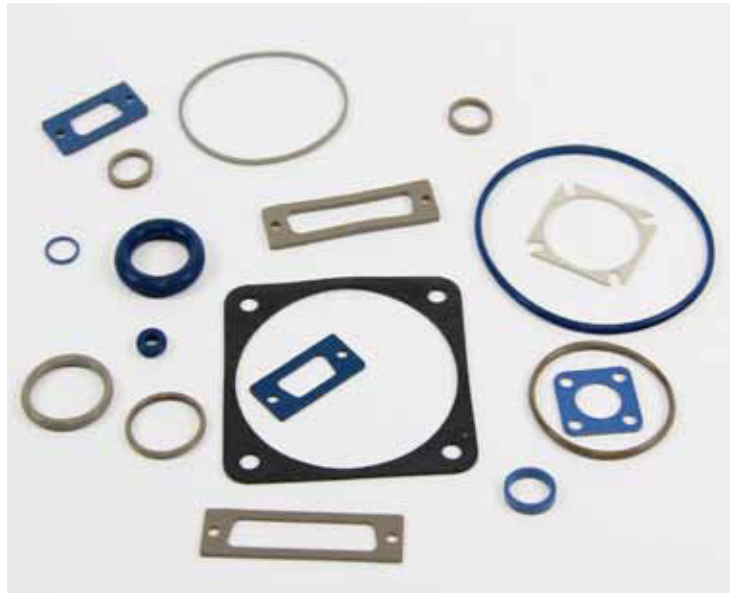


# Conductive Elastomer Connector Gaskets

Parker Chomerics provides several types of connector gaskets, such as mounting flange connectors, interfacial seals, jam nut seals, flat washers, D-subminiature rectangular connectors, O-Rings and D-Rings. All of these connector gasket are available in most of our CHO-SEAL conductive elastomer material types. For applications to continuous high temperature exposure, e.g., 160° C, CHO-SEAL 1224, 1298, or 1285 are recommended. For those applications where exposure to fluids is a concern, fluorosilicone materials are recommended.



The most common connector seal materials are:

CHO-SEAL 1224, silver filled silicone

CHO-SEAL 1215, silver-plated copper filled silicone

CHO-SEAL 1285, silver-plated aluminum filled silicone

CHO-SEAL 6502, nickel-plated aluminum filled silicone

CHO-SEAL 1298, silver-plated aluminum filled fluorosilicone

CHO-SEAL 6503, nickel-plated aluminum filled fluorosilicone

CHO-SEAL L6303, nickel-plated graphite filled fluorosilicone

## Contact Information:

Parker Hannifin Corporation  
**Chomerics Division**  
77 Dragon Court  
Woburn, MA 01801

phone 781 935 4850

fax 781 933 4318

chomailbox@parker.com

[www.chomerics.com](http://www.chomerics.com)

[www.parker.com/chomerics](http://www.parker.com/chomerics)

## Connector Gasket - Product Information

Chomerics also offers connector gaskets manufactured from other non-weather sealing (foam based) materials. Consult Chomerics Applications Engineering Department with any questions.

For applications where galvanic corrosion issues against aluminum are a concern, the above materials are offered in “octane levels” of protections from the low to the superior. See Table 1.

Table 1

CONNECTOR GASKET MATERIAL RECOMMENDATIONS							
Product	CHO-SEAL® 1298	CHO-SEAL® 6502	CHO-SEAL® 6503	CHO-SEAL® 1285	CHO-SEAL® L6303	CHO-SEAL® 1215	CHO-SEAL® 1224
Conductive Filler	Ag/Al	Ni/Al	Ni/Al	Ag/Al	Ni/C	Ag/Cu	Ag
Elastomer Binder	Fluorosilicone	Silicone	Fluorosilicone	Silicone	Fluorosilicone	Silicone	Silicone
Octane Level Protection Corrosion vs Aluminum	Superior	Best	Best	Good	Moderate	Low	Low
Max Use Temp °C	200	125	125	200	150	125	200

Refer to Chomerics Conductive Elastomer EMI Gaskets Molded and Extruded Materials Selector Guide for details.

[www.chomerics.com](http://www.chomerics.com)  
[www.parker.com/chomerics](http://www.parker.com/chomerics)

CHOMERICS is a registered trademark of Parker Hannifin Corporation. © 2010

TB 1070 EN April 2012



ENGINEERING YOUR SUCCESS.

# Conductive Elastomer D-Subminiature EMI Gaskets

## D-SUBMINIATURE RECTANGULAR GASKETS

Subminiature-D style gaskets are used to provide EMI shielding and environmental sealing between connector flanges and their mating surfaces. Parker Chomerics offers these gaskets in a complement of shell sizes from 9 to 50 pin and in a range of CHO-SEAL materials. Table 1 includes dimensions and tolerances.

### Contact Information:

Parker Hannifin Corporation  
**Chomerics Division**  
77 Dragon Court  
Woburn, MA 01801

phone 781 935 4850  
fax 781 933 4318  
chomailbox@parker.com

www.chomerics.com  
www.parker.com/chomerics



### ORDERING PROCEDURE

Table 1 provides general tolerances for D-Subminiature EMI seals. Select the part number from Table 1.

# D-Subminiature EMI Seals - Product Information

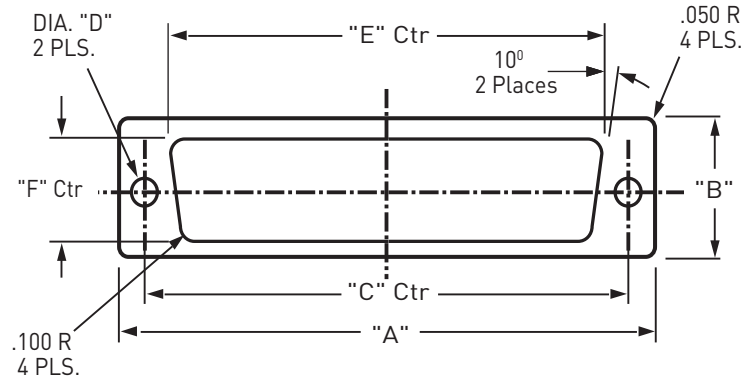


Table 1: D-Subminiature Gaskets

D-SUBMINIATURE GASKETS					
Dimension Tolerances inches (mm)	Shell Size inches (mm)				
	9 PIN	15 PIN	25 PIN	37 PIN	50 PIN
"A" Overall Length $\pm 0.015$ (0.38)	1.213 (30.81)	1.556 (39.52)	2.087 (53.01)	2.729 (69.32)	2.635 (66.93)
"B" Overall Width $\pm 0.015$ (0.38)	0.594 (15.09)	0.600 (15.24)	0.594 (15.09)	0.594 (15.09)	0.605 (15.37)
"C" Hole to Hole $\pm 0.010$ (0.25)	0.984 (25.0)	1.312 (33.32)	1.852 (47.04)	2.500 (63.50)	2.406 (61.11)
"D" Hole Diameter $\pm 0.010$ (0.25)	0.120 (3.05)	0.130 (3.30)	0.120 (3.05)	0.120 (3.05)	0.120 (3.05)
"E" Major Cutout Length $\pm 0.015$ (0.38)	0.697 (17.70)	1.080 (27.43)	1.583 (40.21)	2.231 (56.67)	2.109 (53.57)
"F" Cutout Width $\pm 0.010$ (0.25)	0.360 (9.14)	0.370 (9.40)	0.378 (9.60)	0.378 (9.60)	0.466 (11.84)
Cutout Angle Typical	10°	10°	10°	10°	10°
Chomerics Part Number*	30-TT-A779-XXXX	30-TT-A959-XXXX	30-TT-A780-XXXX	30-TT-A781-XXXX	30-TT-LF19-XXXX

\* Replace "TT" with "01" [0.032  $\pm$  0.005 in. (0.81  $\pm$  0.127 mm) thick]; or "06" [0.062  $\pm$  0.007 in. (1.57  $\pm$  0.178 mm) thick].  
 -XXXX designates material (1215, 1285, etc). Refer to Chomerics Conductive Elastomer EMI Gaskets Molded and Extruded Materials Selector Guide for details.

