

RF Transformer

MTX2-133+

Typical Performance Data

Temperature = +25°C

FREQUENCY (GHz)	AVERAGE INSERTION LOSS ⁽¹⁾ (dB)	INPUT RETURN LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE ⁽²⁾ (deg.)	CMRR (dB)
1.0	8.45	2.26	0.65	11.55	22.58
1.2	6.24	3.40	0.72	9.13	21.61
1.5	4.02	5.54	0.77	6.39	21.02
2.0	2.17	9.88	0.71	3.34	21.80
2.5	1.54	13.45	0.60	1.75	23.30
3.0	1.41	13.72	0.51	0.82	24.66
3.5	1.46	12.70	0.42	0.42	26.43
4.0	1.53	11.90	0.32	0.58	28.77
4.5	1.57	11.61	0.24	0.55	31.52
5.0	1.53	12.12	0.17	0.36	36.03
5.5	1.45	13.41	0.11	0.14	40.00
6.0	1.40	14.93	0.09	0.41	43.51
6.2	1.40	15.25	0.11	0.55	40.27
6.4	1.42	15.20	0.16	1.04	35.06
6.6	1.46	14.81	0.19	1.41	33.17
6.8	1.52	14.06	0.18	1.95	33.88
7.0	1.59	13.30	0.17	2.56	35.07
7.2	1.67	12.68	0.14	2.88	37.68
7.4	1.77	12.03	0.11	3.13	44.30
7.6	1.87	11.51	0.11	3.44	38.77
7.8	1.96	11.26	0.10	3.59	38.80
8.0	2.04	11.12	0.08	3.65	41.48
8.2	2.12	11.00	0.07	3.90	44.70
8.4	2.17	11.07	0.12	4.05	37.15
8.6	2.22	11.29	0.19	4.01	33.21
8.8	2.26	11.53	0.27	3.89	30.54
9.0	2.28	11.92	0.34	3.55	28.84
9.2	2.30	12.52	0.39	3.07	27.71
9.4	2.32	13.21	0.41	2.51	27.29
9.6	2.33	13.95	0.39	1.84	27.77
9.8	2.34	14.84	0.36	1.37	28.39
10.0	2.35	15.77	0.30	1.08	29.87
10.5	2.42	17.20	0.16	0.85	34.90
11.0	2.58	16.95	0.11	1.03	40.53
11.5	2.84	15.81	0.10	1.25	39.10
12.0	3.24	15.71	0.05	1.38	45.50
12.5	3.83	19.91	0.12	0.94	40.93
13.0	5.11	20.38	0.10	0.54	46.94
13.5	8.41	9.83	0.08	1.73	42.51
14.0	16.27	5.55	0.07	2.42	45.61

⁽¹⁾ Above 3 dB theoretical loss

⁽²⁾ Relative to 180°

RF Transformer

MTX2-133+

Typical Performance Data

Temperature = -45°C

FREQUENCY (GHz)	AVERAGE INSERTION LOSS ⁽¹⁾ (dB)	INPUT RETURN LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE ⁽²⁾ (deg.)	CMRR (dB)
1.0	8.21	2.00	0.70	8.95	21.85
1.2	5.97	3.08	0.74	6.94	21.40
1.5	3.71	5.16	0.76	4.74	21.22
2.0	1.85	9.53	0.65	2.41	22.57
2.5	1.25	13.08	0.54	1.46	24.08
3.0	1.12	13.62	0.49	0.81	24.99
3.5	1.16	12.95	0.40	0.36	26.82
4.0	1.23	12.22	0.28	0.51	29.74
4.5	1.27	11.83	0.22	0.61	31.99
5.0	1.23	12.32	0.20	0.77	34.09
5.5	1.14	13.73	0.11	0.63	53.74
6.0	1.09	15.09	0.09	0.98	40.52
6.2	1.09	15.26	0.08	1.44	46.35
6.4	1.10	15.13	0.13	2.01	36.80
6.6	1.13	14.75	0.16	2.40	34.58
6.8	1.18	14.05	0.14	3.03	35.90
7.0	1.24	13.31	0.12	3.69	38.09
7.2	1.32	12.65	0.10	4.00	44.97
7.4	1.42	11.89	0.11	4.27	38.82
7.6	1.51	11.25	0.12	4.59	37.51
7.8	1.61	10.91	0.11	4.70	38.88
8.0	1.68	10.70	0.09	4.76	45.95
8.2	1.75	10.57	0.11	5.06	39.45
8.4	1.80	10.64	0.15	5.24	35.22
8.6	1.83	10.86	0.22	5.30	31.91
8.8	1.86	11.11	0.30	5.28	29.60
9.0	1.88	11.50	0.37	5.03	27.93
9.2	1.90	12.03	0.43	4.62	26.59
9.4	1.91	12.57	0.47	4.08	25.94
9.6	1.92	13.09	0.46	3.37	26.13
9.8	1.92	13.69	0.44	2.85	26.45
10.0	1.93	14.28	0.38	2.48	27.64
10.5	1.97	15.18	0.20	2.11	32.65
11.0	2.09	15.41	0.11	2.42	40.66
11.5	2.30	14.86	0.11	2.87	38.10
12.0	2.62	14.71	0.03	3.09	52.59
12.5	3.07	17.66	0.09	2.80	42.51
13.0	4.02	20.61	0.10	1.69	39.20
13.5	6.66	10.36	0.24	1.03	31.25
14.0	13.25	5.34	0.38	1.77	27.28

