

# Digital Step Attenuator

# DAT-31575-SP+

## Typical Performance Data

TEST CONDITIONS: INPUT POWER=-10dBm, Vdd=+3V, TEMPERATURE=-45degC

FREQUENCY (MHz)	STEP ATTENUATION* AT TTL CONTROL STATE (dB)							
	000000 THRU LOSS	000001 0.5 dB	000010 1.0 dB	000100 2.0 dB	001000 4.0 dB	010000 8.0 dB	100000 16 dB	111111 31.5 dB
0.5	0.81	0.55	0.99	2.09	4.11	8.11	16.20	31.89
1	0.83	0.56	1.00	2.10	4.13	8.12	16.20	31.82
5	0.84	0.57	1.01	2.10	4.13	8.13	16.20	31.94
10	0.84	0.57	1.00	2.11	4.12	8.13	16.20	31.86
50	0.85	0.58	1.03	2.12	4.13	8.15	16.22	31.86
100	0.86	0.58	1.01	2.11	4.13	8.14	16.20	31.80
150	0.85	0.59	1.03	2.14	4.15	8.16	16.24	31.94
200	0.93	0.54	1.01	2.10	4.11	8.10	16.20	31.83
250	0.92	0.58	1.01	2.12	4.12	8.12	16.19	31.94
300	0.96	0.56	1.01	2.11	4.13	8.12	16.19	31.66
350	1.01	0.57	1.00	2.10	4.12	8.10	16.18	31.90
400	1.08	0.54	0.97	2.08	4.07	8.07	16.12	31.84
450	1.09	0.56	1.00	2.08	4.08	8.08	16.11	31.71
500	1.13	0.56	0.98	2.08	4.06	8.05	16.10	31.75
550	1.18	0.56	0.99	2.09	4.06	8.05	16.05	31.49
600	1.20	0.53	0.97	2.05	4.04	8.02	16.04	31.30
700	1.30	0.54	0.98	2.06	4.03	8.00	15.96	31.19
800	1.31	0.54	0.97	2.07	4.04	8.02	15.96	31.40
900	1.29	0.54	0.98	2.10	4.08	8.07	15.96	31.37
1000	1.29	0.55	0.98	2.13	4.12	8.10	15.96	31.08
1100	1.37	0.54	0.97	2.13	4.11	8.08	15.91	31.04
1200	1.48	0.55	0.96	2.11	4.07	8.03	15.84	30.84
1300	1.63	0.54	0.96	2.05	3.98	7.93	15.69	30.66
1400	1.74	0.53	0.95	2.02	3.93	7.85	15.60	30.29
1500	1.81	0.52	0.95	2.01	3.91	7.83	15.55	29.94
1600	1.82	0.52	0.95	2.04	3.97	7.88	15.51	29.65
1700	1.81	0.51	0.95	2.10	4.03	7.97	15.54	30.01
1800	1.78	0.51	0.95	2.17	4.12	8.07	15.52	29.99
1900	1.80	0.53	0.95	2.21	4.19	8.11	15.57	29.85
2000	1.92	0.52	0.96	2.21	4.17	8.10	15.47	29.88
2100	2.08	0.52	0.93	2.16	4.10	8.03	15.37	29.84
2200	2.25	0.52	0.93	2.10	4.03	7.92	15.26	29.16
2300	2.40	0.50	0.91	2.10	3.99	7.87	15.16	28.96
2400	2.56	0.49	0.91	2.12	4.01	7.87	15.08	28.58
2500	2.76	0.49	0.90	2.11	3.97	7.82	14.98	28.18
2600	3.16	0.46	0.85	2.04	3.87	7.69	14.76	27.77
2700	3.70	0.47	0.82	1.92	3.67	7.44	14.46	27.00
2800	4.25	0.44	0.78	1.76	3.45	7.12	14.00	26.08
2900	4.48	0.42	0.75	1.70	3.34	6.94	13.64	25.24
3000	4.23	0.42	0.78	1.79	3.47	7.06	13.64	24.99

\* Step Attenuation above Thru Loss (TTL Logic 00000).