[www.chomerics.com](http://www.chomerics.com)  
[www.parker.com/chomerics](http://www.parker.com/chomerics)

CHOMERICS is a registered trademark of Parker Hannifin Corporation. © 2010

TB 1074 EN April 2012



ENGINEERING YOUR SUCCESS.

# Conductive Elastomer Flat Washers

## FLAT WASHER GASKETS

CHO-SEAL flat washers are available in hundreds of different sizes. ID's and OD's are available in increments of .016 in. (0.41 mm). Some of the more common sizes are listed in Table 1. For more information, contact Parker Chomerics Applications Engineering.

**Note:** The  $(OD - ID)/2$  of a flat washer cannot be less than the thickness of the material. Standard minimum wall thickness is 0.080".

## Contact Information:

Parker Hannifin Corporation  
**Chomerics Division**  
77 Dragon Court  
Woburn, MA 01801

phone 781 935 4850  
fax 781 933 4318  
chomailbox@parker.com

www.chomerics.com  
www.parker.com/chomerics



## ORDERING PROCEDURE

Select the part number from Table 1. The last four digits designate the material. Consult Parker Chomerics on other available sizes.

## Flat Washer Gasket - Product Information

For applications requiring a custom part, submit a drawing similar to the figure shown, indicating dimensions ID, OD and T. Part number for custom parts will be assigned by Parker Chomerics.

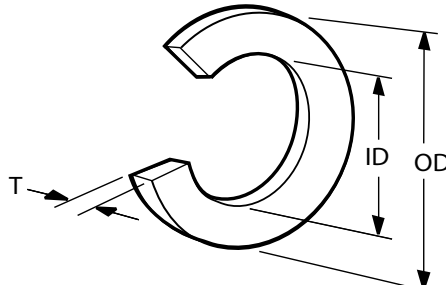


Table 1

FLAT WASHERS				
Nominal Diameters inches (mm)		Thickness T inches (mm)	Chomerics P/N*	MIL P/N: M83528/ 012X <sup>†</sup> -( )
ID ±0.015 (0.38)	OD ±0.015 (0.38)			
0.250 (6.35)	0.625 (15.86)	0.032 (0.81) 0.062 (1.57)	10-02-1859-XXXXX 10-03-1859-XXXXX	001 002
0.375 (9.53)	0.750 (19.05)	0.032 (0.81) 0.062 (1.57)	10-02-1492-XXXXX 10-03-1492-XXXXX	003 004
0.500 (12.70)	0.656 (16.66)	0.032 (0.81) 0.062 (1.57)	10-02-1388-XXXXX 10-03-1388-XXXXX	005 006
0.500 (12.70)	0.875 (22.23)	0.032 (0.81) 0.062 (1.57)	10-02-1494-XXXXX 10-03-1494-XXXXX	007 008
0.750 (19.05)	1.000 (25.40)	0.032 (0.81) 0.062 (1.57)	10-02-2736-XXXXX 10-03-2736-XXXXX	009 010
1.000 (25.40)	1.438 (36.53)	0.032 (0.81) 0.062 (1.57)	10-02-1493-XXXXX 10-03-1493-XXXXX	011 012

<sup>†</sup> "X" should be replaced by applicable MIL-DTL-83528 material type (e.g., A, B, C, etc.). Number in parentheses is MIL-DTL-83528 dash number. Insert it (without parentheses) to complete MIL P/N.

\* -XXXXX designates material (1215, 1285, etc). Refer to Chomerics Conductive Elastomer EMI Gaskets Molded and Extruded Materials Selector Guide for details.

[www.chomerics.com](http://www.chomerics.com)  
[www.parker.com/chomerics](http://www.parker.com/chomerics)

CHOMERICS is a registered trademark of Parker Hannifin Corporation. © 2010

TB 1068 EN April 2012



ENGINEERING YOUR SUCCESS.

# Conductive Elastomer Interfacial EMI Seals

## INTERFACIAL EMI SEALS

The main mating joint of environment-resistant MS connectors is normally provided with a rubber packing ring (MIL-C-26482) or washer (MIL-C-5015) to seal moisture from the pin area. CHO-SEAL gaskets are interchangeable with these packing/washers and provide EMI shielding in addition to sealing.



## Contact Information:

Parker Hannifin Corporation  
**Chomerics Division**  
77 Dragon Court  
Woburn, MA 01801

phone 781 935 4850  
fax 781 933 4318  
chomailbox@parker.com

[www.chomerics.com](http://www.chomerics.com)  
[www.parker.com/chomerics](http://www.parker.com/chomerics)

## ORDERING PROCEDURE

Select the part number from Table 1. Table 2 provides general tolerances for interfacial EMI seals.

# Interfacial EMI Seals - Product Information

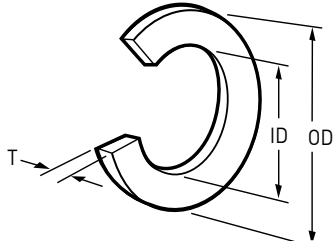


Table 2: Interfacial EMI Seals Tolerances

DIMENSIONS inches (mm)	TOLERANCES inches (mm)
ID, OD	
≤0.500 (12.70)	±0.005 (0.13)
0.501-1.500 (12.70-38.10)	±0.010 (0.25)
1.501-2.000 (38.10-50.80)	±0.015 (0.38)
Thickness (T)	
0.032 (0.81)	±0.005 (0.13)
0.045 (1.14)	±0.006 (0.15)
0.075 (1.91)	±0.007 (0.18)

Table 1: Interfacial EMI Seals

INTERFACIAL EMI SEALS					
Shell Size	Part Number*		Nominal Dimensions inches (mm)		
	MIL-C-26482	MIL-C-5015	ID	OD	T
8	30-02-2041-XXXXX		0.319 (8.10)	0.422 (11.23)	0.075 (1.91)
		30-02-2050-XXXXX	0.328 (8.33)	0.391 (9.93)	0.032 (0.81)
10	30-02-2042-XXXXX		0.447 (11.35)	0.550 (13.97)	0.075 (1.91)
10S SL		30-02-2051-XXXXX	0.406 (10.31)	0.469 (11.91)	0.032 (0.81)
12	30-02-2043-XXXXX		0.547 (13.89)	0.703 (17.86)	0.075 (1.91)
14	30-02-2044-XXXXX		0.671 (17.04)	0.828 (21.03)	0.075 (1.91)
14 14S		30-02-2053-XXXXX	0.641 (16.28)	0.703 (17.86)	0.032 (0.81)
16	30-02-2045-XXXXX		0.797 (20.24)	0.953 (24.21)	0.075 (1.91)
16 16S		30-02-2054-XXXXX	0.781 (19.84)	0.844 (21.44)	0.032 (0.81)
18	30-02-2046-XXXXX		0.891 (22.63)	1.047 (2.59)	0.075 (1.91)
		30-02-2055-XXXXX	0.891 (22.63)	0.953 (24.21)	0.032 (0.81)
20	30-02-2047-XXXXX		1.039 (26.39)	1.172 (29.77)	0.075 (1.91)
		30-02-2056-XXXXX	0.984 (24.99)	1.047 (26.59)	0.032 (0.81)
22	30-02-2048-XXXXX		1.141 (28.98)	1.297 (32.94)	0.075 (1.91)
		30-02-2057-XXXXX	1.109 (28.17)	1.172 (29.77)	0.032 (0.81)
24	30-02-2049-XXXXX		1.266 (32.16)	1.422 (36.12)	0.075 (1.91)
		30-02-2058-XXXXX	1.219 (30.96)	1.281 (32.54)	0.032 (0.81)
28		30-02-2059-XXXXX	1.455 (36.96)	1.547 (39.29)	0.045 (1.14)
32		30-02-2060-XXXXX	1.672 (42.47)	1.766 (44.86)	0.045 (1.14)
36		30-02-2061-XXXXX	1.891 (48.03)	1.984 (50.39)	0.045 (1.14)

\* -XXXXX designates material (1215, 1285, etc). Refer to Chomerics Conductive Elastomer EMI Gaskets Molded and Extruded Materials Selector Guide for details.

