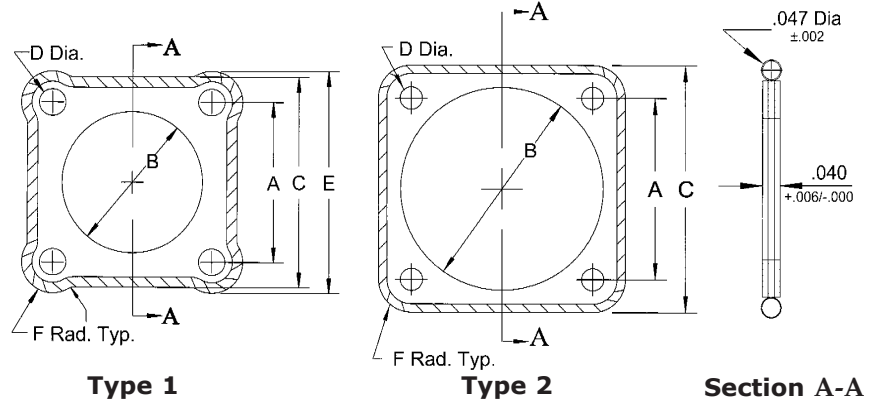


EMI & Environmental Connector-Seal (Front-Mount)



Spira's **Front-Mount EMI & Environmental Connector-Seal** gaskets are designed to provide an EMI & Environmental seal in flange-mounted connectors for the life of a system. They provide superior shielding quality and an excellent and durable environmental seal.



Application Information

The *Front-Mount "FMECS"* EMI & Environmental Connector-Seal have a Spira-Shield O-Ring gasket on the *outside* of the frame to provide an environmental seal when front mounting the connector. (As shown in the figures on page 26.) The frame consists of a metal plate sealed on both sides with vulcanized silicone or fluorosilicone rubber elastomer. The metal plate eliminates cold flow of the environmental sealing elastomer and provides a very durable and reusable gasket. Please see the previous pages for a more cost-effective back-mount "ECS" EMI & Environmental Connector-Seal.

Materials

See page 59 for material specifications.

Frame: Corrosion resistant Stainless Steel, between silicone or fluorosilicone rubber elastomer. Specify "/S" for Silicone or "/F" for Fluorosilicone.

Spiral: Spira-Shield Standard force tin/lead plated beryllium copper gasket.

Shielding Quality

Connector-Seal gaskets offer shielding quality from 116 to 152 dB. The level is dependent on contact surfaces and may vary depending on your specific application. Refer to Shielding Quality for more complete performance data.

Available Options

Plating

See page 60 for material compatibility information.

See table below for spiral plating options.

The gasket is electroplated, 90% tin, 10% lead (edges unplated).

Plating options can be specified by changing the prefix in the part number:

E: Edge tin/lead plating (includes edges) for high humidity or salt-fog environments

IW: RoHS compliant tin plating (Example: FMECS-IW-11S2 /S)

EIW: RoHS compliant edge tin plating for high humidity or salt-fog

Frame

The default frame is stainless steel sealed on both sides by by silicone or fluorosilicone rubber elastomer.

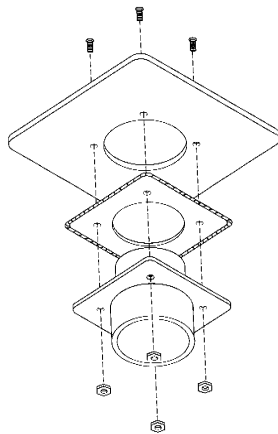
Specify frame and plating options by choosing the desired prefix from the table.

Specify dash number from table on page 26.

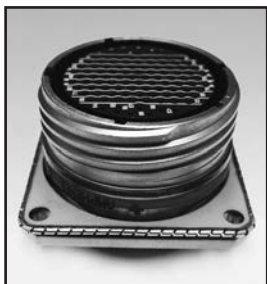
Frame	Elastomer	Tin/Lead Plated Gasket	RoHS Tin Plated Gasket	Edge Tin/Lead Plated Gasket	RoHS Edge Tin Plated Gasket
Elastomer over Stainless Steel	Silicone	FMECS-T-__ /S	FMECS-IW-__ /S	FMECS-E-__ /S	FMECS-EIW-__ /S
	Fluorosilicone	FMECS-T-__ /F	FMECS-IW-__ /F	FMECS-E-__ /F	FMECS-EIW-__ /F

Ordering Information

Front Mount EMI/Environmental Connector-Seal gaskets are ordered by the piece.