# Digital Step Attenuator

# DAT-31575-SP+

## Typical Performance Data

TEST CONDITIONS: INPUT POWER=-10dBm, Vdd=+3V, TEMPERATURE=-45degC

FREQUENCY (MHz)	INPUT RETURN LOSS AT TTL CONTROL STATE							
	(dB)							
	000000 0 dB	000001 0.5 dB	000010 1.0 dB	000100 2.0 dB	001000 4.0 dB	010000 8.0 dB	100000 16 dB	111111 31.5 dB
0.5	21.01	23.45	24.82	24.51	29.30	49.47	27.71	25.61
1	21.05	23.53	24.90	24.62	29.45	51.00	27.73	25.61
5	21.13	23.62	25.01	24.68	29.53	50.15	27.67	25.56
10	21.13	23.64	24.96	24.69	29.58	47.73	27.70	25.59
50	20.46	22.66	23.87	23.58	27.60	36.56	28.86	26.68
100	19.53	21.52	22.55	22.30	25.47	32.39	32.01	29.17
150	19.22	21.07	22.11	21.85	24.98	31.77	35.15	30.78
200	19.95	22.01	23.16	22.89	26.48	34.90	31.21	28.06
250	21.19	23.66	25.04	24.68	29.29	47.91	27.88	25.63
300	22.06	24.78	26.51	25.81	30.80	37.19	25.98	24.14
350	21.42	23.70	25.23	24.21	27.34	29.95	25.10	23.78
400	19.87	21.71	22.92	22.01	24.18	26.85	25.22	24.28
450	18.84	20.38	21.47	20.63	22.58	25.46	26.25	25.69
500	18.42	19.86	20.92	20.05	21.97	25.16	28.06	27.77
550	18.46	19.96	21.16	20.20	22.12	25.71	30.11	29.72
600	18.93	20.52	21.76	20.68	22.71	26.78	31.16	30.10
700	19.49	20.99	22.42	20.93	22.82	26.43	28.62	27.75
800	18.60	19.92	21.26	19.70	21.18	23.96	26.61	26.80
900	17.55	18.67	19.88	18.37	19.64	22.10	25.61	26.59
1000	16.81	17.86	19.01	17.46	18.59	20.87	25.40	27.70
1100	16.81	17.82	18.90	17.32	18.41	20.70	26.85	31.37
1200	17.68	18.86	20.03	18.28	19.49	22.14	31.20	38.61
1300	19.38	20.80	22.28	20.08	21.45	24.98	40.79	33.90
1400	21.25	23.12	25.07	22.07	23.60	28.48	36.56	28.80
1500	23.29	25.50	28.88	23.66	25.33	31.26	29.46	25.68
1600	23.51	25.60	29.76	22.97	23.89	26.91	25.59	23.76
1700	21.29	22.75	25.53	20.47	21.03	22.87	23.49	22.90
1800	19.19	20.46	22.82	18.75	19.31	21.04	23.17	23.31
1900	18.14	19.38	21.63	17.98	18.68	20.75	23.78	24.33
2000	17.57	18.79	21.01	17.67	18.52	20.69	24.26	24.93
2100	17.36	18.71	20.99	17.77	18.68	21.02	24.07	24.16
2200	16.97	18.33	20.79	17.56	18.60	20.72	22.54	22.19
2300	16.02	17.33	19.65	16.62	17.45	19.15	19.97	19.65
2400	14.27	15.28	17.20	14.74	15.48	16.86	17.69	17.59
2500	12.09	12.91	14.36	12.57	13.32	14.64	15.81	16.04
2600	10.20	10.89	12.08	10.76	11.54	12.86	14.48	14.95
2700	8.61	9.24	10.26	9.27	10.11	11.58	13.54	14.27
2800	7.57	8.13	9.05	8.24	9.07	10.59	12.84	13.79
2900	7.02	7.51	8.35	7.61	8.39	9.87	12.31	13.44
3000	6.72	7.19	7.97	7.28	8.00	9.48	12.10	13.41