[www.chomerics.com](http://www.chomerics.com)  
[www.parker.com/chomerics](http://www.parker.com/chomerics)

CHOMERICS is a registered trademark of Parker Hannifin Corporation. © 2010

TB 1072 EN April 2012



ENGINEERING YOUR SUCCESS.



# Conductive Elastomer Jam Nut EMI Seals

## JAM NUT EMI Seals

MIL-C-38999, MIL-C-26482, and MIL-C-81511 rear-mounting jam nut receptacles require a Mil Spec (MS) O-ring as a moisture-pressure seal. When EMI attenuation is also required, CHO-SEAL O-rings should be used. Each is interchangeable with the corresponding MS O-ring.

## Contact Information:

Parker Hannifin Corporation  
**Chomerics Division**  
77 Dragon Court  
Woburn, MA 01801

**phone 781 935 4850**  
**fax 781 933 4318**  
**chomailbox@parker.com**

[www.chomerics.com](http://www.chomerics.com)  
[www.parker.com/chomerics](http://www.parker.com/chomerics)



## ORDERING PROCEDURE

Select the part number from Table 1. Table 2 provides general tolerances for jam nut EMI seals.

# Jam Nut EMI Seals - Product Information

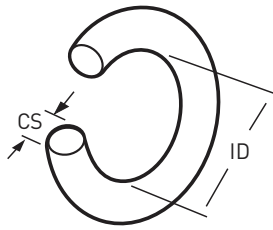


Table 2: Jam Nut EMI Seals Tolerances

DIMENSIONS inches (mm)	TOLERANCES inches (mm)
Inside Diameter (ID)	
≤1.500 [38.10]	±0.010 [0.25]
1.501-2.000 [38.10-50.80]	±0.015 [0.38]
Cross Section Diameter (CS)	
0.070 [1.78]	±0.004 [0.10]
0.103 [2.62]	±0.005 [0.13]

Table 1: Jam Nut EMI Seals

JAM NUT EMI SEALS						
Shell Size	Chomerics P/N*	MIL-C-38999JS1N1 MIL-C-26482GS1A5	Reference MIL-C-81511FS1	MIL P/N: M83528/002X <sup>†</sup> - ( )	Nominal Dimensions inches (mm)	
					ID	CS
6	30-03-2065-XXXXX	√		015	0.551 [14.00]	0.070 [1.78]
8	30-03-2066-XXXXX	√		017	0.676 [17.17]	0.070 [1.78]
	30-03-2075-XXXXX		√	018	0.739 [18.77]	0.070 [1.78]
9, 10	30-03-1981-XXXXX	√		019	0.801 [20.35]	0.070 [1.78]
	30-03-2076-XXXXX		√	020	0.864 [21.95]	0.070 [1.78]
11, 12	30-03-2068-XXXXX	√		022	0.989 [25.12]	0.070 [1.78]
13, 14	30-03-2069-XXXXX	√	√	024	1.114 [28.30]	0.070 [1.78]
15, 16	30-03-2070-XXXXX	√	√	026	1.239 [31.47]	0.070 [1.78]
17, 18	30-03-2071-XXXXX	√	√	028	1.364 [34.65]	0.070 [1.78]
19, 20	30-03-2072-XXXXX	√		128	1.487 [37.77]	0.103 [2.62]
21, 22	30-03-1846-XXXXX	√		/005X <sup>†</sup> -022	1.612 [40.94]	0.103 [2.62]
23, 24	30-03-2031-XXXXX	√		132	1.737 [44.12]	0.103 [2.62]
25	30-03-8800-XXXXX			134	1.862 [47.30]	0.103 [2.62]

Note: Slight size variations exist between several series within a given MIL-SPEC. It is recommended that gasket(s) be selected on the basis of gasket dimensions which match groove dimensions.

\* -XXXXX designates material (1215, 1285, etc). Refer to Chomerics Conductive Elastomer EMI Gaskets Molded and Extruded Materials Selector Guide for details. Note that these parts are available only in Cho-Seal materials with the "M" (Molded) format.

<sup>†</sup>"X" should be replaced by applicable MIL-DTL-83528 material type (e.g. A, B, C, etc.). MIL-DTL-83528 dash number should be inserted (without parentheses) at end of MIL P/N.

[www.chomerics.com](http://www.chomerics.com)  
[www.parker.com/chomerics](http://www.parker.com/chomerics)

CHOMERICS is a registered trademark of Parker Hannifin Corporation. © 2010

TB 1073 EN April 2012



ENGINEERING YOUR SUCCESS.

# Mounting Flange EMI Gaskets

## MOUNTING FLANGE EMI GASKETS

Parker Chomerics die-cut CHO-SEAL gaskets provide EMI shielding and environmental sealing when inserted between a connector flange and a mounting bulkhead. The gaskets described in this section are designed for use with MIL-C-83723, MIL-C-5015, MIL-C-26482, MIL-C-38999 and MIL-C-81511 connectors. They are interchangeable with non-conductive gaskets.

In addition to standard sizes and configurations listed in Table 1, connector gaskets and ground planes can be custom designed.



### Contact Information:

Parker Hannifin Corporation  
**Chomerics Division**  
77 Dragon Court  
Woburn, MA 01801

phone 781 935 4850  
fax 781 933 4318  
chomailbox@parker.com

[www.parker.com/chomerics](http://www.parker.com/chomerics)  
[www.chomerics.com](http://www.chomerics.com)

### ORDERING PROCEDURE

Standard Sizes: Using Table 1, construct the appropriate part number as illustrated below. For Custom Gaskets: Drawings must be supplied. Part numbers will be assigned by Parker Chomerics.

# Mounting Flange Gasket - Product Information

## ORDERING PROCEDURE

Standard Sizes: Using Table 1, construct the appropriate part number as illustrated below. For Custom Gaskets: Drawings must be supplied. Part numbers will be assigned by Parker Chomerics.

30 - 01 - ZZZZ - XXXXX

Configuration Drawing Number (from Table 1 below)

