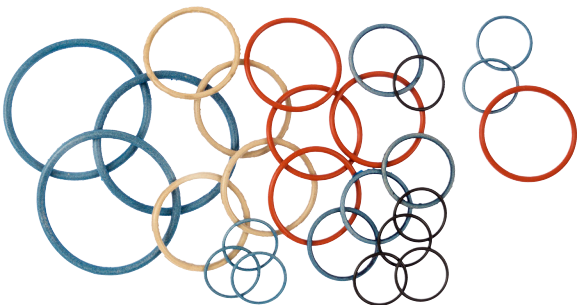


EMI Shielded O-Rings

2051 Series

MAJR's shielded O-Ring gaskets provide environmental sealing and EMI shielding when installed and compressed in a groove. Typically used with MIL-DTL-83528 connectors they are provided in standard diameters and can often be swapped in for standard non-conductive O-Rings if shielding is required.



Materials

O-Rings are available in two standard materials, **TYPE B – Silver Aluminum Silicone** and **TYPE D – Silver Aluminum Fluorosilicone**.

Type B – Silver Aluminum Silicone is our standard o-ring elastomer material, it's water resistant, non-sticky, has low thermal conductivity, high thermal stability and UV resistance making it ideal for even extreme environments.

Type D -Silver Aluminum Fluorosilicone is recommended when higher levels of resilience are required in environments exposed to chemical contamination, such as cleaning agents, oils or fuels or marine use with heavy salt fog.

TYPE B – Silver Aluminum Silicone

Electrical Specifications	Tolerance	Test Method	Silver Plated Aluminum Elastomer (Ohm-cm)
Volume Resistivity	Maximum	MIL-DTL-83528 (PARA 4.6.11)	0.008
Shielding Effectiveness (Frequencies)	Minimum	MIL-DTL-83528	Silver Aluminum Elastomer (dB)
100 MHz (E-Field)	Minimum	MIL-DTL-83528	100
500 MHz (E-Field)	Minimum	MIL-DTL-83528	100
2 GHz (Plane Wave)	Minimum	MIL-DTL-83528	100
10 GHz (Plane Wave)	Minimum	MIL-DTL-83528	100

Properties (General Specifications for Silver Plated Aluminum Elastomer)					
Hardness (Shore A)	Tensile (psi)	Elongation (min. – max.)	Tear (lb./in)	Volume Resistivity (ohm-cm)	Specific Gravity (g/cc)
65	200	100 - 300	30	0.008	2.0

TYPE D – Silver Aluminum Fluorosilicone

Electrical Specifications	Test Method	Ag/Al fluorosilicone Elastomer
Volume Resistivity	MIL-DTL-83528	(Ohm-cm)
DC	(PARA 4.5.11)	0.012
Shielding Effectiveness	MIL-DTL-83528	(Attenuation - dB)
20MHz – 10 GHz	(PARA 4.5.12)	>90

Properties (General Specifications for Silver plated Aluminum Fluorosilicone Elastomer)					
Hardness (Shore A)	Tensile (psi)	Elongation (%)	Color	Operating Temperature Deg. C (min. to max.)	Specific Gravity (g/cc)
70	180	60-260	Tan / Dark blue	-55 to +160	2.00

Mounting

O-ring must be mated to a conductive surface, meaning no non-conductive paint, oils, or coatings. If a non-conductive surface is present on the mating or mounting surface, the conductive elastomer shielding effectiveness will be greatly degraded.

Sizing

MAJR's round profile EMI / RFI shielding O-rings come in two standard military series, M83528/002 and M83528/005, and can be made in custom sizes.

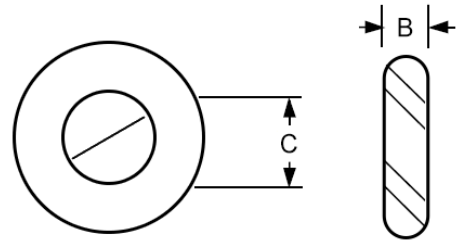


Table 1 for 002 sized O-Rings

DIMENSIONS		PART NUMBERS	
B	C	Material Type/Size Designation	Mil Number
0.070	0.145	B [007]	M83528/002B007
0.070	0.301	B [011]	M83528/002B011
0.070	0.364	B [012]	M83528/002B012
0.070	0.426	B [013]	M83528/002B013
0.070	0.489	B [014]	M83528/002B014
0.070	0.551	B [015]	M83528/002B015
0.070	0.676	B [017]	M83528/002B017
0.070	0.739	B [018]	M83528/002B018
0.070	0.801	B [019]	M83528/002B019
0.070	0.864	B [020]	M83528/002B020
0.070	0.926	B [021]	M83528/002B021
0.070	0.989	B [022]	M83528/002B022
0.070	1.114	B [024]	M83528/002B024
0.070	1.239	B [026]	M83528/002B026
0.070	1.364	B [028]	M83528/002B028
0.103	0.612	B [114]	M83528/002B114

