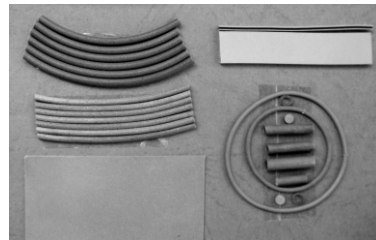


导电橡胶板，导电橡胶条



一、导电橡胶材料说明：

导电橡胶是将玻璃纤维镀银、铝镀银、铜镀银、银、石墨镀镍、镍镀银、低密度银、高密度银、纯镍、碳黑等等微细导电颗粒，均匀分布在硅橡胶中，通过压力使导电颗粒接触而达到良好导电性能的方法制成。在一定的压力下能够提供良好的导电性，它既保持住了橡胶原有水汽密封性能又具有高导电性，导电橡胶具有良好的电磁兼容屏蔽和环境密封能力。

- H 玻璃镀银导电橡胶 — 具有最佳性能、价格比
- I 铝镀银导电橡胶 — 具有优良屏蔽性能和抗盐雾性能
- J 铜镀银导电橡胶 — 导电性能最好的导电橡胶
- K 石墨镀镍导电橡胶 — 用于连接器和阻扼波导法兰

二、技术性能：

导电橡胶必须受一定压力才能良好导电，所以，结构设计要保证导电橡胶即有合适压力又不过压，导电橡胶板最佳高度压缩量在 5-15%，圆形成品导电橡胶条最佳高度压缩范围在 10-25%，主要技术性能见下表：

导电橡胶 填充颗粒 材料名称	材料代码		特点	电阻率 Ohm-cm max	电性能				
	CHO	IS			屏蔽效果 Db				
					200 KHz	100 MHz	500 MHz	2 GHz	10 GHz
玻璃镀银	1350	85	工业中等性能	0.01	50	100	100	90	80
铝镀银	1285	89	军用、抗烟雾	0.008	60	115	110	105	100
铜镀银	1215	88	军用、高屏蔽	0.004	70	120	120	120	120
石墨镀镍	S6305	86	工业波导法兰	0.1		95	90	85	80

三、应用场合：

导电橡胶板主要用于要求密封或频率范围特别宽（高达 40GHz 以上），并具有优良屏蔽性能的场所，特别适用于中、小型军用电子机箱和微波波导系统。几十年实践表明，导电橡胶在航空、航天、舰船等军用电子设备中是应用最广泛的导电衬垫。尤其在恶劣环境中，凡水气密封胶均可用导电橡胶替代，同时完成环境密封和电磁密封。

四、使用说明：

导电橡胶板可以剪切成任意形状。当要求水密封场合，利用导电橡胶板可冲切成无接头的闭合密封衬垫。导电橡胶条一般要开槽安装，槽的尺寸应确保导电橡胶不过压，又有合适压力；导电橡胶高度压缩量在规定范围之内。

为实现压力密封，导电橡胶条需要形成闭环，可选用成型导电橡胶环制成品，有多种规格可选若尺寸不合适，必须用导电橡胶条拼接时，请注意这项拼接工作，必须用专用的拼接材料和装置才能完成。

导电橡胶需固定在金属面上时，可用硅脂导电胶，这是一种专门将导电橡胶粘接在金属表面的专用粘合剂。导电胶亦可用于导电橡胶接头间粘接，但强度不高，不宜用于压力密封。导电橡胶接触的两金属接合面，必须保持表面的高导电性，绝对禁止在搭接金属面上涂覆不导电涂层。对室外环境军用铝制机箱，可采用铝导电保护液，避免铝表面氧化；对于海上或恶劣盐雾中的电子机箱，可在搭接金属表面上涂覆导电三防漆或采用法兰导电保护胶带。