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# DAT-31575-SP+

## Typical Performance Data

TEST CONDITIONS: INPUT POWER=-10dBm, Vdd=+3V, TEMPERATURE=-45degC

FREQUENCY (MHz)	OUTPUT RETURN LOSS AT TTL CONTROL STATE (dB)							
	000000	000001	000010	000100	001000	010000	100000	111111
	0 dB	0.5 dB	1.0 dB	2.0 dB	4.0 dB	8.0 dB	16 dB	31.5 dB
0.5	21.09	22.53	22.57	32.25	42.70	32.67	36.34	23.70
1	21.16	22.56	22.67	32.23	43.25	32.92	36.59	23.80
5	21.18	22.60	22.70	32.36	42.68	32.61	36.17	23.75
10	21.21	22.62	22.69	32.22	42.26	32.73	36.23	23.82
50	20.39	21.61	21.66	29.12	37.52	34.21	36.80	24.85
100	19.20	20.26	20.30	26.34	34.05	38.76	37.14	27.32
150	18.91	19.95	20.05	25.85	34.09	47.93	38.56	28.51
200	19.78	20.97	21.04	27.88	37.78	37.60	38.57	25.90
250	21.21	22.61	22.73	32.37	40.19	32.29	35.31	23.68
300	21.85	23.42	23.58	33.68	34.41	29.63	31.87	22.70
350	20.90	22.08	22.21	28.40	29.81	28.24	29.57	22.66
400	19.45	20.34	20.49	25.24	27.79	27.89	28.39	23.78
450	18.46	19.34	19.42	23.80	27.23	28.56	28.28	25.48
500	18.14	18.91	19.00	23.54	27.50	29.60	28.74	27.25
550	18.15	18.99	19.10	23.79	28.10	30.80	29.53	28.18
600	18.23	19.07	19.16	23.91	28.66	31.46	29.94	28.37
700	18.23	18.95	19.04	23.85	28.31	31.15	29.39	28.62
800	17.97	18.63	18.73	23.30	27.42	30.02	28.44	28.28
900	17.06	17.64	17.75	21.80	25.14	27.38	25.89	28.97
1000	16.18	16.73	16.76	20.53	23.67	25.53	23.92	34.36
1100	16.46	16.93	16.94	20.91	24.18	26.09	23.95	41.62
1200	17.56	18.06	18.04	22.54	26.01	27.56	25.35	30.07
1300	18.97	19.58	19.51	24.96	28.41	28.92	27.26	25.58
1400	21.07	21.82	21.71	28.97	30.33	29.15	29.96	22.74
1500	23.73	24.74	24.59	37.93	30.60	28.19	32.93	21.06
1600	24.51	25.34	25.42	41.65	29.58	27.28	31.92	20.30
1700	23.33	23.77	23.97	32.17	28.19	26.41	29.20	19.96
1800	21.31	21.79	21.76	28.43	27.49	26.11	27.22	20.14
1900	20.24	20.57	20.76	27.48	27.91	26.41	27.09	20.55
2000	20.26	20.63	20.75	28.47	28.72	26.58	27.50	20.16
2100	20.66	21.04	21.12	28.02	26.55	24.64	25.46	18.90
2200	20.11	20.47	20.71	24.90	23.37	21.77	22.46	17.31
2300	18.37	18.74	18.88	21.71	20.83	19.65	19.93	16.11
2400	16.10	16.32	16.49	18.92	18.82	17.97	17.84	15.27
2500	13.47	13.65	13.85	16.09	16.66	16.30	15.94	14.63
2600	11.26	11.47	11.67	13.76	14.77	14.85	14.37	14.09
2700	9.67	9.87	10.07	12.11	13.33	13.84	13.38	14.02
2800	8.79	8.99	9.16	11.14	12.53	13.30	12.85	14.47
2900	8.43	8.59	8.73	10.71	12.09	13.01	12.57	15.20
3000	8.16	8.33	8.45	10.35	11.75	12.71	12.25	15.70

