Programmable Attenuator RUDAT-4000-120

Typical Performance Data @ 0°C

FREQUENCY (MHz)	Attenuation relative to Insertion Loss (dB)							
	0.25 dB	20 dB	40 dB	60 dB	80 dB	100 dB	110 dB	120 dB
1	0.28	20.37	40.52	59.32	79.31	99.01	109.24	119.79
5	0.28	20.37	40.52	59.43	79.42	99.12	109.35	119.79
10	0.28	20.37	40.52	59.55	79.54	99.25	109.45	120.03
20	0.28	20.36	40.51	59.5	79.5	99.21	109.36	119.88
50	0.27	20.32	40.47	59.53	79.52	99.22	109.47	119.93
100	0.27	20.29	40.43	59.72	79.72	99.41	109.73	120.14
200	0.27	20.19	40.31	59.88	79.87	99.58	109.77	120.27
500	0.24	19.8	39.83	59.61	79.56	99.25	109.41	120.06
750	0.23	19.57	39.52	59.41	79.33	98.99	109.18	119.89
1000	0.23	19.54	39.44	59.64	79.54	99.18	109.39	119.77
1500	0.23	19.6	39.52	59.63	79.5	99.2	109.53	120.07
2000	0.23	19.57	39.53	59.7	79.58	99.28	109.56	120.11
2500	0.23	19.67	39.67	59.96	79.87	99.71	110.09	121.17
3000	0.22	19.64	39.7	60.02	79.99	99.82	110.02	120.34
3500	0.23	19.98	40.15	60.35	80.34	100.22	110.5	120.72
4000	0.24	20.26	40.6	60.63	80.62	100.55	110.54	121.01
4500	0.23	20.24	40.68	60.82	80.85	100.85	110.74	121.17
5000	0.22	20.19	40.55	60.86	80.85	101.1	110.91	120.3
5500	0.23	20.24	40.41	60.55	80.25	101.03	110.83	120.36
6000	0.24	20.59	40.63	60.4	79.77	100.98	110.46	120.14

FREQUENCY (MHz)	Attenuation accuracy relative to nominal attenuation setting (dB)							
	0.25 dB	20 dB	40 dB	60 dB	80 dB	100 dB	110 dB	120 dB
1	-0.03	-0.37	-0.52	0.68	0.69	0.99	0.76	0.21
5	-0.03	-0.37	-0.52	0.57	0.58	0.88	0.65	0.21
10	-0.03	-0.37	-0.52	0.46	0.46	0.75	0.55	-0.03
20	-0.03	-0.36	-0.51	0.5	0.5	0.79	0.64	0.12
50	-0.02	-0.32	-0.47	0.47	0.48	0.78	0.54	0.07
100	-0.02	-0.29	-0.42	0.28	0.28	0.59	0.27	-0.14
200	-0.01	-0.19	-0.31	0.12	0.13	0.42	0.23	-0.27
500	0.01	0.2	0.17	0.4	0.44	0.75	0.59	-0.06
750	0.02	0.43	0.48	0.59	0.68	1.01	0.82	0.11
1000	0.02	0.46	0.56	0.36	0.46	0.82	0.61	0.23
1500	0.02	0.4	0.48	0.37	0.5	0.8	0.47	-0.07
2000	0.02	0.43	0.47	0.3	0.42	0.72	0.44	-0.11
2500	0.02	0.33	0.33	0.04	0.13	0.29	-0.09	-1.17
3000	0.03	0.36	0.3	-0.02	0.01	0.18	-0.02	-0.34
3500	0.02	0.02	-0.15	-0.35	-0.34	-0.22	-0.5	-0.72
4000	0.01	-0.26	-0.6	-0.63	-0.62	-0.55	-0.54	-1
4500	0.02	-0.24	-0.68	-0.82	-0.85	-0.85	-0.74	-1.17
5000	0.03	-0.19	-0.55	-0.85	-0.85	-1.1	-0.91	-0.3
5500	0.02	-0.24	-0.41	-0.55	-0.25	-1.03	-0.82	-0.36
6000	0.01	-0.59	-0.63	-0.4	0.24	-0.98	-0.46	-0.14

Programmable Attenuator RUDAT-4000-120

Typical Performance Data @ 0°C

FREQUENCY (MHz)	IP3 (dBm)	Insertion Loss @P_{IN}=0 dBm (dB)	Insertion Loss @P_{IN}=+20 dBm (dB)
1	49.76	4.29	4.12
5	53.52	4.33	4.15
10	54.31	4.41	4.21
20	56.56	4.48	4.28
50	48.03	4.05	3.93
100	47.44	4.99	4.85
200	50.13	5.16	5.02
500	57.53	5.71	5.56
750	54.95	6	5.86
1000	50.47	6.19	6.05
1500	52.31	6.64	6.51
2000	54.74	7.06	6.91
2500	53.53	7.49	7.32
3000	57.14	8.02	7.85
3500	49.21	8.45	8.23
4000	45.85	8.91	8.77
4500	45.54	8.72	8.48
5000	48.04	8.86	8.63
5500	44.67	9.36	9.14
6000	46.43	9.61	9.38