CHO-SEAL Material

MIL-C-38999 Series III and MIL-C-28840

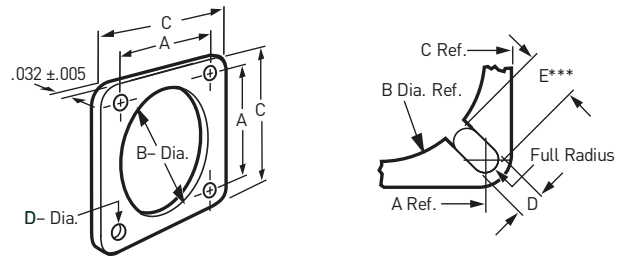


Table 1: Mounting Flange EMI Gaskets

Shell Size	Configuration Drawing No. ZZZZ							Dimensions inches (mm)						
	Letter	MIL-C-38999 Series				MIL-C-81511 Series	MIL-C-28840 Series	MIL-C-5015 C-83723 NAS-1599 MIL-C-26482	MIL P/N: M83528/004X-{}	A	B	C	D	E***
		I	II	III	IV				±0.010 (0.25)	+0.020 (0.51) -0.000	±0.015 (0.38)	±0.010 (0.25)	±0.010 (0.25)	
6								1946*	001	0.469 (11.91)	0.375 (9.53)	0.738 (18.75)	0.141 (3.58)	
8		1947	√						001	0.594 (15.09)	0.630 (16.00)	0.840 (21.34)	0.135 (3.43)	
						4690			003	0.594 (15.09)	0.568 (14.43)	0.812 (20.62)	0.125 (3.18)	
9		1949	√					1948	004	0.594 (15.09)	0.500 (12.70)	0.875 (22.23)	0.156 (3.96)	
	A	C646			√				NA	0.719 (18.26)	0.750 (19.05)	0.965 (24.51)	0.135 (3.43)	0.222 (5.64)
10		1949	√						005	0.719 (18.26)	0.750 (19.05)	0.965 (24.51)	0.135 (3.43)	
						4691			006	0.719 (18.26)	0.680 (17.27)	0.937 (23.80)	0.125 (3.18)	
	(S/SL)							1950	007	0.719 (18.26)	0.625 (15.88)	1.000 (25.40)	0.156 (3.96)	
11		6961	√			√			008	0.812 (20.62)	0.875 (22.23)	1.060 (26.92)	0.141 (3.58)	
	B	C647			√				NA	0.812 (20.62)	0.875 (22.23)	1.060 (26.92)	0.141 (3.58)	0.206 (5.23)
	A						C637		NA	0.750 (19.05)	0.875 (22.23)	1.046 (26.57)	0.141 (3.58)	0.163 (4.14)
12		6961	√						008	0.812 (20.62)	0.875 (22.23)	1.060 (26.92)	0.141 (3.58)	
	(S/SL)							1951	009	0.813 (20.65)	0.750 (19.05)	1.094 (27.79)	0.156 (3.96)	
13		1953	√			√			010	0.906 (23.01)	1.005 (25.53)	1.153 (29.29)	0.135 (3.43)	
	C	C648			√				NA	0.906 (23.01)	1.000 (25.40)	1.156 (29.36)	0.141 (3.58)	0.206 (5.23)
	B						C638		NA	0.843 (21.41)	1.000 (25.40)	1.156 (29.36)	0.141 (3.58)	0.167 (4.24)
14		1953	√						010	0.906 (23.01)	1.005 (25.53)	1.153 (29.29)	0.135 (3.43)	
						4692			011	0.906 (23.01)	0.938 (23.83)	1.125 (28.58)	0.125 (3.18)	
	(S)							1952	012	0.906 (23.01)	0.875 (22.23)	1.188 (30.18)	0.156 (3.96)	
15		1955	√			√			013	0.969 (24.61)	1.135 (28.83)	1.258 (31.95)	0.156 (3.96)	
	D	C649			√				NA	0.969 (24.61)	1.135 (28.83)	1.258 (31.95)	0.156 (3.96)	0.206 (5.23)
	C						C639		NA	0.968 (24.59)	1.187 (30.15)	1.281 (32.54)	0.141 (3.58)	0.161 (4.09)

√ Available in series designated.

\* Shell size 6 not specified in MIL-C-5015

\*\* Shell size 28-48 specified in MIL-C-5015.

\*\*\* For dimension E, hole is slotted through to B diameter.

\*"X" should be replaced by applicable MIL-DTL-83528 material type (e.g. A, B, C, etc.).

MIL-DTL-83528 dash number should be inserted (without parentheses) at end of MIL P/N.

Note: Refer to Chomerics Conductive Elastomer EMI Gaskets Molded and Extruded Materials Selector Guide for details.

# Mounting Flange Gasket - Product Information

## ORDERING PROCEDURE

Standard Sizes: Using Table 1, construct the appropriate part number as illustrated below. For Custom Gaskets: Drawings must be supplied. Part numbers will be assigned by Parker Chomerics.

30 - 01 - ZZZZ - XXXXX

Configuration Drawing Number (from Table 1 below)

CHO-SEAL Material

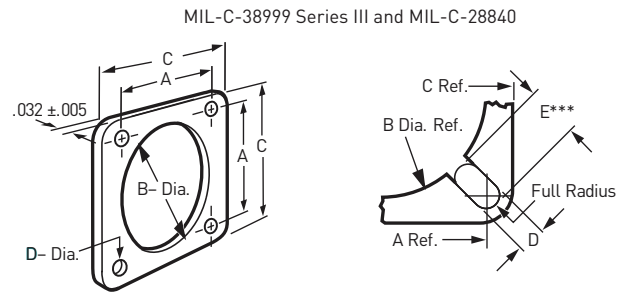


Table 1: Mounting Flange EMI Gaskets *continued*

Shell Size	Configuration Drawing No. ZZZZ								Dimensions inches (mm)					
	Letter	MIL-C-38999 Series				MIL-C-81511 Series	MIL-C-28840 Series	MIL-C-5015 C-83723 NAS-1599 MIL-C-26482	MIL P/N: M83528/004X'-( )	A	B	C	D	E***
		I	II	III	IV					±0.010 (0.25)	+0.020 (0.51) -0.000	±0.015 (0.38)	±0.010 (0.25)	±0.010 (0.25)
16		1955		√				013	0.969 (24.61)	1.135 (28.83)	1.258 (31.95)	0.156 (3.96)		
						4693		014	0.969 (24.61)	1.063 (27.00)	1.250 (31.75)	0.125 (3.18)		
	(S)						1954	015	0.969 (24.61)	1.000 (25.40)	1.281 (32.54)	0.156 (3.96)		
17		1957	√					016	1.062 (26.97)	1.260 (32.00)	1.351 (34.32)	0.156 (3.96)		
	E	C650			√			NA	1.062 (26.97)	1.260 (32.00)	1.351 (34.32)	0.156 (3.96)	0.222 (5.64)	
	D						C640	NA	1.015 (25.78)	1.250 (31.75)	1.406 (35.71)	0.141 (3.58)	0.163 (4.14)	
18	(S)	1957		√				016	1.062 (26.97)	1.260 (32.00)	1.351 (34.32)	0.156 (3.96)		
						4694		017	1.062 (26.97)	1.189 (30.20)	1.343 (34.11)	0.125 (3.18)		
							1956	018	1.062 (26.97)	1.135 (28.83)	1.375 (34.93)	0.156 (3.96)		
19		6962	√					019	1.156 (29.36)	1.375 (34.93)	1.500 (38.10)	0.141 (3.58)		
	F	C651			√			NA	1.156 (29.36)	1.375 (34.93)	1.500 (38.10)	0.141 (3.58)	0.206 (5.23)	
	E						C641	NA	1.140 (28.96)	1.437 (36.50)	1.531 (38.89)	0.141 (3.58)	0.158 (4.01)	
20		6962						019	1.156 (29.36)	1.375 (34.93)	1.500 (38.10)	0.141 (3.58)		
				√		4695		020	1.156 (29.36)	1.312 (33.32)	1.467 (37.26)	0.125 (3.18)		
							1958	021	1.156 (29.36)	1.250 (31.75)	1.500 (38.10)	0.172 (4.37)		
21		6963	√					022	1.250 (31.75)	1.500 (38.10)	1.625 (41.28)	0.141 (3.58)		
	G	C652			√			NA	1.250 (31.75)	1.500 (38.10)	1.625 (41.28)	0.141 (3.58)	0.206 (5.23)	
22		6963		√				022	1.250 (31.75)	1.500 (38.10)	1.625 (41.28)	0.141 (3.58)		
						4969		023	1.250 (31.75)	1.437 (36.50)	1.562 (39.67)	0.125 (3.18)		
							1959	024	1.250 (31.75)	1.375 (34.93)	1.625 (41.28)	0.172 (4.37)		
23		6964	√					025	1.375 (34.93)	1.625 (41.28)	1.750 (44.45)	0.172 (4.37)		
	H	C653			√			NA	1.375 (34.93)	1.625 (41.28)	1.750 (44.45)	0.172 (4.37)	0.259 (6.58)	
	F						C642	NA	1.281 (32.54)	1.625 (41.28)	1.750 (44.45)	0.141 (3.58)	0.164 (4.17)	

√ Available in series designated.

