				
FR-550	5.438 (13	8.1)		FR-11	50 11.344 (28	38.1)				
FR-600	5.906 (15	0.0)	4.953 (125.8)	FR-12	00 11.844 (30	(8.00	10.406 (264.3)	5.203 (132.2)	.093 (2.4)	.156 (4.0
FR-650	6.406 (16	2.7)	4.555 (125.6)	FR-12						
FR-700	6.875 (17	4.6)		FR-13						
FR-750	7.375 (18	7.3)	5.969 (151.6)	FR-13			11.906 (302.4)	5.953 (151.2)	.093 (2.4)	.156 (4.0
FR-800	7.875 (20	0.0)		FR-14					(2.1)	

# COMP-O-GIDE™

# Industry Standard Snap-in Card Guides for <sup>1</sup>/<sub>16</sub><sup>th</sup> PCBs

- 52 Configurations to meet most standard requirements
- Precision Molded for rigidity, strength and heat resistance from 94V-2 UL rated materials
- Stainless Steel Conductive Inserts available for all sizes (see page 13)
- Two channel depths and two channel widths available to accommodate  $\frac{1}{6}$ <sup>th</sup>,  $\frac{3}{2}$ <sup>nd</sup> PCBs
- Common industry standards interchange with competitive devices

COMP-O-GIDE, was introduced to provide second sources for previously single source card guides. The series has expanded to offer wider selection and application specific function. Rigid, strong and economical, COMP-O-GIDEs provide the installed reliability that your most demanding products require. Retention is firm and there are no special tools or fixtures required for installation.

#### **Mounting Information:**

Snap-in metal plates: 0.047"- 0.090" (1.2mm - 2.3mm) thick Hole Size: 0.180" (4.6mm) diameter + 0.003" (0.08mm), - 0.001" (0.03mm) 3/16th drill Rear - 0.225" x 0.176" + 0.003" - 0.001"

#### **Material Specifications:**

UL Rated 94V-2, natural, 6/6 Nylon per ASTM D4066 PA111 Oxygen Index: +28% UL File #E135532

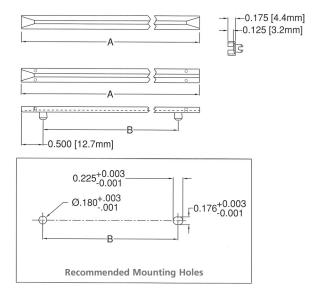
#### **Application Notes:**

Slotting or elongating of the second mounting hole is recommended to allow for length variations and to provide for easier assembly.

Prolonged pre-assembly exposure to high humidity can cause molded Nylon components to "grow" out of tolerance. Storage in a cool dry place is recommended. Open sealed vapor barrier bags at the time of production to assure optimum shelf life.

<b>DC Series</b> r <sup>1</sup> /16 <sup>th</sup> PCBs, 2-1/2" thru 8" Lengths						
A ±.031(.79)	B ±.016 (.41)					
2.5 (63.5)	1.5 (38.1)					
3.0 (76.2)	2.0 (50.8)					
3.5 (88.9)	2.5 (63.5)					
4.0 (101.6)	3.0 (76.2)					
4.5 (114.3)	3.5 (88.9)					
5.0 (127.0)	4.0 (101.6)					
5.5 (139.7)	4.5 (114.3)					
6.0 (152.4)	5.0 (127.0)					
6.5 (165.1)	5.5 (139.7)					
7.0 (177.8)	6.0 (152.4)					
7.5 (190.5)	6.5 (165.1)					
8.0 (203.2)	7.0 (177.8)					
	A   ±.031(.79)   2.5 (63.5)   3.0 (76.2)   3.5 (88.9)   4.0 (101.6)   4.5 (114.3)   5.0 (127.0)   5.5 (139.7)   6.0 (152.4)   6.5 (165.1)   7.0 (177.8)   7.5 (190.5)					