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# Digital Step Attenuator

# DAT-31575-SP+

## Typical Performance Data

TEST CONDITIONS: INPUT POWER=-10dBm, Vdd=+3V, TEMPERATURE=+25degC

FREQUENCY (MHz)	STEP ATTENUATION* AT TTL CONTROL STATE (dB)							
	000000 THRU LOSS	000001 0.5 dB	000010 1.0 dB	000100 2.0 dB	001000 4.0 dB	010000 8.0 dB	100000 16 dB	111111 31.5 dB
0.5	0.90	0.57	1.00	2.09	4.07	8.05	16.08	31.69
1	0.94	0.57	1.00	2.08	4.07	8.05	16.08	31.64
5	0.96	0.55	0.98	2.07	4.05	8.04	16.08	31.72
10	0.97	0.55	0.98	2.06	4.06	8.03	16.10	31.62
50	0.98	0.59	1.00	2.08	4.07	8.03	16.09	31.77
100	0.99	0.56	1.01	2.08	4.06	8.04	16.10	31.80
150	1.05	0.52	0.96	2.04	4.02	8.01	16.07	31.57
200	1.06	0.55	0.99	2.08	4.07	8.02	16.07	31.57
250	1.09	0.55	0.97	2.07	4.04	8.01	16.04	31.55
300	1.15	0.53	0.97	2.06	4.03	8.01	16.03	31.59
350	1.19	0.53	0.96	2.06	4.03	8.00	16.02	31.58
400	1.23	0.55	0.98	2.07	4.03	8.00	16.05	31.48
450	1.29	0.53	0.96	2.05	4.01	7.98	15.96	31.38
500	1.34	0.52	0.96	2.04	4.00	7.97	15.95	31.38
550	1.41	0.53	0.95	2.03	3.98	7.94	15.92	31.26
600	1.43	0.53	0.96	2.03	3.97	7.93	15.87	31.43
700	1.56	0.52	0.95	2.03	3.96	7.91	15.85	31.11
800	1.58	0.52	0.95	2.04	3.99	7.93	15.86	30.97
900	1.57	0.51	0.95	2.07	4.03	7.98	15.84	31.08
1000	1.57	0.52	0.95	2.10	4.05	8.01	15.79	30.77
1100	1.65	0.51	0.94	2.08	4.03	7.97	15.74	30.70
1200	1.75	0.51	0.94	2.05	4.00	7.92	15.69	30.41
1300	1.88	0.50	0.94	2.02	3.93	7.85	15.58	30.37
1400	2.00	0.51	0.94	1.99	3.90	7.82	15.52	30.11
1500	2.10	0.50	0.95	2.00	3.89	7.80	15.46	29.97
1600	2.13	0.51	0.94	2.04	3.93	7.84	15.38	29.75
1700	2.14	0.50	0.92	2.09	4.00	7.90	15.38	29.75
1800	2.10	0.49	0.92	2.16	4.10	7.98	15.39	29.80
1900	2.12	0.48	0.91	2.19	4.13	8.01	15.33	29.61
2000	2.23	0.49	0.91	2.16	4.09	7.95	15.24	29.56
2100	2.39	0.50	0.92	2.13	4.02	7.88	15.15	29.19
2200	2.57	0.49	0.91	2.06	3.94	7.80	15.03	28.97
2300	2.70	0.48	0.90	2.05	3.91	7.76	14.95	28.78
2400	2.83	0.48	0.90	2.06	3.92	7.76	14.85	28.43
2500	2.99	0.48	0.89	2.06	3.92	7.73	14.78	27.96
2600	3.32	0.47	0.86	2.04	3.85	7.64	14.61	27.76
2700	3.84	0.46	0.83	1.92	3.68	7.42	14.36	27.16
2800	4.44	0.44	0.78	1.78	3.45	7.13	13.97	25.93
2900	4.84	0.43	0.75	1.71	3.33	6.92	13.54	24.99
3000	4.79	0.40	0.74	1.78	3.42	6.99	13.40	24.70

\* Step Attenuation above Thru Loss (TTL Logic 00000).