五、导电橡胶条规格

实心 O-形条

代码	071	076	081	084	102	122	127	135	152	157	178	188	191
直径	0.71	0.76	0.81	0.84	1.02	1.22	1.27	1.35	1.52	1.57	1.78	1.88	1.91
代码	196	201	203	216	229	236	254	262	269	284	302	318	330
直径	1.96	2.01	2.03	2.16	2.29	2.36	2.54	2.62	2.69	2.84	3.02	3.18	3.30
代码	340	353	373	381	401	404	406	432	478	495	549	627	635
直径	3.40	3.53	3.73	3.81	4.01	4.04	4.06	4.32	4.78	4.95	5.49	6.27	6.35

空心 O-形条

代码	102	135	152	157	178	185	203	211	229	236	254	262	318
外径	1.02	1.35	1.52	1.57	1.78	1.85	2.03	2.11	2.29	2.36	2.54	2.62	3.18
内径	0.33	0.81	0.51	0.89	0.51	1.24	0.76	1.27	1.27	1.55	1.78	1.02	1.57
代码	384	445	526	549	635	736	884	947	1026	1110	1270	1331	1427
直径	3.84	4.45	5.26	5.49	6.35	7.36	8.84	9.47	10.26	11.10	12.70	13.31	14.27
内径	2.39	3.66	1.95	2.27	3.18	3.96	6.35	5.08	6.17	8.81	9.78	8.00	11.10

实心 D-形条

代码	140	157	188	216	254	279	318	340	396	445	508	521	823
高	1.40	1.57	1.88	2.16	2.54	2.79	3.18	3.40	3.96	4.45	5.08	5.21	8.23
宽	1.62	0.89	1.57	1.57	1.57	3.81	3.18	2.31	3.96	4.52	4.75	4.75	12.37
半径	0.81	0.46	0.78	0.78	0.79	1.91	1.57	1.14	1.98	2.26	2.36	2.36	6.17

空心 D-形条、U 形条、实心矩形条、空心矩形条、中空 P 形条、V 形条等等都可以供货。

RTEST	SO	N	102	H
导电橡胶条	外形	背胶	规格大小	材料
	SO 实 O 形 KO 空 O 形 SD 实 D 形	带背胶 Y 不带背胶 N	参考列表代码	H 玻璃镀银 I 铝镀银 J 铜镀银 K 石墨镀镍

六、导电橡胶板规格

RTESB	M	N	V	H
导电橡胶板	厚度	背胶	规格大小	材料
	M 0.51mm O 0.81mm P 1.14mm Q 1.57mm R 2.36mm S 3.18mm	带背胶 Y 不带背胶 N	T 254*254mm U 254*381mm V 254*508mm X 38.1*508mm Y 508 *762mm	H 玻璃镀银 I 铝镀银 J 铜镀银 K 石墨镀镍

双层导电橡胶条

一、双层导电橡胶条特点:

表层导电、里层不导电

具备 EMI 屏蔽及环境密封双重作用

耐压性好、节省成本

屏蔽效能: 110dB, 1MHz-10GHz MIL-STD-285

工作温度: -60°C~+270°C

原材料: 内层: 硅橡胶 外层: 导电橡胶

订货信息:

5000- **

5000: 型号

** 01: 加 Ag 银 导电颗粒导电橡胶

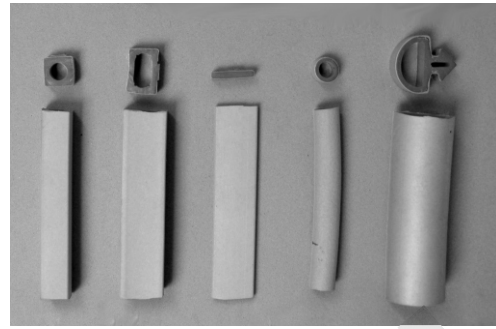
05: 加 Ag/Glass 玻璃球镀银导电颗粒导电橡胶

03: 加 Ag/Al 铝镀银导电颗粒导电橡胶

例: 5000-05 表示 P 型双层导电橡胶条, 导电成份为 Ag/Glass (玻璃球镀银)