\* Shell size 6 not specified in MIL-C-5015

\*\* Shell size 28-48 specified in MIL-C-5015.

\*\*\* For dimension E, hole is slotted through to B diameter.

\*"X" should be replaced by applicable MIL-DTL-83528 material type (e.g. A, B, C, etc.).

MIL-DTL-83528 dash number should be inserted (without parentheses) at end of MIL P/N.

Note: Refer to Chomerics Conductive Elastomer EMI Gaskets Molded and Extruded Materials Selector Guide for details.

# Mounting Flange Gasket - Product Information

## ORDERING PROCEDURE

Standard Sizes: Using Table 1, construct the appropriate part number as illustrated below. For Custom Gaskets: Drawings must be supplied. Part numbers will be assigned by Parker Chomerics.

30 - 01 - ZZZZ - XXXXX

Configuration Drawing Number Material  
(from Table 1 below)

CHO-SEAL

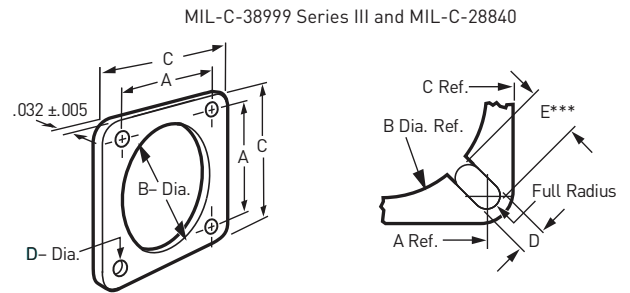


Table 1: Mounting Flange EMI Gaskets *continued*

Shell Size		Configuration Drawing No. ZZZZ								Dimensions inches (mm)					
No	Letter	MIL-C-38999 Series					MIL-C-81511 Series	MIL-C-28840 Series	MIL-C-5015 C-83723 NAS-1599 MIL-C-26482	MIL P/N: M83528/004X-( )	A	B	C	D	E***
			I	II	III	IV					±0.010 (0.25)	+0.020 (0.51) -0.000	±0.015 (0.38)	±0.010 (0.25)	±0.010 (0.25)
24		6964		√					025	1.375 (34.93)	1.625 (41.28)	1.750 (44.45)	0.172 (4.37)		
							4697		026	1.375 (34.93)	1.563 (39.710)	1.703 (43.26)	0.152 (3.86)		
								1960	027	1.375 (34.93)	1.500 (38.10)	1.750 (44.45)	0.203 (5.16)		
25		6965	√			√			028	1.500 (38.10)	1.750 (44.45)	1.875 (47.63)	0.172 (4.37)		
	J	C654				√			NA	1.500 (38.10)	1.750 (44.45)	1.875 (47.63)	0.172 (4.37)	0.259 (6.58)	
	G							C643	NA	1.392 (35.36)	1.750 (44.45)	1.843 (46.81)	0.172 (4.37)	0.195 (4.95)	
28								1961	029	1.562 (39.67)	1.750 (44.45)	2.000 (50.80)	0.203 (5.16)		
29	H							C644	NA	1.568 (39.83)	2.000 (50.80)	2.171 (55.14)	0.172 (4.37)	0.195 (4.95)	
32**								1962	030	1.750 (44.45)	2.000 (50.80)	2.250 (57.15)	0.219 (5.56)		
33	J							C645	NA	1.734 (44.04)	2.187 (55.55)	2.356 (59.84)	0.203 (5.16)	0.234 (5.94)	
36**								1963	031	1.938 (49.23)	2.250 (57.15)	2.500 (63.50)	0.219 (5.56)		
40**								1964	032	2.188 (55.58)	2.500 (63.50)	2.750 (69.85)	0.219 (5.56)		
44**								1965	033	2.375 (60.33)	2.781 (70.64)	3.000 (76.20)	0.219 (5.56)		
48**								1966	034	2.625 (66.68)	3.031 (76.99)	3.250 (82.55)	0.219 (5.56)		

√ Available in series designated.

\* Shell size 6 not specified in MIL-C-5015

\*\* Shell size 28-48 specified in MIL-C-5015.

\*\*\* For dimension E, hole is slotted through to B diameter.

+ "X" should be replaced by applicable MIL-DTL-83528 material type (e.g. A, B, C, etc.).

MIL-DTL-83528 dash number should be inserted (without parentheses) at end of MIL P/N.

Note: Refer to Chomerics Conductive Elastomer EMI Gaskets Molded and Extruded Materials Selector Guide for details.

# Conductive Elastomer Waveguide Gaskets



## WAVEGUIDE GASKETS

Parker Chomerics offers a selection of EMI gasket materials that provide effective EMI shielding and pressure sealing for choke, cover and contact flanges. Parker Chomerics waveguide gaskets ensure low insertion loss, low flange leakage, maximum heat transfer and minimum out gassing. Made from CHO-SEAL 1239 and 1212 conductive elastomers, the gaskets are reusable and will not scar flanges.

Cover flange and flat contact flange gaskets are die-cut from silver-plated copper filled silicone CHO-SEAL 1239 sheet stock 0.027 in. (0.69 mm) thick,  $\pm 0.005$  in. (0.13 mm). Containing an expanded metal reinforcement to eliminate cold flow, these gaskets can be supplied with a slightly raised lip around the iris opening for high-pressure, high-power applications.

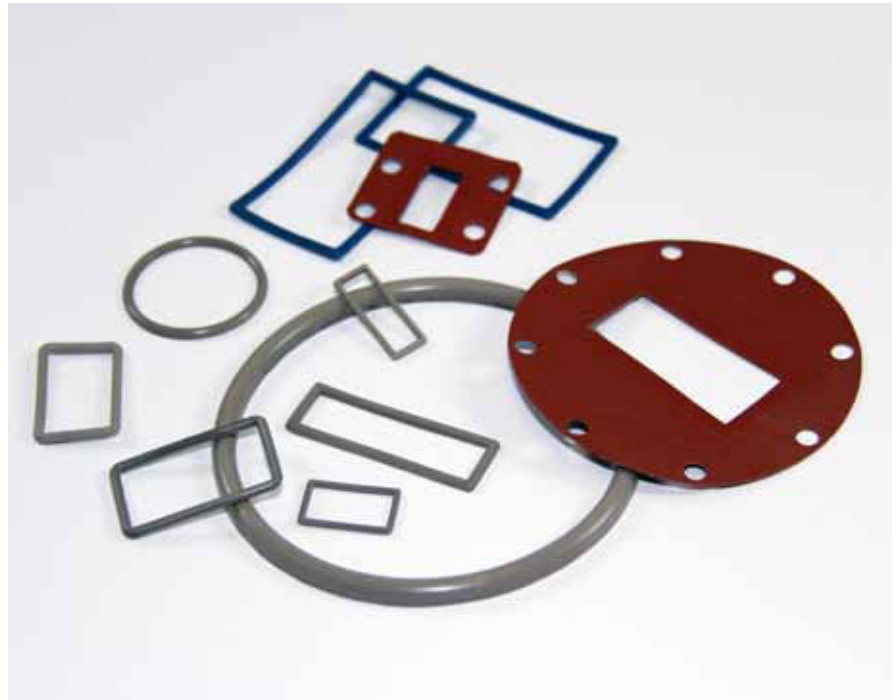
Choke flange and grooved contact flange gaskets are molded from CHO-SEAL 1212 silver-filled silicone elastomer material, and are available with O- or D-cross sections. Properties of CHO-SEAL 1212 and 1239 materials are shown in Table 1. For applications in outdoor environments, contact Parker Chomerics Applications Engineering to discuss other materials, e.g., CHO-SEAL 1285 or 6502.

