

50 Ω μWAVE/mmWAVE CABLE SPECIFICATIONS

STANDARD OFF-THE-SHELF ASSEMBLIES

Series		RF047-A, GC47	RF25S	RF405	RF085	RF086, GC86	RF23C	RF23S	RF402	RF180	RF280
Type		.047 (29 AWG), low loss flexible	Samtec 25 AWG, flexible	RG 405, .086, (24 AWG), semi-flexbile	.085 (24 AWG), low loss flexible	.086 (23 AWG), low loss flexible	Samtec 23 AWG, flexible, copper shield	Samtec 23 AWG, flexible	RG 402, .141 (19 AWG), semi-flexbile	.178 (16 AWG), low loss flexible	.277 (11 AWG), low loss flexible
Electrical											
Max. Frequency (GHz)		65	40	20	50	65	50	35	20	27	18
Max. Insertion Loss (dB/m)	1 GHz	1.21	0.79	0.72	0.69	0.65	0.68	0.72	0.40	0.27	0.17
	26 GHz	7.43	3.80 @ 20 GHz	4.26 @ 20 GHz	4.28	3.90	4.27	3.71 @ 20 GHz	2.30 @ 20 GHz	1.23 @ 18 GHz	0.79 @ 18 GHz
	40 GHz	9.68	—		5.59	5.06	5.59	—	—		
	50 GHz	11.14	—		6.47	5.81	6.46	—			
Propagation Delay (ns/m)		4.76		4.79	4.75	4.20	4.76	4.72	4.79	4.17	4.02
Velocity of Propagation		70%				80%	70%		70%	80%	83%
Capacitance (pF/m)		95.00	96.80	104.97	88.20	83.37	97.80	95.45	98.07	82.00	
Construction											
Center Conductor	Material	Solid Silver Plated Copper									
	AWG (mm/in.)	29 (.2870 / .0113)	25 (.4570 / .0180)	24 (.5100 / .0200)		23 (.5740 / .0226)			19 (.9200 / .0362)	16 (1.3000 / .0512)	11 (2.2600 / .0889)
Dielectric	Material	PFA	Solid FEP	PTFE	Solid PTFE	Foam FEP	FEP	Solid FEP	PTFE	PTFE Tape	
	Dia. (mm/in.)	.9220 / .0363	1.4700 / .0578	1.6800 / .0660	1.6300 / .0640	1.6150 / .0636	1.8470 / .0727	1.8470 / .0727	2.9800 / .1170	3.6800 / .1450	6.3500 / .2500
Shield	Material	1) Ag Plated Cu 2) Ag Plated Cu		Tinned Cu	Spiral Strip Ag Plated Cu	1) Ag Plated Cu 2) Ag Plated Cu	1) Ag Plated Cu 2) Cu Tape 3) Ag Plated Cu	1) Ag Plated Cu 2) Ag Plated Cu	Tinned Cu	1) Flat Ag Plated Cu 2) Al Polyester 3) Round Ag Plated Cu	
Outer Braid	Dia. (mm/in.)	1.1700 / .0460	1.8600 / .0735	2.2000 / .0860	2.1300 / .0840	2.1080 / .0830	2.2730 / .0895	2.2480 / .0885	3.5800 / .1410	4.5200 / .1780	7.0400 / .2770
Jacket	Material	FEP		—	FEP				—	FEP	
	Dia. (mm/in.)	1.4200 / .0560	2.0600 / .0810	3.2000 / .1260	2.6400 / .1040	2.5400 / .1000	2.6670 / .1050	2.5900 / .1020	4.5800 / .1803	4.9500 / .1950	7.6200 / .3000
Mechanical											
Operating Temp		-65° C to 125° C		-40° C to 200° C	-40° C to 125° C	-65° C to 125° C	-55° C to 125° C	-65° C to 125° C	-40° C to 200° C	-40° C to 150° C	-55° C to 200° C
Min. Bend Radius		5.00 mm	9.00 mm	6.35 mm	13.20 mm	8.90 mm	3.18 mm	8.89 mm	10.90 mm	24.80 mm	38.10 mm
Connector Options		1.00 mm, 1.35 mm, 1.85 mm, 2.40 mm, 2.92 mm, SMA, SMP, SMPM, Ganged SMPM (Magnum RF™)	SMA, SMP		2.92 mm, 2.40 mm	1.85 mm, 2.40 mm, 2.92 mm, SMA, SMP, SMPM, Ganged SMPM (Magnum RF™)	2.40 mm, 2.92 mm, SMA, SMP, SMPM	3.50 mm	SMA	SMA, TNCA, N Type	SMA, TNCA, N Type

For complete specifications, visit samtec.com or contact RFGroup@samtec.com