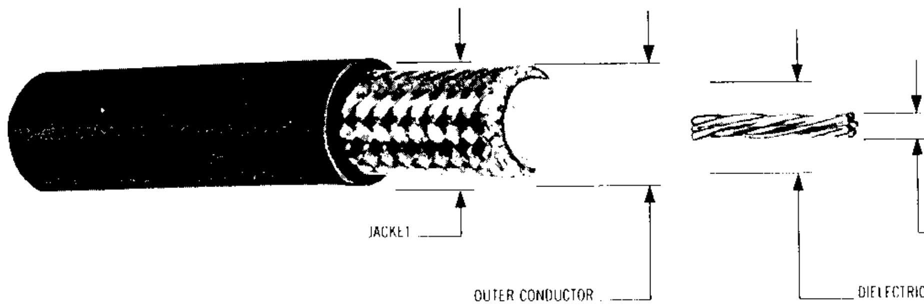

FLEXIBLE CABLES

	CABLE TYPE	RG-55/U	RG-58/U	RG-141/U	RG-142/U	RG-174/U	RG-178/U	RG-179/U	RG-180/U	RG-187/U	RG-188/U	RG-195/U	RG-196/U	RG-214/U	RG-223/U	RG-303/U	RG-316/U
	IMPEDANCE (OHMS)	53.5	50	50	50	50	50	75	95	75	50	95	50	50	50	50	50
DIA	JACKET	.216 MAX	195 ± 004	.190 ± 005	195 ± 005	.100 ± 005	075 MAX	100 ± 005	145 MAX	110 MAX	110 MAX	155 MAX	080 MAX	425 ± 007	.216 MAX	170 ± 005	102 MAX
	OUTER CONDUCTOR	.176 MAX	150 MAX	146 MAX	.171 MAX	088 MAX	.054 MAX	084 MAX	124 MAX	084 MAX	.081 MAX	124 MAX	054 MAX	360 MAX	176 MAX	146 MAX	081 MAX
	DIELECTRIC CORE	116 ± 005	116 ± 004	116 ± 005	116 ± 005	060 ± 003	.034 ± 002	063 ± 003	102 ± 003	060 + 006 / − 000	.060 ± 003	102 ± 003	034 ± 002	285 ± 007	116 ± 004	116 ± 005	060 ± 003
	CENTER CONDUCTOR	032 NOM	0375 MAX	039 ± 001	039 ± 001	020 NOM	012 NOM	.012 NOM	012 NOM	.012 NOM	020 NOM	012 NOM	012 NOM	089 ± 005	035 ± 001	039 ± 001	020 NOM

RG CABLE	ATTENUATION RATING							POWER RATING						
	TYP dB/100 FT. AT FREQUENCY, GHz							MAXIMUM WATTS AT FREQUENCY, GHz						
	.1	.2	.4	1	3	5	10	.1	.2	.4	1	3	5	10
55	4.8	7.0	10.0	16.5	30.5	46.0	>100.0	480	320	215	120	60	40	
58	4.6	6.9	10.5	17.5	37.5	60.0	>100.0	300	200	135	80	40	20	--
141	3.9	5.6	8.0	13.5	27.0	39.0	70.0	1,700	1,200	830	450	220	140	65
142	3.9	5.6	8.0	13.5	27.0	39.0	70.0	1,800	1,300	800	530	265	175	100
174	8.9	12.0	17.5	30.0	64.0	99.0	>100.0	110	80	60	35	15	10	—
178	14.0	19.0	28.0	46.0	85.0	>100.0	>100.0	240	180	120	75	40	—	—
179	10.0	12.5	16.0	24.0	44.0	65.0	>100.0	480	420	320	190	100	73	[illegible]
180	5.7	7.6	10.8	17.0	35.0	50.0	88.0	800	570	400	240	130	90	50
187	10.0	12.5	16.0	24.0	44.0	69.0	>100.0	480	420	320	190	100	73	
188	11.4	14.2	16.7	31.0	60.0	82.0	>100.0	400	325	275	150	80	55	
195	5.7	7.6	10.8	17.0	35.0	50.0	88.0	800	570	400	240	130	90	50
196	14.0	19.0	28.0	46.0	85.0	>100.0	>100.0	240	180	120	75	40	-	
214	2.3	3.3	5.0	8.8	18.0	27.0	45.0	780	550	360	200	100	65	40
223	4.8	7.0	10.0	16.5	30.5	46.0	>100.0	480	320	215	120	60	40	—
303	3.9	5.6	8.0	13.5	27.0	39.0	70.0	1,800	1,300	900	530	265	175	100
316	11.4	14.2	16.7	31.0	60.0	82.0	>100.0	400	325	275	150	80	55	

*This information listed is typical. Consult your cable source for further details.