## Contact Information:

Parker Hannifin Corporation  
**Chomerics Division**  
77 Dragon Court  
Woburn, MA 01801

phone 781 935 4850  
fax 781 933 4318  
chomailbox@parker.com

www.chomerics.com  
www.parker.com/chomerics



## STANDARD WAVEGUIDE GASKETS

The gaskets listed in the following tables will fit the standard UG, CPR, and CMR flanges shown. The number 1 through 6 listed in the "gasket configuration" column of the tables indicate the style of gasket, as follows:

- 1 - Die-Cut rectangular
- 2 - Die-Cut circular
- 3 - Molded rectangular, with "O" cross section
- 4 - Molded circular, with "O" cross section (O-rings)
- 5 - Molded circular, with "D" cross section (D-rings)
- 6 - Molded rectangular, with "D" cross section

Gaskets can also be custom designed to meet special requirements or less frequently used waveguide sizes (from WR 10 to WR 2300) and double-ridged waveguide.

# Waveguide Gasket - Product Information

**Table 1**

SPECIFICATIONS			CHO-SEAL 1212	CHO-SEAL 1239	
Type (Ref: MIL-DTL-83528)			K	G	
Volume Resistivity ohm-cm, max) as supplied (without pressure-sensitive adhesive)			0.005	0.007	
Hardness (Shore A ±7)			85	80	
Specific Gravity			3.5 ±0.45	4.75 ±0.75	
Tensile Strength, psi (Mpa), min.			400 (2.76)	600 (4.14)	
Elongation (percent, min/max)			100 / 300	20 / NA	
Tear Strength, lb/in. (kN/m), min.			40 (7.00)	70 (12.25)	
Compression Set, 70 hrs. @ 100°C, % max.			35	Not Tested	
Low Temperature Flex, TR10, °C, min.			-45	Not Tested	
Maximum Continuous Use Temperature, °C			125	125	
Shielding	200 kHz (H Field)		dB, min.	70	70
	100 MHz (E Field)			120	110
	500 MHz (E Field)			120	110
	2 GHz (Plane Wave)			120	110
	10 GHz (Plane Wave)			120	110
Electrical Stability	Heat Aging		ohm-cm, max.	0.010	0.010
	Vibration Resistance	During		0.010	0.007
		After		0.005	NA
	Post Tensile Set Volume Resistivity			0.010	NA
EMP Survivability (kA per in. perimeter)			>0.9	>0.9	

NA = Not Applicable

Typical materials shown here, contact Parker Chomerics Applications Engineering for others.

## ORDERING PROCEDURE

For standard gaskets, select the part number from Tables 2-8. For custom configurations, gasket and waveguide flange drawings must be provided, and part numbers will be assigned by Parker Chomerics.



# Waveguide Gasket - Product Information

Refer to Tables 3-8 on the following pages for Waveguide Gasket dimensions.

**Table 2** Use Table 2 to select part numbers.

WAVEGUIDE GASKETS										
Frequency Range (GHz)	Band	EIA Waveguide Size	JAN Designation	Flange Description			Flange Type	Gasket Configuration*	Chomerics Part Number	Mil P/N: <sup>†</sup> M83528/ 013 [ ]-( )
				UG	CPR	CMR				
26.5 → 40.0	Ka	WR28	RG-96/U (Silver)	UG-599/U			Cover	1	20-01-5000-1239**	[G]-[001]
				UG-600A/U			Choke	5	20-02-6510-1212	[K]-[002]
18.0 → 26.5	K	WR42	RG-53/U (Brass) RG-121/U (Aluminum)	UG-595/U UG-597/U			Cover	1	20-01-5005-1239**	[G]-[003]
				UG-596A/U UG-598A/U			Choke	5	20-02-6515-1212	[K]-[004]
12.4 → 18.0	Ku	WR62	RG-91/U (Brass) RG-107/U (Silver)	UG-419/U			Cover	1	20-01-5010-1239**	[G]-[005]
				UG-541A/U			Choke	5	20-02-6520-1212	[K]-[006]
10.0 → 15.0		WR75					Cover Choke	1 5	20-11-1683-1239 20-02-6525-1212	[G]-[007] [K]-[008]
							Cover	1	20-11-5015-1239	[G]-[009]
8.2 → 12.4	X	WR90	RG-52/U (Brass) RG-67/U (Aluminum)	UG-39/U UG-135/U			Cover	1	20-11-5015-1239	[G]-[009]
				UG-1736/U UG-1737/U	CPR-90F		Flat Contact	1	20-01-5115-1239**	[G]-[010]
				UG-136A/U UG-40A/U			Choke	5	20-02-6531-1212	[K]-[011]
				UG-136B/U UG-40B/U			Choke	5	20-02-6530-1212	[K]-[012]
				UG-1360/U UG-1361/U	CPR-90G		Contact	3	20-03-6630-1212	[K]-[013]
7.0 → 11.0		WR102		UG-149A/U			Choke	5	20-02-6535-1212	[K]-[014]
7.05 → 10.0	X <sub>i</sub>	WR112	RG-51/U (Brass) RG-68/U (Aluminum)	UG-51/U UG-138/U			Cover	1	20-11-5020-1239	[G]-[015]
				UG-1734/U UG-1735/U	CPR-112F		Flat Contact	1	20-01-5120-1239**	[G]-[016]
				UG-52B/U UG-137B/U			Choke	5	20-02-6540-1212	[K]-[017]
				UG-1358/U UG-1359/U	CPR-112G CPR-112G/F		Contact Choke/Flat	3 6	20-03-6635-1212 20-03-3686-1212	[K]-[018] —
5.85 → 8.2	X <sub>b</sub>	WR137	RG-50/U (Brass) RG-106/U (Aluminum)	UG-344/U UG-441/U			Cover	2	20-11-5025-1239	[G]-[019]
				UG-1732/U UG-1733/U	CPR-137F		Flat Contact	1	20-01-5125-1239**	[G]-[020]
						CMR-137	Flat Contact	1	20-01-5225-1239**	[G]-[021]
				UG-343B/U UG-440B/U			Choke	4	20-02-6545-1212	[K]-[022]
				UG-1356/U UG-1357/U	CPR-137G CPR-137G/F		Contact Choke/Flat	3 6	20-03-6645-1212 20-03-3731-1212	[K]-[023] —

\* Number corresponds to configuration type, Tables 3-8

\*\* This gasket will seal a maximum pressure of 20 psi. For systems pressurized above this limit, a high-pressure (raised-lip) version is available. To specify, change 3rd digit in Part Number from 0 to 1.

<sup>†</sup> Letter in bracket is MIL-DTL-83528 material type (G or K). Number in parentheses is MIL-DTL-83528 dash number. Insert them (without brackets or parentheses) to complete MIL P/N.

<sup>‡</sup> Modified "O" cross section

<sup>¶</sup> Modified "D" cross section

# Waveguide Gasket - Product Information

Table 2 (continued)