# Digital Step Attenuator

# DAT-31575-SP+

## Typical Performance Data

TEST CONDITIONS: INPUT POWER=-10dBm, Vdd=+3V, TEMPERATURE=+25degC

FREQUENCY (MHz)	INPUT RETURN LOSS AT TTL CONTROL STATE							
	(dB)							
	000000 0 dB	000001 0.5 dB	000010 1.0 dB	000100 2.0 dB	001000 4.0 dB	010000 8.0 dB	100000 16 dB	111111 31.5 dB
0.5	20.10	21.79	22.57	21.51	23.56	27.30	42.97	45.46
1	20.16	21.85	22.66	21.59	23.66	27.39	43.57	45.09
5	20.25	21.98	22.78	21.67	23.75	27.51	43.74	44.39
10	20.26	21.98	22.79	21.69	23.77	27.52	43.47	44.41
50	20.16	21.88	22.62	21.58	23.60	27.33	41.91	45.95
100	20.05	21.75	22.57	21.49	23.48	27.05	39.90	45.53
150	19.87	21.51	22.28	21.23	23.20	26.58	37.47	41.93
200	19.71	21.27	22.09	21.01	22.91	26.16	35.79	40.32
250	19.44	20.93	21.75	20.65	22.39	25.53	33.83	38.54
300	19.16	20.54	21.36	20.25	21.86	24.84	32.26	36.65
350	18.84	20.19	21.06	19.89	21.43	24.22	31.08	35.16
400	18.51	19.83	20.66	19.49	20.95	23.54	29.94	34.08
450	18.26	19.49	20.39	19.16	20.51	23.02	28.91	33.03
500	17.98	19.12	20.06	18.78	20.03	22.39	28.01	31.90
550	17.72	18.87	19.69	18.39	19.63	21.79	27.22	31.00
600	17.45	18.51	19.38	18.02	19.22	21.31	26.46	30.15
700	17.01	18.06	18.89	17.50	18.48	20.40	25.14	28.54
800	16.80	17.75	18.57	17.10	17.97	19.78	24.24	27.39
900	16.80	17.75	18.67	17.01	17.74	19.48	23.88	26.56
1000	17.26	18.26	19.14	17.26	17.96	19.59	23.94	26.39
1100	18.04	19.00	20.00	17.83	18.46	20.02	24.43	26.58
1200	18.85	19.86	20.94	18.45	19.05	20.67	25.28	26.86
1300	19.74	20.82	22.09	19.18	19.74	21.46	26.57	27.57
1400	20.59	21.78	23.21	19.92	20.54	22.45	28.37	28.31
1500	21.33	22.60	24.28	20.55	21.17	23.34	30.63	29.42
1600	21.71	23.05	25.11	20.82	21.41	23.97	34.46	31.36
1700	21.46	22.84	25.26	20.60	21.21	23.94	39.47	33.38
1800	20.66	22.16	24.50	20.01	20.61	23.38	38.92	34.46
1900	19.68	21.06	23.52	19.23	20.01	22.75	35.48	34.45
2000	18.56	19.89	22.27	18.43	19.19	21.88	31.99	33.55
2100	17.76	19.08	21.36	17.80	18.66	21.32	30.09	31.21
2200	16.73	17.97	20.25	17.05	17.94	20.67	27.89	28.70
2300	15.70	16.86	19.09	16.08	17.07	19.64	25.39	26.14
2400	14.48	15.58	17.59	14.95	15.88	18.25	22.81	23.70
2500	13.12	14.07	15.83	13.56	14.43	16.50	20.21	21.32
2600	11.64	12.49	13.92	12.06	12.89	14.77	17.92	19.12
2700	10.08	10.77	12.01	10.49	11.33	13.03	16.02	17.39
2800	8.75	9.35	10.41	9.20	9.95	11.53	14.38	15.86
2900	7.85	8.36	9.25	8.24	8.92	10.34	13.06	14.59
3000	7.18	7.64	8.43	7.55	8.15	9.48	12.09	13.65

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# Digital Step Attenuator

# DAT-31575-SP+

## Typical Performance Data

TEST CONDITIONS: INPUT POWER=-10dBm, Vdd=+3V, TEMPERATURE=+25degC

FREQUENCY (MHz)	OUTPUT RETURN LOSS AT TTL CONTROL STATE (dB)							
	000000	000001	000010	000100	001000	010000	100000	111111
	0 dB	0.5 dB	1.0 dB	2.0 dB	4.0 dB	8.0 dB	16 dB	31.5 dB
0.5	20.07	20.88	20.65	26.25	32.24	35.35	29.01	33.70
1	20.19	20.95	20.72	26.35	32.31	35.43	29.11	33.77
5	20.21	21.03	20.79	26.48	32.53	35.65	29.20	33.61
10	20.25	21.07	20.84	26.48	32.53	35.53	29.26	33.65
50	20.12	20.94	20.75	26.34	32.16	35.36	29.04	33.89
100	19.90	20.73	20.49	25.84	31.31	33.78	28.56	34.14
150	19.66	20.47	20.23	25.42	30.20	32.68	28.03	34.16
200	19.34	20.11	19.90	24.68	29.03	31.04	27.18	34.76
250	18.99	19.68	19.52	24.07	28.04	30.01	26.44	35.04
300	18.60	19.27	19.14	23.39	27.03	28.85	25.77	35.38
350	18.25	18.87	18.74	22.82	26.14	27.76	25.09	35.04
400	17.87	18.45	18.35	22.28	25.40	26.93	24.29	35.31
450	17.54	18.11	18.01	21.79	24.74	26.15	23.71	35.29
500	17.22	17.70	17.68	21.26	24.13	25.40	23.07	34.80
550	17.01	17.49	17.40	20.85	23.60	24.81	22.63	34.31
600	16.78	17.23	17.14	20.53	23.09	24.26	22.02	33.45
700	16.59	16.99	16.88	20.20	22.68	23.56	21.39	32.35
800	16.56	16.93	16.79	20.20	22.40	23.06	20.84	30.95
900	16.68	17.00	16.82	20.21	22.44	22.79	20.49	29.42
1000	17.16	17.39	17.23	20.73	22.79	22.92	20.42	28.39
1100	17.69	17.90	17.67	21.44	23.21	23.04	20.47	27.20
1200	18.21	18.36	18.06	21.92	23.61	23.23	20.63	26.20
1300	18.66	18.80	18.52	22.46	24.00	23.53	21.01	25.15
1400	19.15	19.34	19.04	23.10	24.31	23.97	21.67	24.11
1500	19.85	20.10	19.82	23.95	24.98	24.64	22.65	23.12
1600	20.85	21.16	20.92	25.50	26.00	25.58	24.36	22.15
1700	22.47	22.77	22.39	28.23	27.36	26.77	26.87	21.23
1800	23.68	24.11	23.83	33.56	29.02	28.06	30.89	20.56
1900	24.64	25.22	24.98	41.17	29.08	28.01	37.78	19.87
2000	23.86	24.13	24.05	32.09	27.51	26.77	34.03	19.23
2100	21.59	21.74	21.67	26.40	25.01	24.69	27.25	18.74
2200	19.41	19.43	19.44	22.97	22.90	22.63	23.49	18.32
2300	17.41	17.47	17.50	21.06	21.65	21.30	21.20	18.26
2400	15.70	15.81	15.82	19.37	20.42	20.36	19.46	18.50
2500	13.87	14.00	14.13	17.44	18.87	18.90	17.71	18.50
2600	12.40	12.55	12.71	15.83	17.55	17.84	16.56	18.61
2700	11.20	11.39	11.55	14.56	16.35	17.00	15.78	18.84
2800	10.30	10.53	10.65	13.49	15.32	16.18	15.01	19.18
2900	9.64	9.84	9.97	12.55	14.28	15.30	14.31	19.21
3000	8.89	9.06	9.19	11.54	13.11	14.10	13.27	18.44