Programmable Attenuator RUDAT-4000-120

Typical Performance Data @ +25°C

FREQUENCY (MHz)	Attenuation relative to Insertion Loss (dB)							
	0.25 dB	20 dB	40 dB	60 dB	80 dB	100 dB	110 dB	120 dB
1	0.27	20.27	40.42	59.23	79.25	98.93	109.14	119.73
5	0.27	20.27	40.42	59.33	79.34	99.02	109.26	119.82
10	0.27	20.27	40.42	59.44	79.46	99.13	109.39	119.96
20	0.27	20.26	40.41	59.39	79.42	99.1	109.3	119.69
50	0.27	20.23	40.38	59.42	79.45	99.13	109.35	119.64
100	0.27	20.21	40.36	59.65	79.67	99.36	109.62	120.12
200	0.26	20.12	40.24	59.81	79.82	99.5	109.72	120.22
500	0.24	19.7	39.72	59.5	79.46	99.1	109.36	119.78
750	0.23	19.5	39.43	59.34	79.26	98.85	109.12	119.65
1000	0.23	19.48	39.37	59.56	79.46	99.03	109.28	119.72
1500	0.23	19.55	39.47	59.58	79.49	99.09	109.31	119.92
2000	0.22	19.52	39.48	59.66	79.58	99.2	109.49	119.84
2500	0.23	19.63	39.64	59.92	79.87	99.65	109.96	120.72
3000	0.22	19.62	39.69	60	79.97	99.78	109.96	120.56
3500	0.23	19.95	40.14	60.33	80.35	100.26	110.46	121.02
4000	0.24	20.18	40.54	60.61	80.66	100.61	110.74	120.92
4500	0.23	20.13	40.56	60.78	80.86	100.92	110.87	121.26
5000	0.22	20.12	40.47	60.82	80.84	101.12	110.89	121.32
5500	0.23	20.18	40.38	60.54	80.28	101.01	110.81	120.61
6000	0.23	20.55	40.63	60.42	79.87	100.93	110.55	119.47

FREQUENCY (MHz)	Attenuation accuracy relative to nominal attenuation setting (dB)							
	0.25 dB	20 dB	40 dB	60 dB	80 dB	100 dB	110 dB	120 dB
1	-0.02	-0.27	-0.42	0.77	0.75	1.07	0.86	0.27
5	-0.02	-0.27	-0.42	0.67	0.66	0.98	0.74	0.18
10	-0.02	-0.27	-0.42	0.56	0.54	0.87	0.61	0.04
20	-0.02	-0.26	-0.41	0.61	0.58	0.9	0.7	0.32
50	-0.02	-0.23	-0.38	0.58	0.55	0.87	0.65	0.36
100	-0.02	-0.21	-0.36	0.35	0.33	0.64	0.38	-0.12
200	-0.01	-0.12	-0.24	0.19	0.18	0.5	0.28	-0.22
500	0.01	0.3	0.28	0.5	0.54	0.9	0.64	0.22
750	0.02	0.5	0.57	0.66	0.74	1.15	0.88	0.35
1000	0.02	0.52	0.63	0.44	0.54	0.97	0.72	0.28
1500	0.02	0.45	0.53	0.42	0.51	0.91	0.69	0.08
2000	0.03	0.48	0.52	0.34	0.42	0.8	0.51	0.16
2500	0.03	0.37	0.36	0.08	0.14	0.35	0.04	-0.72
3000	0.03	0.38	0.31	0	0.03	0.22	0.04	-0.56
3500	0.02	0.05	-0.14	-0.33	-0.35	-0.26	-0.46	-1.02
4000	0.01	-0.18	-0.54	-0.61	-0.66	-0.61	-0.74	-0.92
4500	0.02	-0.13	-0.56	-0.78	-0.86	-0.92	-0.87	-1.26
5000	0.03	-0.12	-0.47	-0.82	-0.84	-1.12	-0.89	-1.32
5500	0.02	-0.18	-0.38	-0.54	-0.28	-1.01	-0.81	-0.61
6000	0.02	-0.55	-0.63	-0.42	0.13	-0.93	-0.55	0.53

