2SK2595

Silicon N-Channel MOS FET
UHF Power Amplifier

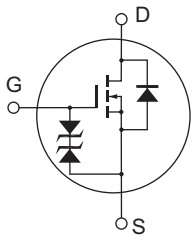
REJ03G0206-0300
Rev.3.00
Aug.26.2004

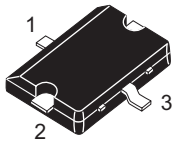
Features

- High power output, High gain, High efficiency
  PG = 7.8 dB, Pout = 5.37 W, ηD = 50% min. (f = 836.5 MHz)
- Compact package capable of surface mounting

Outline

RP8P





1. Gate
2. Source
3. Drain

Note: Marking is "AX".

This Device is sensitive to Electro Static Discharge. An Adequate handling procedure is requested.

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DSS}	17	V
Gate to source voltage	V_{GSS}	±10	V
Drain current	I_D	1.1	A
Drain peak current	$I_{D(pulse)}$ Note1	5	A
Channel dissipation	Pch Note2	20	W
Channel temperature	Tch	150	°C
Storage temperature	Tstg	– 45 to +150	°C

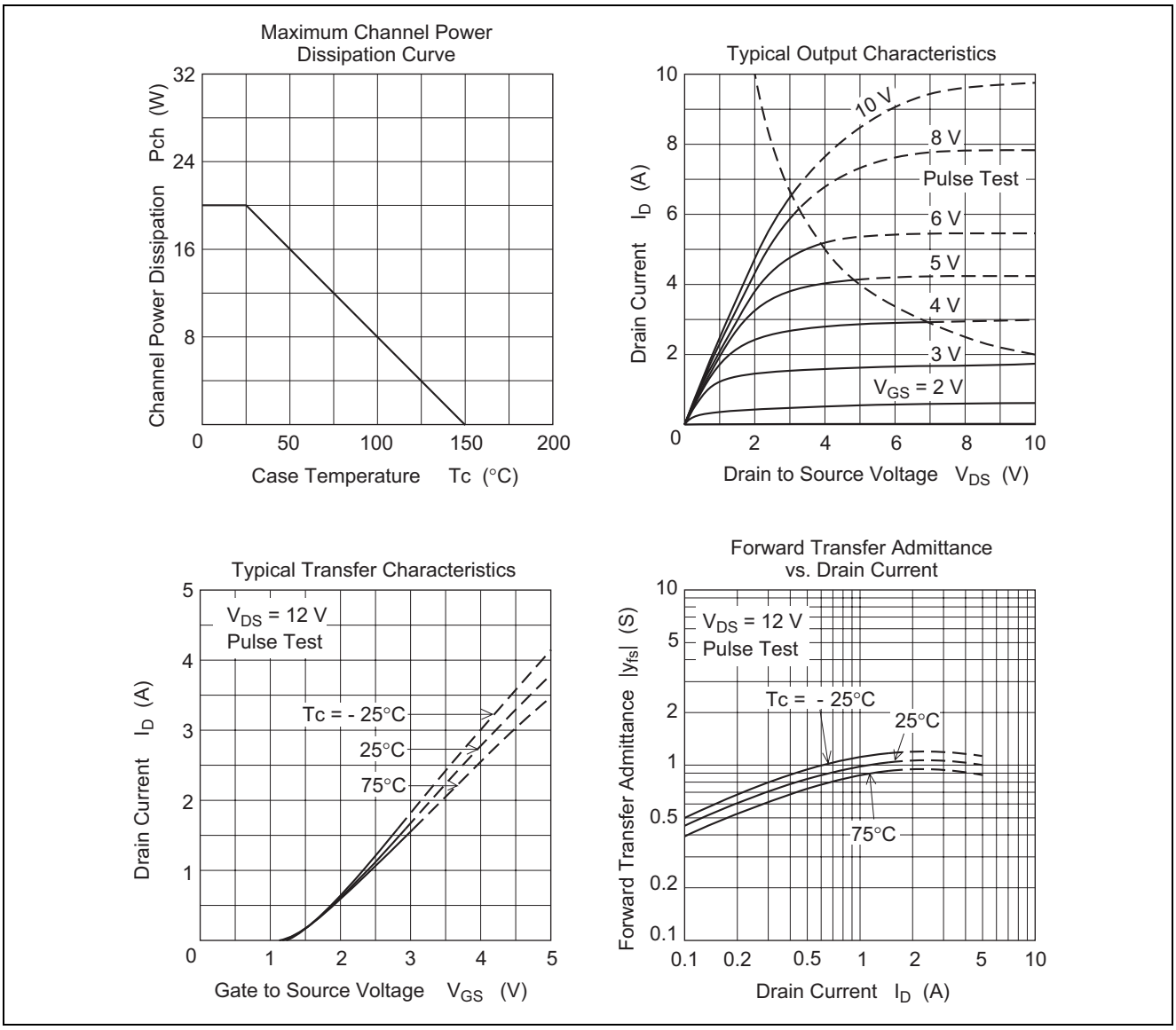
Notes: 1. PW ≤ 10 µs, duty cycle ≤ 1%
2. Value at Tc = 25°C