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# Digital Step Attenuator

# DAT-31575-SP+

## Typical Performance Data

TEST CONDITIONS: INPUT POWER=-10dBm, Vdd=+3V, TEMPERATURE=+85degC

FREQUENCY (MHz)	STEP ATTENUATION* AT TTL CONTROL STATE (dB)							
	000000 THRU LOSS	000001 0.5 dB	000010 1.0 dB	000100 2.0 dB	001000 4.0 dB	010000 8.0 dB	100000 16 dB	111111 31.5 dB
0.5	1.03	0.53	0.96	2.04	4.01	7.96	15.98	31.46
1	1.07	0.54	0.97	2.04	4.01	7.96	15.98	31.52
5	1.07	0.54	0.97	2.05	4.01	7.97	15.99	31.46
10	1.08	0.54	0.97	2.05	4.02	7.96	16.01	31.39
50	1.10	0.56	0.98	2.06	4.03	7.98	16.00	31.42
100	1.13	0.55	0.98	2.06	4.02	7.97	15.99	31.59
150	1.16	0.55	0.97	2.04	4.02	7.95	15.98	31.49
200	1.20	0.55	0.97	2.05	4.01	7.96	15.99	31.41
250	1.24	0.53	0.97	2.04	4.00	7.95	15.94	31.40
300	1.29	0.53	0.97	2.05	4.00	7.94	15.96	31.45
350	1.35	0.53	0.97	2.04	3.99	7.96	15.93	31.34
400	1.42	0.52	0.95	2.02	3.97	7.92	15.90	31.44
450	1.47	0.52	0.95	2.02	3.97	7.91	15.88	31.39
500	1.53	0.51	0.94	2.01	3.96	7.90	15.84	31.15
550	1.60	0.52	0.94	2.00	3.94	7.88	15.85	31.10
600	1.63	0.51	0.94	2.00	3.95	7.89	15.84	31.07
700	1.77	0.51	0.94	2.00	3.95	7.88	15.78	30.93
800	1.81	0.51	0.95	2.02	3.95	7.90	15.78	30.69
900	1.79	0.53	0.95	2.06	4.02	7.95	15.77	30.72
1000	1.82	0.52	0.95	2.07	4.02	7.92	15.71	30.79
1100	1.89	0.51	0.94	2.07	4.01	7.89	15.61	30.55
1200	1.99	0.51	0.94	2.04	3.97	7.86	15.58	30.33
1300	2.13	0.51	0.94	2.00	3.91	7.79	15.49	30.05
1400	2.27	0.51	0.95	1.99	3.90	7.79	15.44	29.83
1500	2.39	0.51	0.95	2.01	3.90	7.80	15.45	29.75
1600	2.44	0.50	0.94	2.04	3.95	7.82	15.35	29.55
1700	2.45	0.48	0.93	2.10	4.00	7.90	15.30	29.75
1800	2.41	0.49	0.93	2.15	4.07	7.93	15.25	29.66
1900	2.41	0.49	0.92	2.18	4.10	7.94	15.20	29.77
2000	2.50	0.50	0.92	2.15	4.05	7.89	15.10	29.65
2100	2.64	0.49	0.92	2.11	3.99	7.80	15.03	29.09
2200	2.83	0.48	0.90	2.06	3.90	7.73	14.91	29.03
2300	2.99	0.48	0.91	2.03	3.88	7.68	14.81	28.63
2400	3.13	0.48	0.90	2.04	3.87	7.67	14.71	27.99
2500	3.30	0.48	0.88	2.06	3.85	7.61	14.60	27.85
2600	3.64	0.48	0.86	2.03	3.79	7.53	14.44	27.62
2700	4.13	0.46	0.83	1.89	3.60	7.33	14.15	26.75
2800	4.67	0.43	0.78	1.77	3.43	7.07	13.81	26.00
2900	5.03	0.43	0.76	1.73	3.35	6.92	13.49	25.19
3000	4.97	0.42	0.75	1.80	3.44	7.02	13.41	24.90