Programmable Attenuator RUDAT-4000-120

Typical Performance Data @ +25°C

FREQUENCY (MHz)	Input VSWR (:1)							
	0.25 dB	20 dB	40 dB	60 dB	80 dB	100 dB	110 dB	120 dB
1	2.11	1.11	1.15	1.02	1.02	1.04	1.04	1.02
5	2.11	1.11	1.15	1.02	1.02	1.04	1.04	1.02
10	2.10	1.11	1.15	1.01	1.01	1.03	1.03	1.01
20	2.10	1.11	1.15	1.01	1.01	1.03	1.03	1.01
50	2.08	1.11	1.15	1.01	1.01	1.03	1.03	1.01
100	2.03	1.11	1.15	1.00	1.00	1.03	1.03	1.01
200	1.92	1.10	1.15	1.01	1.01	1.03	1.03	1.01
500	1.47	1.08	1.13	1.01	1.01	1.03	1.03	1.01
750	1.19	1.06	1.12	1.02	1.02	1.02	1.02	1.02
1000	1.08	1.05	1.11	1.02	1.02	1.01	1.01	1.02
1500	1.11	1.02	1.08	1.04	1.04	1.02	1.02	1.04
2000	1.03	1.01	1.06	1.07	1.07	1.05	1.05	1.07
2500	1.05	1.04	1.06	1.10	1.10	1.09	1.09	1.10
3000	1.09	1.07	1.09	1.12	1.12	1.12	1.12	1.12
3500	1.36	1.07	1.11	1.13	1.13	1.15	1.15	1.13
4000	1.64	1.08	1.12	1.12	1.12	1.15	1.15	1.12
4500	1.69	1.11	1.14	1.08	1.08	1.12	1.12	1.08
5000	1.41	1.11	1.13	1.03	1.04	1.06	1.06	1.03
5500	1.54	1.17	1.16	1.10	1.10	1.06	1.06	1.10
6000	1.46	1.29	1.27	1.25	1.25	1.21	1.21	1.25

FREQUENCY (MHz)	Output VSWR (:1)							
	0.25 dB	20 dB	40 dB	60 dB	80 dB	100 dB	110 dB	120 dB
1	2.20	1.12	1.04	1.02	1.02	1.02	1.02	1.02
5	2.20	1.12	1.04	1.02	1.02	1.02	1.02	1.02
10	2.19	1.12	1.03	1.01	1.01	1.01	1.01	1.01
20	2.18	1.12	1.03	1.01	1.01	1.01	1.01	1.01
50	2.17	1.12	1.03	1.01	1.01	1.01	1.01	1.01
100	2.10	1.11	1.03	1.01	1.01	1.01	1.01	1.01
200	1.99	1.11	1.03	1.02	1.02	1.02	1.02	1.02
500	1.51	1.07	1.03	1.02	1.02	1.02	1.02	1.02
750	1.21	1.03	1.03	1.02	1.02	1.02	1.02	1.02
1000	1.09	1.01	1.02	1.02	1.02	1.02	1.02	1.02
1500	1.13	1.02	1.01	1.02	1.02	1.02	1.02	1.02
2000	1.03	1.01	1.01	1.02	1.02	1.02	1.02	1.02
2500	1.11	1.00	1.03	1.02	1.02	1.02	1.02	1.02
3000	1.09	1.02	1.04	1.02	1.02	1.02	1.02	1.02
3500	1.50	1.08	1.05	1.04	1.04	1.04	1.04	1.04
4000	1.85	1.18	1.07	1.07	1.07	1.07	1.07	1.07
4500	1.79	1.23	1.10	1.12	1.12	1.12	1.12	1.12
5000	1.46	1.24	1.16	1.19	1.19	1.19	1.19	1.19
5500	1.57	1.34	1.26	1.29	1.29	1.29	1.29	1.29
6000	1.47	1.43	1.39	1.42	1.42	1.42	1.42	1.42

Programmable Attenuator RUDAT-4000-120

Typical Performance Data @ +25°C

FREQUENCY (MHz)	IP3 (dBm)	Insertion Loss @P_{IN}=0 dBm (dB)	Insertion Loss @P_{IN}=+20 dBm (dB)
1	48.77	4.44	4.26
5	55.78	4.48	4.29
10	54.79	4.56	4.36
20	56.87	4.63	4.43
50	47.73	4.20	4.08
100	47.31	5.12	4.99
200	50.04	5.32	5.18
500	56.98	5.94	5.80
750	55.38	6.29	6.16
1000	50.24	6.49	6.35
1500	52.38	6.97	6.84
2000	57.19	7.40	7.26
2500	54.40	7.89	7.72
3000	58.32	8.46	8.29
3500	49.13	8.83	8.68
4000	45.22	9.40	9.25
4500	45.47	9.08	8.89
5000	48.66	9.20	9.02
5500	45.30	9.68	9.52
6000	47.10	9.95	9.77