WAVEGUIDE GASKETS										
Frequency Range (GHz)	Band	EIA Waveguide Size	JAN Designation	Flange Description			Flange Type	Gasket Configuration*	Chomerics Part Number	Mil P/N: <sup>†</sup> M83528/ 013 [ ]-( )
				UG	CPR	CMR				
4.9 → 7.05		WR159		UG-1730/U UG-1731/U	CPR-159F		Flat Contact	1	20-01-5130-1239**	[G]-(024)
						CMR-159	Flat Contact	1	20-01-5230-1239**	[G]-(025)
					CPR-159G		Choke	3	20-03-L767-1212	—
					CPR-159G/F		Choke/Flat	6	20-03-3980-1212	—
3.95 → 5.85	C	WR187	RG-49/U (Brass)	UG-149A/U UG-407/U			Cover	2	20-11-5035-1239	[G]-(026)
				UG-1728/U UG-1729/U	CPR-187F		Flat Contact	1	20-01-5135-1239**	[G]-(027)
			RG-95/U (Aluminum)			CMR-187	Flat Contact	1	20-01-5235-1239**	[G]-(028)
				UG-148C/U UG-406B/U			Choke	4	20-02-6555-1212	[K]-(029)
				UG-1352/U UG-1353/U	CPR-187G		Contact	3	20-03-6655-1212	[K]-(030)
					CPR-187G/F		Choke/Flat	6 <sup>†††</sup>	20-03-3561-1212	—
3.30 → 4.90		WR229		UG-1726/U UG-1727/U	CPR-229F		Flat Contact	1	20-01-5140-1239**	[G]-(031)
						CMR-229	Flat Contact	1	20-01-5240-1239**	[G]-(032)
					CPR-229G		Choke	3	20-03-L768-1212	—
2.6 → 3.95	S	WR284	RG-48/U (Brass)	UG-53/U UG-584/U			Cover	2	20-01-5045-1239**	[G]-(033)
				UG-1724/U UG-1725/U	CPR-284F		Flat Contact	1	20-01-5145-1239**	[G]-(034)
			RG-75/U (Aluminum)			CMR-284	Flat Contact	1	20-01-5245-1239**	[G]-(035)
				UG-54B/U UG-585A/U			Choke	5	20-02-6565-1212	[K]-(036)
				UG-1348/U UG-1349/U	CPR-284G		Contact	3	20-03-6665-1212	[K]-(037)
2.2 → 3.3		WR340	RG-112/U (Brass) RG-112/U (Aluminum)	UG-533/U UG-554/U			Flat Contact	1	20-01-5050-1239**	[G]-(038)
					CPR-340F		Flat Contact	1	20-01-5150-1239**	[G]-(039)
1.7 → 2.6	W	WR430	RG-104/U (Brass) RG-105/U (Aluminum)	UG-435A/U UG-437A/U			Flat Contact	1	20-01-5055-1239**	[G]-(040)
					CPR-430F		Flat Contact	1	20-01-5155-1239**	[G]-(041)
					CPR-430G		Choke	3 <sup>††</sup>	20-03-1560-1212	—
					CPR-430G/F		Choke/Flat	6 <sup>†††</sup>	20-03-6685-1212	—
1.12 → 1.7	L	WR650	RG-69/U (Brass) RG-103/U (Aluminum)	UG-417A/U UG-418A/U			Flat Contact	1	20-01-5060-1239**	[G]-(042)

\* Number corresponds to configuration type, Tables 3-8

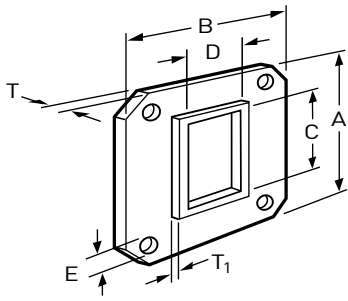
\*\* This gasket will seal a maximum pressure of 20 psi. For systems pressurized above this limit, a high-pressure (raised-lip) version is available. To specify, change 3rd digit in Part Number from 0 to 1.

<sup>†</sup> Letter in bracket is MIL-DTL-83528 material type (G or K). Number in parentheses is MIL-DTL-83528 dash number. Insert them (without brackets or parentheses) to complete MIL P/N.

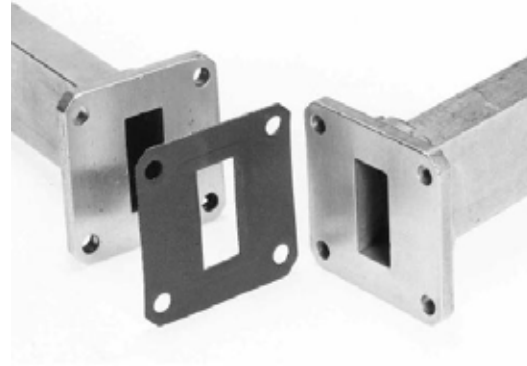
<sup>††</sup> Modified "O" cross section

<sup>†††</sup> Modified "D" cross section

# Waveguide Gasket - Product Information



**Note:** Raised portion will have a nominal width of 0.187 in. [4.75 mm]. Thickness [T] is 0.004 in. [0.10 mm] ±0.002 in. [0.05 mm]. This raised area applies only to part number with a third digit of "1"



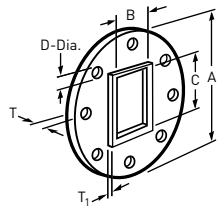
**Table 3**

CONFIGURATION 1 - DIE-CUT RECTANGULAR							
Dimensions inches (mm)						MIL P/N: <sup>1</sup> M83528/ 013G-( )	Chomerics P/N**
A	B	C	D	E*	T		
±0.015 (0.38)	±0.015 (0.38)	±0.015 (0.38) - 0.000		±0.010 (0.25)	±0.003 (0.08)		
1.496 (38.00)	1.496 (38.00)	0.760 (19.30)	0.385 (9.78)	0.155 (3.94)	0.027 (0.69)	007	20-11-1683-1239
0.750 (19.05)	0.750 (19.05)	0.145 (3.68)	0.285 (7.24)	0.116 (2.95)	0.027 (0.69)	001	20-01-5000-1239
0.875 (22.23)	0.875 (22.23)	0.175 (4.45)	0.425 (10.80)	0.116 (2.95)	0.027 (0.69)	003	20-01-5005-1239
1.313 (33.35)	1.313 (33.35)	0.630 (16.00)	0.320 (8.13)	0.140 (3.56)	0.027 (0.69)	005	20-01-5010-1239
1.625 (41.28)	1.625 (41.28)	0.905 (22.99)	0.405 (10.29)	0.169 (4.29)	0.027 (0.69)	009	20-01-5015-1239
1.875 (47.63)	1.875 (47.63)	1.130 (28.70)	0.505 (12.83)	0.180 (4.57)	0.027 (0.69)	015	20-11-5020-1239
3.750 (92.25)	5.440 (138.18)	1.710 (43.43)	3.410 (86.61)	0.264 (6.71) 0.250 (6.35)	0.027 (0.69)	038	20-01-5050-1239
4.188 (106.38)	6.344 (161.14)	2.160 (54.86)	4.310 (109.47)	0.266 (6.76) 0.281 (7.14)	0.027 (0.69)	040	20-01-5055-1239
5.438 (138.13)	8.688 (220.68)	3.260 (82.80)	6.510 (165.35)	0.250 (6.35) 0.328 (8.33)	0.027 (0.69)	042	20-01-5060-1239
1.594 (40.49)	2.094 (53.19)	0.405 (10.29)	0.905 (22.99)	0.169 (4.29)	0.027 (0.69)	010	20-01-5115-1239
1.750 (44.45)	2.500 (63.50)	0.505 (12.83)	1.130 (28.70)	0.171 (4.34)	0.027 (0.69)	016	20-01-5120-1239
1.937 (49.20)	2.687 (68.25)	0.633 (16.08)	1.380 (35.05)	0.206 (5.23)	0.027 (0.69)	020	20-01-5125-1239
2.438 (61.93)	3.188 (80.98)	0.805 (20.45)	1.600 (40.64)	0.257 (6.53)	0.027 (0.69)	024	20-01-5130-1239
3.500 (88.90)	2.500 (63.50)	1.880 (47.75)	0.880 (22.35)	0.266 (6.76)	0.027 (0.69)	027	20-01-5135-1239
2.750 (69.85)	3.875 (98.43)	1.155 (29.34)	2.300 (58.42)	0.270 (6.86)	0.027 (0.69)	031	20-01-5140-1239
4.50 (114.30)	3.000 (76.20)	2.850 (72.39)	1.350 (34.29)	0.266 (6.76)	0.027 (0.69)	034	20-01-5145-1239
3.750 (95.25)	5.438 (138.13)	1.710 (43.43)	3.410 (86.61)	0.266 (6.76)	0.027 (0.69)	039	20-01-5150-1239
6.344 (161.14)	4.188 (106.38)	4.310 (109.47)	2.160 (54.86)	0.266 (6.76)	0.027 (0.69)	041	20-01-5155-1239
1.531 (38.89)	2.281 (57.94)	0.632 (16.05)	1.382 (35.10)	0.150 (3.81)	0.027 (0.69)	021	20-01-5225-1239
1.750 (44.45)	2.500 (63.50)	0.800 (20.32)	1.600 (40.64)	0.160 (4.06) 0.150 (3.81)	0.027 (0.69)	025	20-01-5230-1239
1.784 (45.31)	2.781 (70.64)	0.882 (22.40)	1.882 (47.80)	0.156 (3.96) 0.141 (3.58)	0.027 (0.69)	028	20-01-5235-1239
2.000 (50.80)	3.156 (80.16)	1.155 (29.34)	2.300 (58.42)	0.150 (3.81)	0.027 (0.69)	032	20-01-5240-1239
3.844 (37.64)	2.344 (59.54)	2.850 (72.39)	1.350 (34.29)	0.172 (4.37) 0.188 (4.78)	0.027 (0.69)	028	20-01-5245-1239

\* Hole locations conform to holes in standard waveguide flanges identified in Table 2. Where two hole diameters are given, flange has hole of two different diameters.