Front Mount Type 1*



Front Mount Type 2

Part Number:

FMECS - T - /

Dash No.
From Table

Gasket Plating

T: Tin
E: Edge Tin
IW: RoHS Tin
EIW: RoHS Edge Tin
NI: Stainless Steel
TNI: Tin Stainless Steel
IWN: RoHS Tin
Stainless Steel

Frame Material:

/S: Silicone over Stainless Steel
/F: Fluorosilicone over Stainless Steel

Dash No.	MIL-C-38999					A	B	C	D	E	F
	Series I	Series II	Series III								
03S1	9					0.719	0.666	0.958	0.120	0.999*	0.140
06S1	11					0.812	0.806	1.051	0.120	1.092*	0.140
08S1	13					0.906	0.932	1.145	0.120	1.186*	0.140
10S1	15					0.969	1.057	1.243	0.120		0.137
12S1	17					1.062	1.170	1.336	0.120		0.137
14S1	19					1.156	1.307	1.460	0.120		0.152
16S1	21					1.250	1.432	1.585	0.120		0.168
18S1	23					1.375	1.557	1.710	0.152		0.168
20S1	25					1.500	1.682	1.835	0.152		0.168
01S2		8				0.594	0.563	0.828	0.120	0.874*	0.140
05S2		10				0.719	0.680	0.954	0.120	0.999*	0.140
07S2		12				0.812	0.859	1.047	0.120	1.092*	0.140
09S2		14				0.906	0.984	1.141	0.120	1.186*	0.140
11S2		16				0.969	1.068	1.243	0.120		0.137
13S2		18				1.062	1.193	1.346	0.120		0.142
15S2		20				1.156	1.318	1.471	0.120		0.158
17S2		22				1.250	1.443	1.596	0.120		0.173
19S2		24				1.375	1.570	1.723	0.152		0.174
04S3			9			0.719	0.635	0.948	0.120	1.000*	0.141
06S3			11			0.812	0.760	1.042	0.120	1.094*	0.141
08S3			13			0.906	0.885	1.136	0.120	1.188*	0.141
10S3			15			0.969	1.010	1.254	0.120		0.143
12S3			17			1.062	1.185	1.348	0.120		0.143
14S3			19			1.156	1.260	1.449	0.120		0.147
16S3			21			1.250	1.385	1.575	0.120		0.163
18S3			23			1.375	1.510	1.701	0.150		0.163
20S3			25			1.500	1.635	1.823	0.150		0.162
				MS-3412, MIL- DTL 5015 Series II	MIL-C-28840	A	B	C	D		F
22				8		0.594	0.510	0.875	0.120		0.141
23				10		0.719	0.635	1.000	0.120		0.141
24					11	0.750	0.760	1.023	0.120		0.137
25				12		0.812	0.760	1.094	0.120		0.141
26					13	0.843	0.885	1.138	0.120		0.148
27				14		0.906	0.885	1.188	0.120		0.141
28					15	0.968	1.072	1.258	0.120		0.145
29				16		0.969	1.010	1.281	0.120		0.156
30					17	1.015	1.135	1.383	0.120		0.184
31				18		1.062	1.135	1.375	0.120		0.157
32					19	1.140	1.322	1.508	0.120		0.184
33				20		1.156	1.260	1.500	0.120		0.172
34				22		1.250	1.385	1.625	0.120		0.188
35					23	1.281	1.510	1.718	0.120		0.219
36				24		1.375	1.510	1.750	0.150		0.188
37					25	1.392	1.635	1.818	0.150		0.213
38				28		1.562	1.760	2.000	0.150		0.219
39					29	1.568	1.885	2.138	0.150		0.285
40				32		1.750	2.010	2.250	0.170		0.250
41					33	1.734	2.073	2.328	0.170		0.297
42				36		1.938	2.260	2.500	0.170		0.281
43				40		2.188	2.510	2.750	0.170		0.281
44				44		2.375	2.760	3.000	0.170		0.313
45				48		2.625	3.010	3.250	0.170		0.313

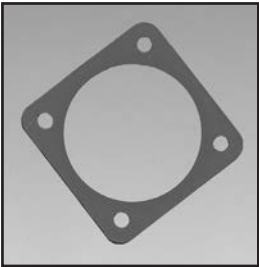
* Type 1 gaskets have an E dimension to provide sufficient environmental sealing on smaller sizes. See drawing on page 25.