⁽¹⁾ Above 3 dB theoretical loss

⁽²⁾ Relative to 180°

RF Transformer

MTX2-133+

Typical Performance Data

Temperature = +85°C

FREQUENCY (GHz)	AVERAGE INSERTION LOSS ⁽¹⁾ (dB)	INPUT RETURN LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE ⁽²⁾ (deg.)	CMRR (dB)
1.0	8.66	2.45	0.58	13.81	23.48
1.2	6.47	3.63	0.69	11.10	22.01
1.5	4.26	5.80	0.78	8.01	20.99
2.0	2.41	10.18	0.74	4.49	21.42
2.5	1.76	13.70	0.64	2.52	22.69
3.0	1.62	13.74	0.55	1.33	24.07
3.5	1.67	12.57	0.44	0.54	25.84
4.0	1.75	11.74	0.34	0.58	28.25
4.5	1.79	11.43	0.24	0.55	31.25
5.0	1.75	11.92	0.16	0.37	36.27
5.5	1.67	13.24	0.11	0.06	39.56
6.0	1.62	14.86	0.09	0.38	46.62
6.2	1.62	15.23	0.13	0.55	38.17
6.4	1.64	15.21	0.19	1.02	33.56
6.6	1.68	14.82	0.23	1.42	31.72
6.8	1.75	14.10	0.22	2.00	32.05
7.0	1.83	13.37	0.21	2.65	32.86
7.2	1.91	12.76	0.18	3.02	34.49
7.4	2.02	12.13	0.13	3.27	39.88
7.6	2.12	11.61	0.10	3.58	43.45
7.8	2.22	11.37	0.09	3.71	40.91
8.0	2.30	11.25	0.07	3.74	42.41
8.2	2.38	11.16	0.04	3.96	56.62
8.4	2.44	11.27	0.09	4.11	40.07
8.6	2.49	11.54	0.16	4.08	35.38
8.8	2.53	11.87	0.23	3.96	32.24
9.0	2.56	12.39	0.29	3.61	30.28
9.2	2.58	13.15	0.34	3.13	29.01
9.4	2.60	14.01	0.36	2.57	28.60
9.6	2.62	14.93	0.34	1.92	29.24
9.8	2.63	16.03	0.30	1.47	30.12
10.0	2.66	17.13	0.24	1.19	32.09
10.5	2.75	18.69	0.09	1.08	39.54
11.0	2.94	18.09	0.11	1.40	38.43
11.5	3.25	16.65	0.09	1.71	39.48
12.0	3.71	16.68	0.08	1.75	41.21
12.5	4.44	22.74	0.17	0.97	34.88
13.0	6.04	18.77	0.16	0.89	35.71
13.5	9.96	9.31	0.05	2.49	46.01
14.0	19.32	5.66	0.46	5.95	25.76

⁽¹⁾ Above 3 dB theoretical loss

⁽²⁾ Relative to 180°