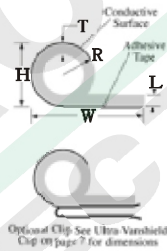
5000-01 表示 P 型双层导电橡胶条, 导电成份为 Ag (银)

5000-03 表示 P 型双层导电橡胶条, 导电成份为 Ag / Al (铝镀银)



二、规格尺寸

1) P 型双层导电橡胶屏蔽条



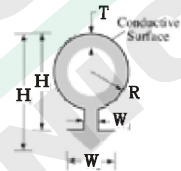
Part #	H	W	L	R	T
5000	.040 1, 02	.250 6, 35	.028 0, 71	.020 0, 51	.015 0, 38
5010	.062 1, 57	.250 6, 35	.032 0, 81	.031 0, 79	.016 0, 41
5070	.078 1, 98	.250 6, 35	.036 0, 91	.039 0, 99	.016 0, 41
5080	.088 2, 24	.250 6, 35	.036 0, 91	.044 1, 12	.016 0, 41
5090	.098 2, 49	.250 6, 35	.038 0, 97	.049 1, 24	.016 0, 41
5100	.125 3, 17	.250 6, 35	.040 1, 02	.062 1, 57	.023 0, 58
5150	.125 3, 17	.375 9, 53	.040 1, 02	.062 1, 57	.023 0, 58
5200	.187 4, 75	.375 9, 53	.040 1, 02	0.94 2, 39	.028 0, 71
5300	.250 6, 35	.500 12, 70	.050 1, 27	.125 3, 17	.029 0, 74
5500	.375 9, 53	.625 15, 90	.055 1, 40	.188 4, 78	.040 1, 02
5510	.393 9, 96	.750 19, 10	.045 1, 14	.197 5, 00	.040 1, 02
5600*	.438 11, 10	.750 19, 10	.060 1, 52	.219 5, 56	.045 1, 14
5700*	.500 12, 70	.875 22, 20	.065 1, 65	.250 6, 35	.050 1, 27

2) 圆筒型双层导电橡胶屏蔽条

Part #	H1	H2	W1	W2	R	T
1020	.236 5,99	.177 4,50	.059 1,50	.141 3,58	.059 1,50	.020 0,51
1050	.308 7,82	.234 5,94	.062 1,57	.142 3,61	.088 2,23	.032 0,81
1100	.437 11,10	.350 8,89	.071 1,80	.172 4,37	.138 3,50	.035 0,89
1200	.590 14,94	.500 12,70	.081 2,06	.224 5,69	.210 5,33	.045 1,14
1250	.625 15,90	.500 12,70	.093 2,36	.234 5,94	.219 5,56	.035 0,89

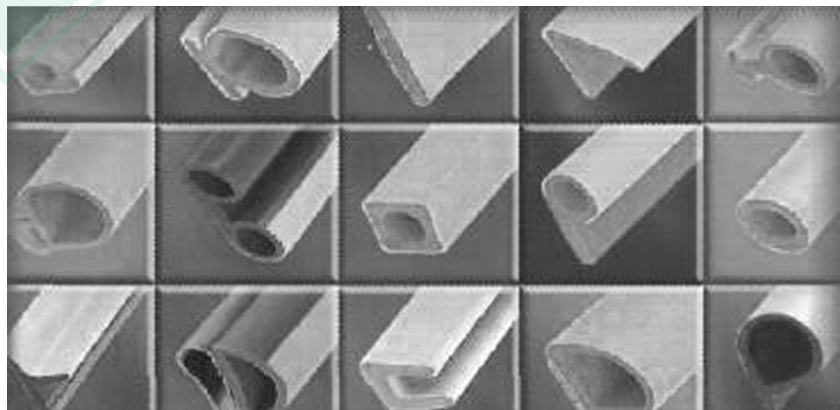
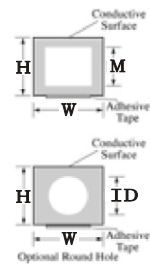
3) 空芯方型双层导电橡胶屏蔽条