Custom sizes are also available. Contact us for more information.

Spira's Connector-Seal Gaskets

Spira offers the best Connector-Seal gaskets on the market, providing an excellent, durable and reusable EMI and/or Environmental seal in flange-mounted connectors for the life of a system. The durability and longevity of the gasket is due to the unique frame design with vulcanized elastomer/rubber sealing on both sides of a metal plate. The metal plate provides strength and eliminates cold flow of the environmental sealing elastomer. This page gives an overview of Spira's Connector-Seal gaskets. Please see the following pages for the product datasheets and ordering specifications.

Environmental-Only Connector-Seal

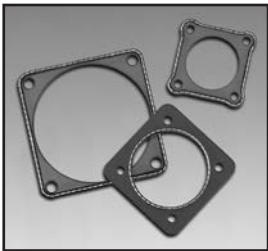


Provides an excellent and durable environmental seal for the life of a system.

The **EOCS** frame is silicone or fluorosilicone rubber elastomer material sealed over salt-fog & corrosion resistant stainless steel with **no EMI gasket**. The dimensions are the same as the EMI-Only Connector-Seal (CS and SSCG series) below.

Environmental-Only Connector-Seal Part Number Prefix: **EOCS**
Can be used for Back-Mount or Front-Mount applications.

EMI & Environmental Connector-Seal



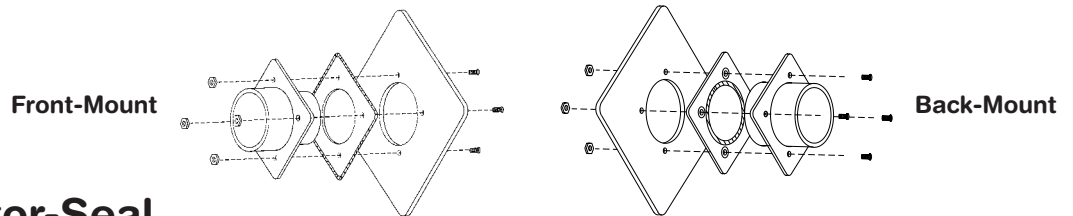
Provides superior EMI shielding and an excellent and durable environmental seal.

The **ECS** and **FMECS** frame is silicone or fluorosilicone rubber elastomer material sealed over corrosion resistant metal, with a Spira-Shield (or other) EMI gasket.

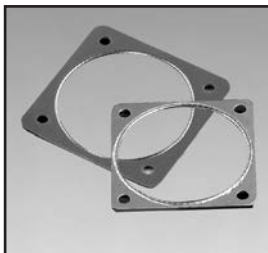
Order in Back-Mount or Front-Mount configuration as needed:

Back-Mount Connector-Seal Part Number Prefix: **ECS** (EMI gasket is on the inside.)

Front-Mount Connector-Seal Part Number Prefix: **FMECS** (EMI gasket is on the outside.)



EMI-Only Connector-Seal



Provides excellent EMI Shielding and durability for the life of a system.

The **CS** Connector-Seal is a more durable and cost effective replacement of Spira's original Connector-Seal gasket (SSCG series) and provides **EMI-Only** shielding. The frame is silicone or fluorosilicone rubber elastomer material sealed over corrosion resistant metal, with a Spira-Shield (or other) EMI gasket. The CS gasket looks similar to the EMI & Environmental Connector-Seal (ECS) above, but due to frame dimensions it **does not provide Environmental sealing**.

EMI-Only Connector-Seal Part Number Prefix: **CS** (Same dimensions as old SSCG gaskets.)
Can be used for Back-Mount or Front-Mount applications.