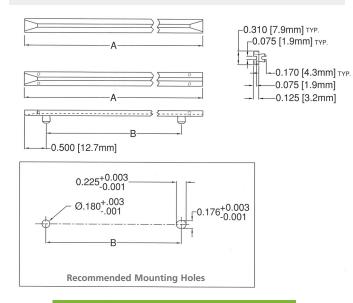


## COMP-O-GIDE™

# Industry Standard Snap-in Card Guides for <sup>1</sup>/<sub>16</sub><sup>th</sup> and <sup>3</sup>/<sub>32</sub><sup>nd</sup> PCBs

- 52 Configurations to meet most standard requirements
- Precision Molded for rigidity, strength and heat resistance from 94V-2 UL rated materials
- Stainless Steel Conductive Inserts available for all sizes (see page 13)
- Two channel depths and two channel widths available to accommodate  $\frac{1}{16}$ <sup>th</sup>,  $\frac{3}{22}$ <sup>nd</sup> PCBs
- Common industry standards interchange with competitive devices





#### **SSD Series** For <sup>1</sup>/16<sup>th</sup> and <sup>3</sup>/32<sup>th</sup>, 2-1/2" thru 8" Le

Part No.	A ±.031(.79)	B ±.016(.41)	SW* 102 (2.6)
SSD-250	2.5 (63.5)	1.5 (38.1)	0.102 (2.6)
SSD-300	3.0 (76.2)	2.0 (50.8)	0.102 (2.6)
SSD-350	3.5 (88.9)	2.5 (63.5)	0.102 (2.6)
SSD-400	4.0 (101.6)	3.0 (76.2)	0.102 (2.6)
SSD-450 3X	4.5 (114.3)	3.0 (76.2)	0.102 (2.6)
SSD-450	4.5 (114.3)	3.5 (88.9)	0.102 (2.6)
SSD-500	5.0 (127.0)	4.0 (101.6)	0.102 (2.6)
SSD-550	5.5 (139.7)	4.5 (114.3)	0.102 (2.6)
SSD-600	6.0 (152.4)	5.0 (127.0)	0.102 (2.6)
SSD-650	6.5 (165.1)	5.5 (139.7)	0.102 (2.6)
SSD-700	7.0 (177.8)	6.0 (152.4)	0.102 (2.6)
SSD-750	7.5 (190.5)	6.5 (165.1)	0.102 (2.6)
SSD-800	8.0 (203.2)	7.0 (177.8)	0.102 (2.6)

#### Notes:

Standard slot width is .075 (1.9) for <sup>1</sup>/16<sup>th</sup> PCBs

\* For slot width of .102 (2.6) for <sup>3</sup>/<sub>32</sub><sup>nd</sup> PCBs, add -102 suffix to part number.

COMP-O-GIDE, was introduced to provide second sources for previously single source card guides. The series has expanded to offer wider selection and application specific function. Rigid, strong and economical, COMP-O-GIDEs provide the installed reliability that your most demanding products require. Retention is firm and there are no special tools or fixtures required for installation.

#### **Mounting Information:**

Snap-in metal plates: 0.047" - 0.090" (1.2mm - 2.3mm) thick Hole Size: 0.180" (4.6mm) diameter + 0.003" (0.08mm), - 0.001" (0.03mm) 3/16th drill Rear - 0.225" x 0.176" + 0.003" - 0.001"

#### **Material Specifications:**

UL Rated 94V-2, natural, 6/6 Nylon per ASTM D4066 PA111 Oxygen Index: +28% UL File #E135532

#### **Application Notes:**

Slotting or elongating of the second mounting hole is recommended to allow for length variations and to provide for easier assembly.

Prolonged pre-assembly exposure to high humidity can cause molded Nylon components to "grow" out of tolerance. Storage in a cool dry place is recommended. Open sealed vapor barrier bags at the time of production to assure optimum shelf life.

# HORIZONTAL CARD GUIDES Snap-in Card Guides for Horizontally Mounting <sup>1</sup>/<sub>16</sub><sup>th</sup> PCBs

- 18 Standard parts with single and double channel configurations
- Tapered entry ramps for PCB insertion ease
- Fixed center line of 0.165" (4.2mm) (other centerlines available subject to minimum orders)

Horizontal Card Guides, introduced to meet the growing requirements for secondary daughter cards and parallel mounting of peripheral devices, provide an innovative mounting method for a variety of applications. Rigid, strong and economical, Horizontal Card Guides provide the design flexibility and installed reliability that your most demanding products require. Retention is firm and there are no special tools or fixtures required for installation.