\* Step Attenuation above Thru Loss (TTL Logic 00000).

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# Digital Step Attenuator

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## Typical Performance Data

TEST CONDITIONS: INPUT POWER=-10dBm, Vdd=+3V, TEMPERATURE=+85degC

FREQUENCY (MHz)	INPUT RETURN LOSS AT TTL CONTROL STATE							
	(dB)							
	000000 0 dB	000001 0.5 dB	000010 1.0 dB	000100 2.0 dB	001000 4.0 dB	010000 8.0 dB	100000 16 dB	111111 31.5 dB
0.5	18.90	20.10	20.55	19.10	20.01	21.54	25.96	28.55
1	18.93	20.12	20.57	19.13	20.03	21.56	25.96	28.52
5	19.01	20.22	20.66	19.21	20.12	21.63	26.04	28.68
10	19.04	20.24	20.70	19.25	20.14	21.65	26.09	28.73
50	19.16	20.37	20.87	19.41	20.36	21.88	26.45	29.23
100	19.74	21.07	21.62	20.04	21.03	22.83	28.10	31.40
150	19.87	21.24	21.84	20.22	21.31	23.16	28.82	32.73
200	19.39	20.56	21.20	19.63	20.65	22.38	27.12	30.21
250	18.32	19.33	19.85	18.52	19.34	20.86	24.66	26.94
300	17.40	18.33	18.83	17.53	18.25	19.59	22.96	24.88
350	16.83	17.70	18.18	16.91	17.63	18.81	21.96	23.70
400	16.61	17.46	17.99	16.67	17.31	18.48	21.50	23.21
450	16.70	17.59	18.11	16.73	17.34	18.51	21.55	23.18
500	16.94	17.82	18.37	16.93	17.56	18.74	21.87	23.51
550	17.22	18.11	18.73	17.18	17.82	19.00	22.19	24.01
600	17.38	18.28	19.00	17.35	17.96	19.16	22.60	24.56
700	17.14	18.01	18.78	17.00	17.57	18.78	22.28	24.37
800	16.42	17.20	17.95	16.19	16.63	17.73	20.89	22.63
900	15.99	16.73	17.40	15.62	15.96	16.90	19.63	21.16
1000	16.25	16.88	17.57	15.62	15.84	16.62	19.01	20.18
1100	17.06	17.67	18.26	16.14	16.18	16.83	18.98	19.94
1200	18.11	18.72	19.30	16.96	16.94	17.45	19.58	20.18
1300	19.32	19.98	20.63	17.95	17.89	18.44	20.56	20.87
1400	20.32	21.11	21.89	18.82	18.77	19.39	21.83	21.91
1500	20.82	21.68	22.58	19.22	19.20	20.01	22.91	22.98
1600	20.65	21.53	22.64	19.16	19.24	20.18	23.80	23.96
1700	20.37	21.26	22.33	19.05	19.18	20.29	24.35	24.30
1800	19.79	20.75	21.76	18.96	19.22	20.65	24.89	24.52
1900	19.59	20.57	21.65	19.15	19.67	21.49	26.26	24.99
2000	19.40	20.68	22.13	19.44	20.13	22.65	29.74	26.16
2100	19.40	20.78	23.15	19.45	20.31	23.54	39.37	27.86
2200	18.26	19.69	22.47	18.20	19.14	22.35	36.19	29.27
2300	16.28	17.52	19.94	16.24	17.10	19.75	27.23	28.22
2400	14.20	15.23	17.19	14.31	15.15	17.44	23.15	25.86
2500	12.56	13.41	15.03	12.72	13.51	15.54	20.55	23.52
2600	11.22	12.00	13.43	11.53	12.31	14.24	18.78	21.73
2700	10.14	10.84	12.13	10.50	11.27	13.13	17.37	20.25
2800	9.26	9.92	11.11	9.70	10.42	12.21	16.11	18.89
2900	8.69	9.31	10.35	9.10	9.76	11.41	15.06	17.57
3000	8.18	8.72	9.68	8.56	9.16	10.69	14.04	16.36