Part #	H	W	M
8250	.250 6,35	.250 6,35	.150 3,81
8375	.375 9,53	.375 9,53	.250 6,35



4) 空芯圆型双层导电橡胶屏蔽条

Part #	H	W	ID
8062	.060 1,52	.060 1,52	.031 0,79
8125	.125 3,17	.125 3,17	.078 1,98
8130	.130 3,30	.200 5,08	.090 2,29
8134	.134 3,40	.134 3,40	.078 2,00
8251	.250 6,35	.250 6,35	.156 3,96
8376	.375 9,53	.375 9,53	.281 7,14
8380	.250 6,35	.375 9,53	.201 5,11
8453	.453 11,50	.413 10,50	.323 8,20
8454	.453 11,50	.454 11,53	.323 8,20



5) 角叠型双层导电橡胶屏蔽条



Part #	H	W	T
4125	.125 3, 18	.250 6, 35	.031 0, 79
4188	.188 4, 78	.250 6, 35	.040 0, 98
4250	.250 6, 35	.312 7, 92	.043 1, 09
4312	.312 7, 92	.344 8, 74	.055 1, 40
4406	.406 10, 30	.437 11, 10	.062 1, 58
4630	.650 16, 51	.625 15, 88	.080 2, 03

6) U型管双层导电橡胶屏蔽条

Part #	H	W	D	T	Panel Mounting Width(Range)
9118	.122 3, 10	.096 2, 45	.083 2, 10	.030 0, 77	.040-.048 1, 00-1, 22
9156	.156 3, 96	.156 3, 96	.110 2, 79	.040 1, 02	.080-.097 2, 03-2, 47
9250	.250 6, 35	.250 6, 35	.188 4, 78	.062 1, 57	.130-.150 3, 30-3, 81
9375	.375 9, 53	.375 9, 53	.297 1, 54	.078 1, 98	.224-.244 5, 69-6, 20

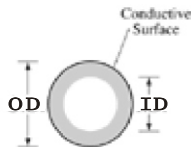
7) 圆型球茎状双层导电橡胶屏蔽条

Part #	H	W	S	T
10125	.125 3, 18	.118 2, 99	.039 0, 99	.030 0, 76
10250	.250 6, 35	.234 5, 94	.055 1, 40	.039 1, 00
10500	.472 11, 90	.469 11, 90	.062 1, 58	.062 1, 57
10550	.500 12, 70	.500 12, 70	.062 1, 58	.042 1, 07

8) D 箭型双层导电橡胶屏蔽条

Part #	H	D	S	T	W1	W2	W3
3020	.323 8, 20	.235 5, 97	.065 1, 65	.053 1, 35	.143 3, 63	.270 6, 90	.500 12, 70
3060	.500 12, 70	.328 8, 33	.078 1, 98	.062 1, 58	.093 2, 36	.093 2, 36	.625 15, 90
3125	.125 3, 18	.250 6, 35	.059 1, 50	.141 3, 58	.250 6, 35	.024 0, 61	.062 1, 57
3312	.312 7, 92	.500 12, 70	.078 1, 98	.203 5, 16	.500 12, 70	.032 0, 81	.078 1, 98
3406	.406 10, 30	.625 15, 90	.083 2, 11	.236 5, 99	.625 15, 90	.036 0, 91	.083 2, 11

9) 圆型双层导电橡胶屏蔽条



Part #	O. D.	I. D.
2050	.030 0,76	n/a n/a
2100	.040 1,02	.020 0,51
2110-NH	.040 1,02	n/a n/a
2125	.045 1,14	.022 0,56
2130	.053 1,35	.016 0,41
2140	.053 1,35	.020 0,51
2150	.062 1,57	.025 0,64
2155	.071 1,80	.028 0,71
2157	.073 1,85	.044 1,12
2170	.078 1,98	.028 0,71
2185	.090 2,29	.039 0,99
2200	.098 2,49	.039 1,00
2210	.103 2,62	.044 1,12
2220	.110 2,80	.040 1,01
2250	.125 3,18	.062 1,57
2251	.125 3,18	.078 1,98
2300	.156 3,96	.093 2,36
2350	.187 4,75	.109 2,77
2375	.201 5,11	.125 3,18
2400	.219 5,56	.141 3,58
2450	.250 6,35	.172 4,37
2500	.312 7,92	.219 5,56
2550	.375 9,53	2.66 6,76
2600	.438 11,10	.313 7,95
2610	.438 11,10	.252 6,40
2650	.500 12,70	.359 9,12
2700	.625 15,90	.484 12,30