#### **Mounting Information:**

Snap-in metal plates: 0.047 " - 0.090" (1.2mm - 2.3mm) thick Hole Size: 0.172" (4.4mm) diameter + 0.003" (0.08mm) -0.001" (0.03mm) 11/64<sup>th</sup> drill Rear - 0.212" x 0.172" + 0.003" - 0.001"

#### **Material Specifications:**

UL Rated 94V-0, Black, 6/6 Nylon per ASTM D4066 PA111 Oxygen Index: +28% UL File #E84658

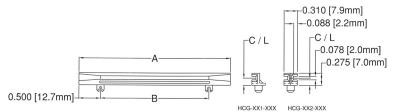
#### **Application Notes:**

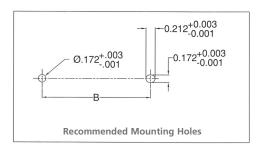
Prolonged pre-assembly exposure to high humidity can cause molded Nylon components to "grow" out of tolerance. Storage in a cool dry place is recommended. Open sealed vapor barrier bags at the time of production to assure optimum shelf life.

Custom centerlines are available subject to minimum orders. Contact Bivar at 1-800-SPACERS for additional information.

Slotting of the rear mounting hole is not recommended for this series







# HCG Series Double Sided Card Guides

Part No.	A ±.016 (.40)	B ±.016 (.40)	C/L ±.005 (.127)
HCG-202-165	2.0 (50.8)	1.0 (25.4)	.165 (4.2)
HCG-252-165	2.5 (63.5)	1.5 (38.1)	.165 (4.2)
HCG-302-165	3.0 (76.2)	2.0 (50.8)	.165 (4.2)
HCG-352-165	3.5 (88.9)	2.5 (63.5)	.165 (4.2)
HCG-402-165	4.0 (101.6)	3.0 (76.2)	.165 (4.2)
HCG-452-165	4.5 (114.3)	3.5 (88.9)	.165 (4.2)
HCG-502-165	5.0 (127.0)	4.0 (101.6)	.165 (4.2)
HCG-552-165	5.5 (139.7)	4.5 (114.3)	.165 (4.2)
HCG-602-165	6.0 (152.4)	5.0 (127.0)	.165 (4.2)

# HCG Series Single Sided Card Guides

Part No.	A ±.016 (.40)	B ±.016 (.40)	C/L ±.005 (.127)
HCG-201-165	2.0 (50.8)	1.0 (25.4)	.165 (4.2)
HCG-251-165	2.5 (63.5)	1.5 (38.1)	.165 (4.2)
HCG-301-165	3.0 (76.2)	2.0 (50.8)	.165 (4.2)
HCG-351-165	3.5 (88.9)	2.5 (63.5)	.165 (4.2)
HCG-401-165	4.0 (101.6)	3.0 (76.2)	.165 (4.2)
HCG-451-165	4.5 (114.3)	3.5 (88.9)	.165 (4.2)
HCG-501-165	5.0 (127.0)	4.0 (101.6)	.165 (4.2)
HCG-551-165	5.5 (139.7)	4.5 (114.3)	.165 (4.2)
HCG-601-165	6.0 (152.4)	5.0 (127.0)	.165 (4.2)

# VERT-D-GIDE™

# Vertical Guides for 1/16<sup>th</sup>, 3/32<sup>nd</sup> and 1/8<sup>th</sup> PCBs

- Two styles with 31 variations that mount with industry standard fasteners
- Can eliminate the need for card cages
- Allows for vertical installations of PCBs in limitless widths
- Compatible with 1/16<sup>th</sup> PCBs



