

# Suspended substrate stripline Low Pass Filter

**ZLSS-4R8G-S+**

## Typical Performance Data

FREQ. (MHz)	INSERTION LOSS (dB)			INPUT RETURN LOSS (dB)			OUTPUT RETURN LOSS (dB)		
	@-40°C	@+25°C	@+85°C	@-40°C	@+25°C	@+85°C	@-40°C	@+25°C	@+85°C
	0.00	0.01	0.01	48.18	61.96	59.82	46.91	55.45	53.95
10	0.01	0.01	0.01	49.26	50.87	53.12	49.02	51.76	53.12
20	0.00	0.01	0.01	41.90	43.49	44.40	41.53	43.21	43.77
50	0.00	0.02	0.02	36.71	37.51	38.35	36.04	37.13	37.48
100	0.00	0.02	0.02	33.82	34.04	34.61	33.12	33.64	33.78
150	0.00	0.02	0.02	31.74	31.51	31.85	31.11	31.16	31.14
200	0.01	0.03	0.03	30.16	29.66	29.85	29.54	29.33	29.21
250	0.02	0.04	0.04	24.12	24.03	24.12	24.00	23.92	24.00
500	0.05	0.08	0.09	21.81	21.67	21.64	21.92	21.66	21.74
750	0.08	0.12	0.13	21.41	21.32	21.32	21.26	21.17	21.16
1000	0.09	0.14	0.15	22.74	22.83	22.84	22.30	22.46	22.41
1250	0.09	0.14	0.15	26.82	27.33	27.22	26.32	26.75	26.73
1500	0.09	0.14	0.15	45.56	47.76	45.71	40.99	43.51	42.66
1750	0.09	0.15	0.16	27.29	27.36	27.59	27.61	27.71	27.99
2000	0.11	0.17	0.19	21.27	21.37	21.41	21.60	21.59	21.71
2250	0.15	0.21	0.23	18.62	18.80	18.86	18.61	18.82	18.82
2500	0.19	0.25	0.27	26.84	27.82	28.17	27.70	28.66	29.12
2750	0.21	0.27	0.30	17.94	18.19	18.22	17.77	18.05	18.04
3000	0.21	0.28	0.30	19.07	19.30	19.25	18.89	19.09	19.07
3250	0.19	0.26	0.29	22.95	22.97	22.80	22.53	22.59	22.46
3500	0.18	0.26	0.29	37.65	35.98	35.19	33.64	33.56	32.87
3750	0.21	0.29	0.32	26.84	27.82	28.17	27.70	28.66	29.12
4000	0.25	0.33	0.37	21.75	22.27	22.48	21.91	22.46	22.61
4250	0.27	0.36	0.40	22.32	22.52	22.62	22.12	22.36	22.41
4500	0.28	0.38	0.42	31.64	31.00	30.94	31.34	31.01	30.79
4550	0.28	0.38	0.42	36.77	35.46	35.57	38.37	37.02	36.52
4600	0.29	0.39	0.43	36.43	36.46	37.59	45.20	45.02	47.58
4800	0.36	0.46	0.50	22.34	23.08	23.43	22.81	23.45	23.82
5000	0.44	0.55	0.59	19.50	20.51	20.85	19.82	20.78	21.14
5100	0.46	0.57	0.62	21.86	23.46	23.99	22.26	23.77	24.35
5250	0.54	0.68	0.75	25.17	23.17	22.60	25.10	22.79	22.21
5300	0.65	0.82	0.90	17.75	16.70	16.45	17.63	16.54	16.24
5400	1.24	1.49	1.59	9.65	9.18	9.12	9.56	9.10	9.00
5525	3.14	3.52	3.65	4.38	4.21	4.24	4.32	4.17	4.16
6000	16.61	17.11	17.24	0.55	0.61	0.66	0.45	0.54	0.57
6300	24.32	24.83	24.96	0.35	0.42	0.47	0.25	0.35	0.37
6500	28.90	29.41	29.55	0.30	0.37	0.41	0.19	0.28	0.30
6600	31.05	31.56	31.71	0.28	0.34	0.39	0.15	0.25	0.26
7100	40.84	41.31	41.47	0.19	0.26	0.30	0.02	0.12	0.14
7600	49.48	49.90	50.07	0.12	0.20	0.24	0.03	0.07	0.08
8000	55.84	56.21	56.38	0.09	0.17	0.22	0.09	0.02	0.03
8300	60.36	60.65	60.85	0.06	0.14	0.19	0.12	0.01	0.00
9000	70.33	70.59	70.46	0.01	0.09	0.14	0.13	0.02	0.01
10000	83.45	82.98	83.99	0.00	0.08	0.13	0.17	0.06	0.04
10100	84.20	84.39	83.56	0.01	0.09	0.14	0.16	0.05	0.03
11500	100.75	99.80	101.63	0.01	0.08	0.13	0.17	0.06	0.04
12000	101.34	121.63	110.81	0.01	0.09	0.15	0.15	0.03	0.01
13000	104.73	100.15	104.51	0.00	0.09	0.16	0.13	0.02	0.02
13500	104.04	105.07	116.26	0.01	0.12	0.19	0.11	0.00	0.04
14000	98.81	107.22	111.01	0.01	0.12	0.20	0.09	0.02	0.06
14500	113.97	123.30	106.72	0.02	0.13	0.21	0.08	0.04	0.08
15000	103.82	103.39	114.36	0.02	0.14	0.23	0.07	0.06	0.09
15500	102.18	102.84	115.75	0.05	0.16	0.24	0.06	0.05	0.10
16000	101.49	102.41	100.65	0.07	0.17	0.26	0.04	0.08	0.13
16500	100.66	100.74	104.36	0.10	0.19	0.28	0.02	0.10	0.15
17000	108.13	100.53	109.18	0.13	0.22	0.31	0.00	0.12	0.17
17500	98.68	110.21	107.73	0.17	0.25	0.34	0.00	0.12	0.17
18000	105.03	102.63	103.85	0.17	0.26	0.35	0.01	0.14	0.19
18500	105.21	109.44	103.47	0.19	0.30	0.40	0.03	0.17	0.22
19000	107.22	105.92	107.71	0.23	0.35	0.45	0.03	0.17	0.22
20000	121.85	100.76	113.01	0.24	0.39	0.50	0.07	0.22	0.26