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# Digital Step Attenuator

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## Typical Performance Data

TEST CONDITIONS: INPUT POWER=-10dBm, Vdd=+3V, TEMPERATURE=+85degC

FREQUENCY (MHz)	OUTPUT RETURN LOSS AT TTL CONTROL STATE (dB)							
	000000	000001	000010	000100	001000	010000	100000	111111
	0 dB	0.5 dB	1.0 dB	2.0 dB	4.0 dB	8.0 dB	16 dB	31.5 dB
0.5	18.86	19.25	18.85	22.55	24.93	24.84	21.91	32.50
1	18.87	19.26	18.88	22.56	24.89	24.80	21.87	32.25
5	18.92	19.33	18.94	22.59	24.92	24.84	21.94	32.38
10	18.97	19.38	18.98	22.67	24.97	24.90	21.97	32.40
50	19.21	19.63	19.25	23.10	25.55	25.44	22.43	33.83
100	19.80	20.27	19.89	24.10	27.05	27.03	23.55	39.42
150	19.76	20.22	19.86	24.10	26.96	27.16	23.74	37.16
200	18.89	19.32	19.02	22.54	24.75	25.11	22.45	31.08
250	17.69	18.01	17.71	20.68	22.51	22.69	20.72	27.53
300	16.74	17.01	16.78	19.41	21.08	21.23	19.42	25.43
350	16.16	16.45	16.24	18.80	20.29	20.42	18.65	24.39
400	16.00	16.26	16.06	18.60	20.08	20.11	18.38	23.94
450	16.08	16.35	16.15	18.74	20.17	20.22	18.37	24.07
500	16.32	16.57	16.34	19.14	20.61	20.53	18.59	24.45
550	16.63	16.93	16.69	19.57	21.06	20.98	18.94	25.08
600	16.78	17.03	16.88	19.83	21.39	21.29	19.15	25.68
700	16.67	16.93	16.72	19.73	21.25	21.11	19.00	25.70
800	16.09	16.30	16.11	18.91	20.26	20.05	18.03	24.08
900	15.66	15.77	15.54	18.16	19.29	18.88	17.02	22.16
1000	15.79	15.81	15.52	17.99	18.77	18.19	16.38	20.67
1100	16.31	16.25	15.89	18.27	18.77	18.00	16.23	19.79
1200	17.19	17.08	16.60	18.92	19.18	18.28	16.56	19.47
1300	18.18	18.07	17.59	19.93	19.95	19.01	17.30	19.62
1400	19.11	18.96	18.43	20.88	20.85	19.90	18.23	19.91
1500	19.79	19.69	19.12	21.80	21.65	20.73	19.09	20.19
1600	20.29	20.19	19.68	22.51	22.18	21.36	19.83	20.23
1700	21.04	20.95	20.51	23.13	22.63	21.76	20.50	19.74
1800	22.48	22.34	21.83	24.27	23.06	22.40	21.91	19.25
1900	25.74	25.79	25.09	26.15	23.66	23.23	24.38	18.55
2000	31.12	31.24	30.16	28.14	24.24	24.42	29.41	18.13
2100	26.56	26.45	26.29	27.34	24.49	24.73	32.54	18.07
2200	20.62	20.56	20.51	23.63	23.14	23.41	25.00	18.28
2300	17.18	17.20	17.12	20.84	21.81	21.89	21.11	19.20
2400	14.82	14.81	14.84	18.60	20.17	20.29	18.56	20.54
2500	13.13	13.25	13.23	16.87	18.64	19.02	17.00	21.78
2600	12.15	12.30	12.35	15.86	17.84	18.41	16.46	23.32
2700	11.63	11.79	11.90	15.37	17.49	18.23	16.29	24.90
2800	11.24	11.39	11.51	14.87	16.90	17.79	15.99	25.35
2900	10.75	10.95	11.06	14.12	15.97	16.86	15.32	24.12
3000	9.90	10.08	10.17	12.87	14.46	15.29	13.99	21.46

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