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Appendix

Captivation Application Guide

Fig. A Epoxy captivation offers the most rigid captivation of all. It is ideal for applications where the contact is soldered directly to a circuit element which may be damaged by axial or rotational displacement of the center contact.

Fig. B Epoxy captivation with conductive epoxy back-fill preserves all the advantages of epoxy captivation and, in addition, provides a significant improvement in RF leakage.

Fig. C Slotted double barb is a variant of the single barb. It provides the rotational captivation required in some applications, however, the electrical performance characteristics degrade at frequencies above 12.4 GHz.

Fig. D Compensated shoulder provides the highest axial displacement force of all the mechanical capture designs, however, offers no rotational captivation. This approach is ideal for applications which require mechanical captivation and with which high axial forces, in both directions, might be expected.

Fig. E Compensated single barb technique is simple and cost effective, however, the axial displacement force is non-symmetrical: 30% higher in one direction than the other. This configuration should be utilized in applications where axial force is primarily uni-directional and no rotational captivation requirement exists.

Fig. F Compensated annular ring captivation provides a symmetrical axial capture and exceptional electrical performance characteristics. This technique is applied in designs where low VSWR is essential at or near the maximum operating frequency and where no rotational captivation requirement exists.

Fig. G Many hermetically sealed connector designs provide axial and rotational captivation since the contact is soldered to the pin of the glass-to-metal seal, which is then brazed into the housing.

Fig. H Many connector designs provide no contact capture at all. These products typically offer the best electrical performance: lowest VSWR since no perturbation of the characteristic impedance is introduced. These designs also mitigate against the effects of thermally introduced stresses, however, the application of these connectors is limited to configurations where mechanical stress introduced by coupling and uncoupling will not compromise the integrity of the attached circuit elements.