Table 1 for 002 sized O-Rings (Continued)

DIMENSIONS		PART NUMBERS	
B	C	Material Type/Size Designation	Mil Number
0.103	0.676	B [115]	M83528/002B115
0.103	0.799	B [117]	M83528/002B117
0.103	1.362	B [126]	M83528/002B126
0.103	1.487	B [128]	M83528/002B128
0.103	1.737	B [132]	M83528/002B132
0.103	1.862	B [134]	M83528/002B134
0.103	2.362	B [142]	M83528/002B142
0.103	2.550	B [145]	M83528/002B145
0.103	3.987	B [155]	M83528/002B155
0.070	0.145	D [007]	M83528/002D007
0.070	0.301	D [011]	M83528/002D011
0.070	0.364	D [012]	M83528/002D012
0.070	0.426	D [013]	M83528/002D013
0.070	0.489	D [014]	M83528/002D014
0.070	0.551	D [015]	M83528/002D015
0.070	0.676	D [017]	M83528/002D017
0.070	0.739	D [018]	M83528/002D018
0.070	0.801	D [019]	M83528/002D019
0.070	0.864	D [020]	M83528/002D020
0.070	0.926	D [021]	M83528/002D021
0.070	0.989	D [022]	M83528/002D022
0.070	1.114	D [024]	M83528/002D024
0.070	1.239	D [026]	M83528/002D026
0.070	1.364	D [028]	M83528/002D028
0.130	0.612	D [114]	M83528/002D114
0.130	0.676	D [115]	M83528/002D115
0.130	0.799	D [117]	M83528/002D117
0.130	1.362	D [126]	M83528/002D126
0.130	1.487	D [128]	M83528/002D128
0.130	1.737	D [132]	M83528/002D132
0.130	1.862	D [134]	M83528/002D134
0.130	2.362	D [142]	M83528/002D142
0.130	2.550	D [145]	M83528/002D145
0.130	3.987	D [155]	M83528/002D155

Table 2 for 005 sized O-Rings

DIMENSIONS		PART NUMBERS	
B	C	Material Type/Size Designation	Mil Number
0.030	0.442	B [001]	M83528/005B001
0.030	0.557	B [002]	M83528/005B002
0.030	0.692	B [003]	M83528/005B003
0.068	1.182	B [004]	M83528/005B004
0.068	3.165	B [005]	M83528/005B005
0.070	0.495	B [006]	M83528/005B006
0.070	0.635	B [007]	M83528/005B007
0.070	0.667	B [008]	M83528/005B008
0.070	0.860	B [009]	M83528/005B009
0.070	1.230	B [010]	M83528/005B010
0.103	1.040	B [011]	M83528/005B011
0.103	1.612	B [012]	M83528/005B012
0.068	1.182	B [013]	M83528/005B013
0.068	3.165	B [014]	M83528/005B014
0.070	0.495	B [015]	M83528/005B015
0.070	0.610	B [016]	M83528/005B016

Table 2 for 005 sized O-Rings (Continued)

DIMENSIONS		PART NUMBERS	
B	C	Material Type/Size Designation	Mil Number
0.070	0.635	B [017]	M83528/005B017
0.070	0.667	B [018]	M83528/005B018
0.070	0.860	B [019]	M83528/005B019
0.070	1.230	B [020]	M83528/005B020
0.103	1.040	B [021]	M83528/005B021
0.103	1.612	B [022]	M83528/005B022
0.103	1.790	B [023]	M83528/005B023
0.030	0.442	D [001]	M83528/005D001
0.030	0.557	D [002]	M83528/005D002
0.030	0.692	D [003]	M83528/005D003
0.068	1.182	D [004]	M83528/005D004
0.068	3.165	D [005]	M83528/005D005
0.070	0.495	D [006]	M83528/005D006
0.070	0.635	D [007]	M83528/005D007
0.070	0.667	D [008]	M83528/005D008
0.070	0.860	D [009]	M83528/005D009
0.070	1.230	D [010]	M83528/005D010
0.103	1.040	D [011]	M83528/005D011
0.103	1.612	D [012]	M83528/005D012
0.068	1.182	D [013]	M83528/005D013
0.068	3.165	D [014]	M83528/005D014
0.070	0.495	D [015]	M83528/005D015
0.070	0.610	D [016]	M83528/005D016
0.070	0.635	D [017]	M83528/005D017
0.070	0.667	D [018]	M83528/005D018
0.070	0.860	D [019]	M83528/005D019
0.070	1.230	D [020]	M83528/005D020
0.103	1.040	D [021]	M83528/005D021
0.103	1.612	D [022]	M83528/005D022
0.103	1.790	D [023]	M83528/005D023