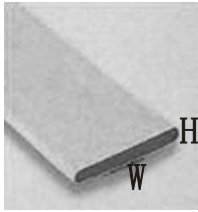
10) D 型双层导电橡胶屏蔽条



Part #	H	W	R	T
6050	.032 0,81	.030 0,73	.015 0,38	.012 0,32
6062	.062 1,57	.156 3,96	.102 2,59	.016 0,41
6100	.062 1,57	.058 1,57	.031 0,78	.012 0,30
6106	.106 2,70	.250 6,35	.125 3,18	.017 4,43
6190	.098 2,49	.098 2,49	.049 1,24	.020 0,51
6200	.125 3,17	.109 2,77	.055 1,40	.024 0,61
6210	.146 3,71	.146 3,71	.073 1,85	.016 0,41
6300	.187 4,75	.172 4,37	.094 2,39	.030 0,76
6370	.240 6,1	.460 11,68	.230 5,84	.040 1,02
6400	.250 6,35	.234 5,94	.125 3,17	.037 0,94
6425	.250 6,35	.375 9,53	.188 4,77	.037 0,94
6500	.312 7,92	.297 7,54	.156 3,96	.034 0,86
6600*	.375 9,53	.359 9,12	.187 4,75	.040 1,02
6700*	.437 11,10	.422 10,70	.218 5,54	.040 1,02

Part #	H	W	R	T
6050	.032 0,81	.030 0,73	.015 0,38	.012 0,32
6062	.062 1,57	.156 3,96	.102 2,59	.016 0,41
6100	.062 1,57	.058 1,57	.031 0,78	.012 0,30
6106	.106 2,70	.250 6,35	.125 3,18	.017 4,43
6190	.098 2,49	.098 2,49	.049 1,24	.020 0,51
6200	.125 3,17	.109 2,77	.055 1,40	.024 0,61
6210	.146 3,71	.146 3,71	.073 1,85	.016 0,41
6300	.187 4,75	.172 4,37	.094 2,39	.030 0,76
6370	.240 6,1	.460 11,68	.230 5,84	.040 1,02
6400	.250 6,35	.234 5,94	.125 3,17	.037 0,94
6425	.250 6,35	.375 9,53	.188 4,77	.037 0,94
6500	.312 7,92	.297 7,54	.156 3,96	.034 0,86
6600*	.375 9,53	.359 9,12	.187 4,75	.040 1,02
6700*	.437 11,10	.422 10,70	.218 5,54	.040 1,02

11) 带状双层导电橡胶屏蔽条



Part #	H	W
7000	.125 3, 18	1.00 25, 40
7030	.030 0, 76	.827 21, 00
7062	.040 1, 02	.062 1, 57
7080	.080 2, 03	1.00 25, 40
7125	.040 1, 02	.125 3, 18
7250	.062 1, 57	.250 6, 35
7375	.062 1, 57	.375 9, 53
7472	.030 0, 76	.472 12, 00
7500	.062 1, 57	.500 12, 70
7550	.015 0, 38	.500 12, 70
7750	.074 1, 88	.750 19, 10
7870	.070 1, 78	.827 21, 00
7871	.093 2, 36	.827 21, 00
7875	.090 2, 29	.875 22, 23