Programmable Attenuator RUDAT-4000-120

Typical Performance Data @ 50°C

FREQUENCY (MHz)	Attenuation relative to Insertion Loss (dB)							
	0.25 dB	20 dB	40 dB	60 dB	80 dB	100 dB	110 dB	120 dB
1	0.27	20.13	40.26	59.07	79.08	98.76	109.02	119.66
5	0.27	20.13	40.27	59.17	79.19	98.85	109.14	119.49
10	0.27	20.13	40.26	59.28	79.31	98.96	109.23	119.63
20	0.27	20.12	40.26	59.24	79.26	98.91	109.13	119.61
50	0.27	20.1	40.23	59.27	79.29	98.96	109.17	119.67
100	0.27	20.09	40.21	59.5	79.51	99.17	109.41	119.93
200	0.26	19.99	40.08	59.64	79.65	99.28	109.52	119.99
500	0.24	19.57	39.54	59.31	79.26	98.86	109.1	119.36
750	0.23	19.38	39.25	59.15	79.05	98.58	108.87	119.13
1000	0.23	19.37	39.21	59.37	79.24	98.78	108.98	119.45
1500	0.23	19.43	39.3	59.4	79.27	98.84	109.09	119.4
2000	0.22	19.41	39.32	59.47	79.37	98.96	109.24	119.85
2500	0.22	19.51	39.48	59.72	79.64	99.35	109.58	120.14
3000	0.22	19.53	39.55	59.79	79.75	99.48	109.61	120.07
3500	0.23	19.86	40.02	60.13	80.13	99.98	110.15	120.77
4000	0.23	20.02	40.35	60.38	80.43	100.32	110.54	120.8
4500	0.22	19.96	40.34	60.55	80.62	100.65	110.69	120.84
5000	0.22	19.98	40.27	60.6	80.58	100.79	110.68	120.72
5500	0.22	20.07	40.21	60.34	80.06	100.67	110.39	120.1
6000	0.23	20.43	40.45	60.22	79.69	100.62	110.26	119.82

FREQUENCY (MHz)	Attenuation accuracy relative to nominal attenuation setting (dB)							
	0.25 dB	20 dB	40 dB	60 dB	80 dB	100 dB	110 dB	120 dB
1	-0.02	-0.13	-0.26	0.93	0.92	1.24	0.98	0.34
5	-0.02	-0.13	-0.26	0.83	0.81	1.15	0.86	0.51
10	-0.02	-0.13	-0.26	0.72	0.69	1.04	0.77	0.37
20	-0.02	-0.12	-0.26	0.76	0.74	1.09	0.87	0.39
50	-0.02	-0.09	-0.23	0.73	0.71	1.04	0.83	0.33
100	-0.01	-0.09	-0.21	0.5	0.49	0.83	0.59	0.07
200	-0.01	0.01	-0.08	0.36	0.35	0.72	0.48	0.01
500	0.02	0.43	0.46	0.69	0.74	1.14	0.9	0.64
750	0.02	0.62	0.75	0.85	0.95	1.42	1.13	0.87
1000	0.02	0.63	0.79	0.63	0.76	1.22	1.02	0.55
1500	0.02	0.57	0.7	0.6	0.73	1.16	0.92	0.6
2000	0.03	0.59	0.68	0.53	0.63	1.04	0.76	0.15
2500	0.03	0.49	0.53	0.28	0.36	0.65	0.43	-0.14
3000	0.04	0.47	0.45	0.21	0.25	0.52	0.39	-0.07
3500	0.02	0.14	-0.01	-0.13	-0.13	0.02	-0.15	-0.77
4000	0.02	-0.02	-0.35	-0.38	-0.43	-0.32	-0.54	-0.8
4500	0.03	0.04	-0.34	-0.55	-0.62	-0.65	-0.69	-0.84
5000	0.03	0.02	-0.27	-0.6	-0.58	-0.79	-0.68	-0.72
5500	0.03	-0.07	-0.21	-0.34	-0.06	-0.67	-0.39	-0.1
6000	0.02	-0.43	-0.45	-0.22	0.31	-0.62	-0.26	0.18

Programmable Attenuator RUDAT-4000-120

Typical Performance Data @ 50°C

FREQUENCY (MHz)	IP3 (dBm)	Insertion Loss @P_{IN}=0 dBm (dB)	Insertion Loss @P_{IN}=+20 dBm (dB)
1	49.76	4.56	4.38
5	53.52	4.61	4.42
10	54.31	4.69	4.49
20	56.56	4.76	4.56
50	48.03	4.37	4.26
100	47.44	5.32	5.19
200	50.13	5.53	5.39
500	57.53	6.16	6.02
750	54.95	6.54	6.41
1000	50.47	6.72	6.59
1500	52.31	7.24	7.11
2000	54.74	7.69	7.55
2500	53.53	8.15	7.99
3000	57.14	8.72	8.57
3500	49.21	9.19	9.04
4000	45.85	9.72	9.57
4500	45.54	9.39	9.19
5000	48.04	9.51	9.33
5500	44.67	9.95	9.78
6000	46.43	10.22	10.04