<sup>1</sup> Number in parentheses is MIL-DTL-83528 dash number, which should be inserted (without parentheses) at end of MIL P/N.

# Waveguide Gasket - Product Information



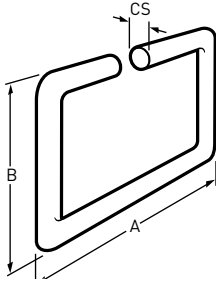
**Note:** Raised portion will have a nominal width of 0.187 in. (4.75 mm). Thickness (T<sub>1</sub>) is 0.004 in. (0.10 mm) ±0.002 in. (0.05 mm). This raised area applies only to part number with a third digit of "1".

**Table 4**

CONFIGURATION 2 - DIE-CUT CIRCULAR						
Dimensions inches (mm)					MIL P/N: M83528/ 013G ( ) <sup>1</sup>	Chomerics P/N
A	B	C	D	T		
±0.015 (0.38)	±0.015 (0.38) - 0.000	±0.010 (0.38)	±0.003 (0.08)			
3.125 (79.38)	0.632 (16.05)	1.382 (35.10)	0.234 (5.94)	0.027 (0.69)	019	20-11-5025-1239
3.625 (92.08)	0.882 (22.40)	1.882 (47.80)	0.234 (5.94)	0.027 (0.69)	026	20-11-5035-1239
5.312 (134.93)	1.350 (34.29)	2.850 (72.39)	0.290 (7.37)	0.027 (0.69)	033	20-01-5045-1239

\* Hole locations conform to holes in standard waveguide flanges identified in Table 2.

<sup>1</sup> Number in parentheses is MIL-DTL-83528 dash number, which should be inserted (without parentheses) at end of MIL P/N.



**Table 5**

CONFIGURATION 3 - MOLDED RECTANGULAR WITH "O" CROSS SECTION					
Dimensions inches (mm)				MIL P/N: M83528/ 013K-( ) <sup>1</sup>	Chomerics P/N
A	B	CS	H		
1.368 (34.75)	0.868 (22.05)	0.103 (2.62)	—	013	20-03-6630-1212
1.616 (41.05)	0.991 (25.17)	0.103 (2.62)	—	018	20-03-6635-1212
1.866 (47.40)	1.116 (28.35)	0.103 (2.62)	—	023	20-03-6645-1212
2.449 (62.20)	1.449 (36.80)	0.139 (3.53)	—	030	20-03-6655-1212
3.451 (87.66)	1.951 (49.56)	0.139 (3.53)	—	037	20-03-6665-1212
2.167 (55.04)	1.372 (34.85)	0.139 (3.53)	—	NA	20-03-L767-1212
2.867 (72.82)	1.722 (43.74)	0.139 (3.53)	—	NA	20-03-L768-1212
5.160 (131.06)	3.010 (76.45)	0.250 (6.35)	0.144 (36.58)	NA	20-03-1560-1212*

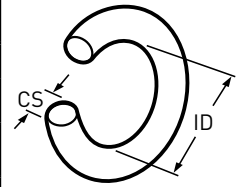
<sup>1</sup> Number in parentheses is MIL-DTL-83528 dash number, which should be inserted (with out parentheses) at end of MIL P/N.

\*Modified "O" Cross Section.

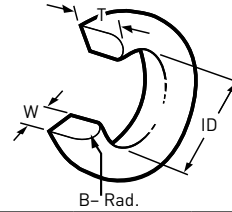
[www.chomerics.com](http://www.chomerics.com)  
[www.parker.com/chomerics](http://www.parker.com/chomerics)

**Table 6**

CONFIGURATION 4 - MOLDED CIRCULAR WITH "O" CROSS SECTION			
Dimensions inches (mm)		MIL P/N: M83528/ 013K-( ) <sup>1</sup>	Chomerics P/N
ID	CS		
2.011 (51.08)	0.123-0.153 (3.12-3.89)	022	20-02-6545-1212
2.683 (68.15)	0.115 (2.92)	029	20-02-6555-1212



<sup>1</sup> Number in parentheses is MIL-DTL-83528 dash number, which should be inserted (with out parentheses) at end of MIL P/N.

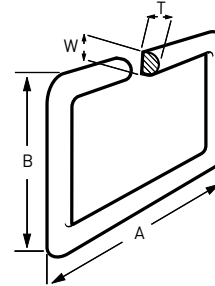


**Table 7**

CONFIGURATION 5 - MOLDED CIRCULAR WITH "D" CROSS SECTION					
Dimensions inches (mm)				MIL P/N: M83528/ 013K-( ) <sup>1</sup>	Chomerics P/N
T	B	ID	W		
0.056 (1.42)	0.041 (1.04)	0.410 (10.41)	0.082 (2.08)	002	20-02-6510-1212
0.048 (1.22)	Full Rad. —	0.587 (14.91)	0.078 (1.98)	004	20-02-6515-1212
0.125 (3.18)	Full Rad. —	0.885 (22.48)	0.155 (3.94)	006	20-02-6520-1212
0.065 (1.65)	0.49 (1.24)	1.122 (28.50)	0.099 (2.51)	008	20-02-6525-1212
0.077 (1.96)	Full Rad. —	1.310 (33.27)	0.115 (2.92)	012	20-02-6530-1212
0.088 (2.24)	Full Rad. —	1.340 (34.04)	0.095 (2.41)	011	20-02-6531-1212
0.085 (2.16)	Full Rad. —	1.392 (35.36)	0.095 (2.41)	014	20-02-6535-1212*
0.078 (1.78)	Full Rad. —	1.550 (39.37)	0.105 (2.68)	017	20-02-6540-1212
0.188 (4.76)	Full Rad. —	3.910 (99.31)	0.240 (6.10)	036	20-02-6565-1212

<sup>1</sup> Number in parentheses is MIL-DTL-83528 dash number, which should be inserted (with out parentheses) at end of MIL P/N.

\* Contact Parker Chomerics Application Engineering for groove analysis



**Table 8**

CONFIGURATION 6 - MOLDED RECTANGULAR WITH "D" CROSS SECTION				
Dimensions inches (mm)				Chomerics P/N
A	B	W	T	
1.616 (41.05)	0.991 (25.17)	0.103 (2.62)	0.053 (1.35)	20-03-3686-1212
1.866 (47.40)	1.116 (28.35)	0.103 (2.62)	0.053 (1.35)	20-03-3731-1212
2.167 (55.04)	1.372 (34.85)	0.120 (3.05)	0.060 (1.52)	20-03-3980-1212
2.449 (62.20)	1.449 (36.80)	0.139 (3.53)	0.070 (1.78)	20-03-3561-1212
5.160 (131.06)	3.010 (76.45)	0.250 (6.35)	0.074 (1.88)	20-03-6685-1212*

\*Modified "D" Cross Section.