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# Suspended substrate stripline Low Pass Filter

**ZLSS-4R8G-S+**

## Typical Performance Data

FREQ. (MHz)	GROUP DELAY		
	(nsec)		
	@-40°C	@+25°C	@+85°C
10	0.33	0.32	0.32
20	0.33	0.32	0.32
50	0.32	0.32	0.32
100	0.32	0.32	0.32
200	0.32	0.32	0.32
300	0.31	0.31	0.32
400	0.31	0.31	0.32
500	0.31	0.31	0.31
600	0.31	0.31	0.31
700	0.31	0.31	0.31
800	0.31	0.31	0.31
900	0.31	0.31	0.31
1000	0.31	0.31	0.31
1100	0.31	0.31	0.32
1200	0.32	0.32	0.32
1300	0.32	0.32	0.32
1400	0.32	0.32	0.32
1500	0.32	0.32	0.32
1750	0.32	0.32	0.33
2000	0.33	0.33	0.33
2100	0.33	0.33	0.33
2200	0.33	0.33	0.33
2300	0.33	0.33	0.33
2400	0.33	0.33	0.33
2500	0.33	0.33	0.34
2600	0.34	0.34	0.34
2700	0.34	0.34	0.34
2800	0.34	0.34	0.34
2900	0.34	0.35	0.35
3000	0.35	0.35	0.35
3100	0.35	0.35	0.35
3200	0.36	0.36	0.36
3300	0.36	0.36	0.36
3400	0.37	0.37	0.37
3500	0.37	0.37	0.37
3600	0.38	0.38	0.38
3700	0.38	0.38	0.38
3800	0.38	0.39	0.39
4000	0.40	0.40	0.40
4500	0.45	0.45	0.45
4800	0.49	0.50	0.50



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