#### Vert-O-Gide VG 2 Series 2" thru 6" Lengths

Dash No.	А	В	SW 1/16"PCB
VG2-2	2.0 (50.8)	1.5 (38.1)	.076 (1.9)
VG2-25	2.5 (63.5)	1.5 (38.1)	.076 (1.9)
VG2-3	3.0 (76.2)	2.0 (50.8)	.076 (1.9)
VG2-35	3.5 (88.9)	2.0 (50.8)	.076 (1.9)
VG2-4	4.0 (101.6)	2.0 (50.8)	.076 (1.9)
VG2-45	4.5 (114.3)	2.0 (50.8)	.076 (1.9)
VG2-5	5.0 (127.0)	2.0 (50.8)	.076 (1.9)
VG2-55	5.5 (139.7)	2.0 (50.8)	.076 (1.9)
VG2-6	6.0 (152.4)	2.0 (50.8)	.076 (1.9)

\*For slot widths other than .076" (1.9), add-xxx e.g. VG2-4-134 is a VG2-4 guide with a slot width of .134" (3.4) VERT-O-GIDEs<sup>™</sup> provide the design flexibility and allow the ganging or tandem mounting of multiple PCBs. Retention is firm and there are no special tools or fixtures required for installation.

#### **Mounting Information:**

Standard #6 fasteners 0.146 [3.7mm] (#27 drill) hole for locating pin / anti-rotation hole

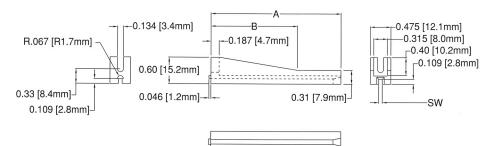
#### Material Specifications:

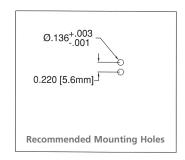
UL Rated 94V-0, Black, 10% Glass Filled 6 Nylon per ASTM D4066 PA210G10 Oxygen Index: +28% UL File #E84658

#### **Application Notes:**

Prolonged pre-assembly exposure to high humidity can cause molded Nylon components to "grow" out of tolerance. Storage in a cool dry place is recommended.

Tops of guides converge slightly to grip boards.





# VERT-D-GIDE™

# Dual Channel Vertical Guides for <sup>1</sup>/16<sup>th</sup> PCBs

- Two styles with 31 variations that mount with industry standard fasteners
- Can eliminate the need for card cages
- Allows for vertical installations of PCBs in limitless widths
- Compatible with <sup>1</sup>/<sub>16</sub><sup>th</sup> PCBs

#### **Mounting Information:**

Standard #6 fasteners 0.146 [3.7mm] (#27 drill) hole for locating pin / anti-rotation hole

#### **Material Specifications:**

UL Rated 94V-0, Black, 10% Glass Filled 6 Nylon per ASTM D4066 PA210G10 Oxygen Index: +28% UL File #E84658

#### **Application Notes:**

Prolonged pre-assembly exposure to high humidity can cause molded Nylon components to "grow" out of tolerance. Storage in a cool dry place is recommended.

Tops of guides converge slightly to grip boards.



#### Vert-O-Gide VG 3 Series -0.375 [9.5mm] -2.00 [50.8mm]--0.109 [2.8mm] 0.437 [11.1mm]--0.109 [2.8mm] 0.125 [3.2mm]--0.280 [7.1mm] Dash No. А 0.188 [4.8mm]-0.187 [4.7mm]-\_0.072 [1.8mm] VG3-3 3.0 (76.2) \_0.615 [15.6mm] Ø.134 [Ø3.4mm] 0.146 [3.7mm] VG3-35 3.5 (88.9) 4.0 (101.6) VG3-4 VG3-45 4.5 (114.3) 0.377 [9.6mm]┘ 0.062 [1.6mm]-VG3-5 5.0 (127.0) 0.136 [3.5mm] VG3-55 5.5 (139.7) 0.067 [1.7mm] 6.0 (152.4) VG3-6 Ø.147<sup>+.003</sup>-.001 -0.310 [7.9mm]

Ø.136<sup>+.003</sup>-.001

**Recommended Mounting Holes**