12) 双 D 型环境密封双层导电橡胶屏蔽条

Part #	H1	H2	W	D
16078	.084 2, 13	.078 1, 98	.078 1, 98	.036 0, 91
16114	.130 3, 30	.125 3, 18	.114 2, 90	.046 1, 17
16118	.159 4, 04	.157 3, 99	.118 3, 00	.071 1, 80
16134	.157 3, 99	.152 3, 86	.134 3, 40	.091 2, 31
16140	.143 3, 63	.140 3, 56	.126 3, 20	.081 2, 06
16187	.193 4, 90	.187 4, 75	.203 5, 16	.093 2, 36
16250	.256 6, 50	.248 6, 30	.250 6, 35	.110 2, 79
16375	.380 9, 65	.372 9, 45	.375 9, 53	.188 4, 78

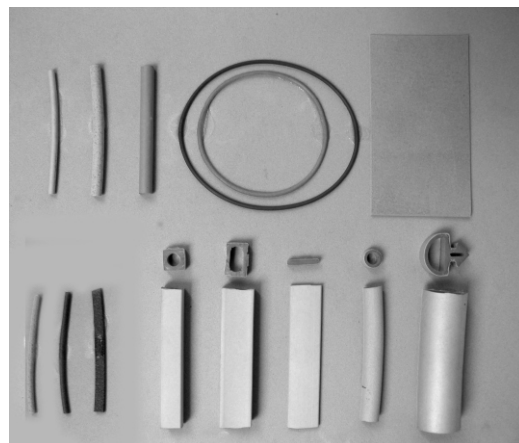
三、产品定型

Part #	1020-	01 -	D50 -	BLU -	NPS -	SPL -	1200
refer to chart	A	B	C	D	E	F	G

A	D
PART NUMBER FROM CATALOG	CORE MATERIAL
	ORA -Orange (STD)
B	GRA -Gray
CONDUCTIVE OUTER LAYER	WHI -White
01 - Standard Silver (Ag)	BLU -Blue
02 - Silver Plated Copper (Ag/Cu)	VIO -Violet
03 - Silver Plated Aluminum (Ag/Al)	BLA -Black
04 - Silver Plated Nickel (Ag/Ni)	RED -Red
05 - Silver Plated Glass Spheres (Ag/GL)	
06 - Gold (Au)	E
07 - Copper (Cu)	MOUNTING TAPE OR CLIP
08 - Nickel (Ni)	NPS -No Pressure Sensitive Tape
09 - Carbon, Low Resistivity (CL)	PSA -Pressure Sensitive Tape (min. width 0.1")
10 - Carbon, Standard (CS)	EPSA - Extended Pressure Sensitive Tape *(see
11 - Silver in Fluorosilicone (AgFK)	below)
12 - Silver in EPDM (AgEP)	CPS -Conductive Pressure Sensitive Tape
13 - Silver in Fluorocarbon (AgFC)	ECPS - Extended Conductive Pressure Sensitive
15 - Silver, Abrasion Resistant (AgX)	Tape *(see below)
16 - Blackened Silver (Ag-Dk)	DCPS -Double Coated Semi-Rigid Pressure
17 - Silver Aluminum (AgAl-Dk)	Sensitive Tape for Stiffness Enhancement
C	
DUROMETER	F
D30 -30 Shore A Durometer	PACKAGING
D50 -50 Shore A Durometer (Standard)	SPL -Spooled on a Reel
D75 -75 Shore A Durometer	CTL -Cut To Length
FR - Flame Resistant, 60 duro. (Brown Only)	COI -Coiled Loosely
SPG -Closed Cell Silicone Sponge	BND -O-Rings, bonded
LOG - Low outgassing silicone	FRM - Mitre-spliced window frame
	G
	LENGTH
	Standard - 1,200 Inches