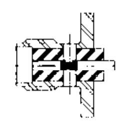

Fig. A

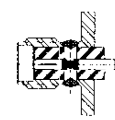

Fig. B

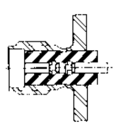

Fig. C

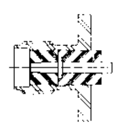

Fig. D

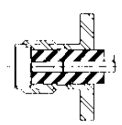

Fig. E

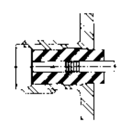

Fig. F

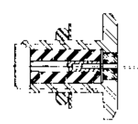

Fig. G

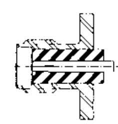

Fig. H

The Effect of VSWR on Transmitted Power

VSWR	VSWR (dB)	Return Loss (dB)	Trans. Loss (dB)	Volt. Refl. Coeff.	Power Trans. (%)	Power Refl. (%)
1.00	.0	∞	.000	.00	100.0	.0
1.01	.1	46.1	.000	.00	100.0	.0
1.02	.2	40.1	.000	.01	100.0	.0
1.03	.3	36.6	.001	.01	100.0	.0
1.04	.3	34.2	.002	.02	100.0	.0
1.05	.4	32.3	.003	.02	99.9	.1
1.06	.5	30.7	.004	.03	99.9	.1
1.07	.6	29.4	.005	.03	99.9	.1
1.08	.7	28.3	.006	.04	99.9	.1
1.09	.7	27.3	.008	.04	99.8	.2
1.10	.8	26.4	.010	.05	99.8	.2
1.11	.9	25.7	.012	.05	99.7	.3
1.12	1.0	24.9	.014	.06	99.7	.3
1.13	1.1	24.3	.016	.06	99.6	.4
1.14	1.1	23.7	.019	.07	99.6	.4
1.15	1.2	23.1	.021	.07	99.5	.5
1.16	1.3	22.6	.024	.07	99.5	.5
1.17	1.4	22.1	.027	.08	99.4	.6
1.18	1.4	21.7	.030	.08	99.3	.7
1.19	1.5	21.2	.033	.09	99.2	.8
1.20	1.6	20.8	.036	.09	99.2	.8
1.21	1.7	20.4	.039	.10	99.1	.9
1.22	1.7	20.1	.043	.10	99.0	1.0
1.23	1.8	19.7	.046	.10	98.9	1.1
1.24	1.9	19.4	.050	.11	98.9	1.1
1.25	1.9	19.1	.054	.11	98.8	1.2
1.26	2.0	18.8	.058	.12	98.7	1.3
1.27	2.1	18.5	.062	.12	98.6	1.4
1.28	2.1	18.2	.066	.12	98.5	1.5
1.29	2.2	17.9	.070	.13	98.4	1.6
1.30	2.3	17.7	.075	.13	98.3	1.7
1.32	2.4	17.2	.083	.14	98.1	1.9
1.34	2.5	16.8	.093	.15	97.9	2.1
1.36	2.7	16.3	.102	.15	97.7	2.3
1.38	2.8	15.9	.112	.16	97.5	2.5
1.40	2.9	15.6	.122	.17	97.2	2.8
1.42	3.0	15.2	.133	.17	97.0	3.0
1.44	3.2	14.9	.144	.18	96.7	3.3
1.46	3.3	14.6	.155	.19	96.5	3.5
1.48	3.4	14.3	.166	.19	96.3	3.7
1.50	3.5	14.0	.177	.20	96.0	4.0
1.52	3.6	13.7	.189	.21	95.7	4.3
1.54	3.8	13.4	.201	.21	95.5	4.5
1.56	3.9	13.2	.213	.22	95.2	4.8
1.58	4.0	13.0	.225	.22	94.9	5.1
1.60	4.1	12.7	.238	.23	94.7	5.3
1.62	4.2	12.5	.250	.24	94.4	5.6
1.64	4.3	12.3	.263	.24	94.1	5.9
1.66	4.4	12.1	.276	.25	93.8	6.2
1.68	4.5	11.9	.289	.25	93.6	6.4
1.70	4.6	11.7	.302	.26	93.3	6.7
1.72	4.7	11.5	.315	.26	93.0	7.0
1.74	4.8	11.4	.329	.27	92.7	7.3
1.76	4.9	11.2	.342	.28	92.4	7.6
1.78	5.0	11.0	.356	.28	92.1	7.9
1.80	5.1	10.9	.370	.29	91.8	8.2
1.82	5.2	10.7	.384	.29	91.5	8.5
1.84	5.3	10.6	.398	.30	91.3	8.7
1.86	5.4	10.4	.412	.30	91.0	9.0
1.88	5.5	10.3	.426	.31	90.7	9.3
1.90	5.6	10.2	.440	.31	90.4	9.6
1.92	5.7	10.0	.454	.32	90.1	9.9
1.94	5.8	9.9	.468	.32	89.8	10.2
1.96	5.8	9.8	.483	.32	89.5	10.5
1.98	5.9	9.7	.497	.33	89.2	10.8
2.00	6.0	9.5	.512	.33	88.9	11.1
2.50	8.0	7.4	.881	.43	81.6	18.4
3.00	9.5	6.0	1.249	.50	75.0	25.0
3.50	10.9	5.1	1.603	.56	69.1	30.9
4.00	12.0	4.4	1.938	.60	64.0	36.0
4.50	13.1	3.9	2.255	.64	59.5	40.5
5.00	14.0	3.5	2.553	.67	55.6	44.4
5.50	14.8	3.2	2.834	.69	52.1	47.9
6.00	15.6	2.9	3.100	.71	49.0	51.0
6.50	16.3	2.7	3.351	.73	46.2	53.8
7.00	16.9	2.5	3.590	.75	43.7	56.2
7.50	17.5	2.3	3.817	.76	41.5	58.5
8.00	18.1	2.2	4.033	.78	39.5	60.5
8.50	18.6	2.1	4.240	.79	37.7	62.3
9.00	19.1	1.9	4.437	.80	36.0	64.0
9.50	19.6	1.8	4.626	.81	34.5	65.5
10.00	20.0	1.7	4.807	.82	33.1	66.9
11.00	20.8	1.6	5.149	.83	30.6	69.4
12.00	21.6	1.5	5.466	.85	28.4	71.6
13.00	22.3	1.3	5.762	.86	26.5	73.5
14.00	22.9	1.2	6.040	.87	24.9	75.1
15.00	23.5	1.2	6.301	.88	23.4	76.6
16.00	24.1	1.1	6.547	.88	22.1	77.9
17.00	24.6	1.0	6.780	.89	21.0	79.0
18.00	25.1	1.0	7.002	.89	19.9	80.1
19.00	25.6	.9	7.212	.90	19.0	81.0
20.00	26.0	.9	7.413	.90	18.1	81.9
25.00	28.0	.7	8.299	.92	14.8	85.2
30.00	29.5	.6	9.035	.94	12.5	87.5

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