四、材料性能

Description	Test Specification	VC3200	VC3220	VC3240	VC3260	VC3280	VC3300	VC3600
Suffix	Vanguard	-01	-02	-03	-04	-05	-08	-09
Conductive Matrix Outer Jacket Material	Vanguard	Pure Ag in Silicone	AgCu in Silicone	AgAl in Silicone	AgNi in Silicone	Ag Glass Silicone	Pure Ni in Silicone	Low Resistivity Carbon in Silicone
Elastomeric Support Inner Core Material	Vanguard	Silicone	Silicone	Silicone	Silicone	Silicone	Silicone	Silicone
Shielding Effective Frequency:	MIL-G-83528 para. 4. 6. 12							
200 Khz-H-Field		65db	65db	60db	65db	55db	65db	50db
100 KHz E-field		120db	110db	110db	100db	90db	75db	75db
500 MHz E-field		120db	110db	100db	100db	90db	100db	75db
2 GHz Plane wave		110db	100db	95db	95db	90db	95db	70db
10 GHz Plane wave		110db	100db	90db	95db	90db	110db	65db
Volume Resistency	ASTM D991	.001	.003	.005	.006	.010	.050	.500 ohm-cm
Surface Resistivity	V.P.C method V908	.150	.300	.400	.500	.750	2.00	10.0 ohm-Lin.in.
Durometer (Shore A)	ASTM D2240	50	50	50				
Tensile Strength	ASTM D412	1,500	1,500	1,500				p. s. i.
Elongation (5)	ASTM D412	320	320	320	320	320	320	300
Tear Strength (p.p.i.)	ASTM D624	120	120	120	120	120	120	100
Compression Set	1,000 hrs. @72° F	0%	0%	0%	0%	0%	0%	0%
Compression Set	70 hrs. @300° F	12%	12%	12%	12%	1' 2%	12%	10%
Life Test	1,000 hrs. @275° F then 48 hrs. @340° F	.004	.015	.018	.012	.027	.500	.650
Humidity Test	MIL-STD-202F Method	.006	.020	.025	.021	.020	.400	.550



Description	Test Specification	VC3200	VC3220	VC3240	VC3260	VC3280	VC3300	VC3600
Suffix	Vanguard	-10	-11	-12	-13	-15	-16	-17
Conductive Matrix (Outer Jacket Material)	Vanguard	Standard Carbon in Silicone	AgCu in Silicone	AgAl in Silicone	AgNi in Silicone	Ag Glass in Silicone	Pure Ni in Silicone	Low Resistivity Carbon in Silicone
Elastomeric Support Matrix (Inner Core Material)	Vanguard	Silicone	Silicone	Silicone	Silicone	Silicone	Silicone	Silicone
Shielding Effectiveness (db) Frequency: 200 Khz-H-Field 100 KHz E-field 500 MHz E-field 2 GHz Plane wave 10 GHz Plane wave	MIL-G-83528 para. 4. 6. 12	30 50 55 45 40	65 120 120 110 105	50 80 80 75 70	55 85 80 80 75	65 120 120 110 110	65 120 120 120 110	65 110 110 100 90
Volume Resistivity (ohm-cm)	ASTM D991	4.00	.002	.050	.100	.002	.001	.005
Surface Resistivity (ohm-Lin.in.)	V. P. C method V908	60.0	.250	1.40	1.30	.200	.050	.400
Durometer (Shore A)	ASTM D2240	70	50	65	65	45	50	50
Tensile Strength (p. s. i.)	ASTM D412	875	1,200	950	1,800	1,300	1,500	1,500
Elongation (5)	ASTM D412	240	250	210	220	230	320	320
Tear Strength (p. p. i.)	ASTM D624	100	80	170	200	100	120	100
Compression Set (room temp.)	1,000 hrs. @72° F	0%	0%	4%	2%	0%	0%	0%
Compression Set (dry heat)	70 hrs. @300° F	10%	15%	20%	20%	10%	10%	10%
Life Test (vol. res. after heat aging)	1,000 hrs. @275° F then 48 hrs. @340° F	6.00	.005	.220	.190	.004	.002	.008
Humidity Test (vol. res. after steady-state exposure to moisture)	MIL-STD-202F Method 103B test condition No. 4 240 hrs. @104° F 90-95%R. H.	4.50	.005	.300	.200	.005	.004	.016