Electrical Characteristics

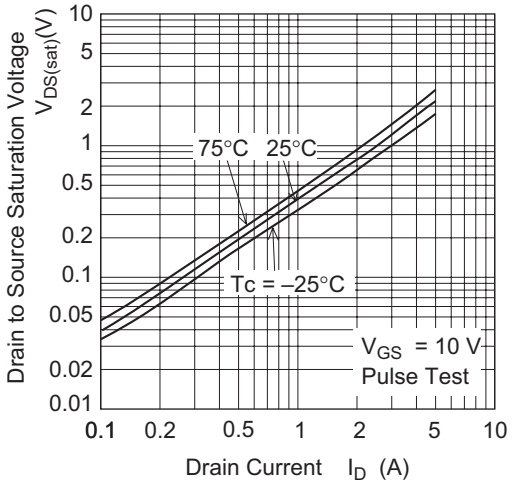
(Ta = 25°C)

Item	Symbol	Min.	Typ	Max.	Unit	Test Conditions
Zero gate voltage drain current	I_{DSS}	—	—	10	µA	V_{DS} = 12 V, V_{GS} = 0
Gate to source leak current	I_{GSS}	—	—	±5.0	µA	V_{GS} = ±10 V, V_{DS} = 0
Gate to source cutoff voltage	$V_{GS(off)}$	0.6	—	1.3	V	V_{DS} = 12 V, I_D = 6 mA
Input capacitance	Ciss	—	68	—	pF	V_{GS} = 5 V, V_{DS} = 0, f = 1 MHz
Output capacitance	Coss	—	27	—	pF	V_{DS} = 12 V, V_{GS} = 0, f = 1 MHz
Output Power	Pout	5.37	7	—	W	V_{DS} = 12 V, I_{DO} = 500 mA, f = 836.5 MHz, Pin = 0.89 W
Drain Efficiency	ηD	50	60	—	%	

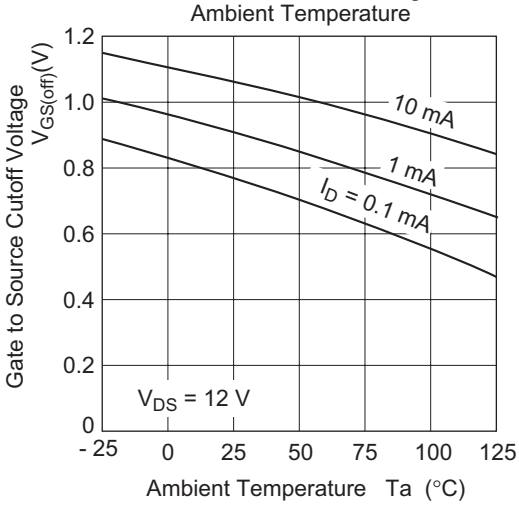
Main Characteristics



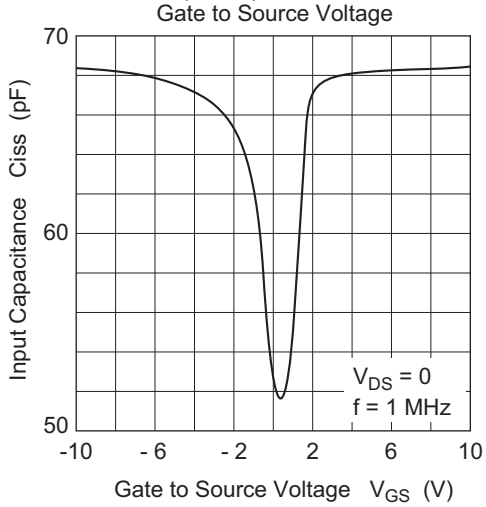
Drain to Source Saturation Voltage vs. Drain Current



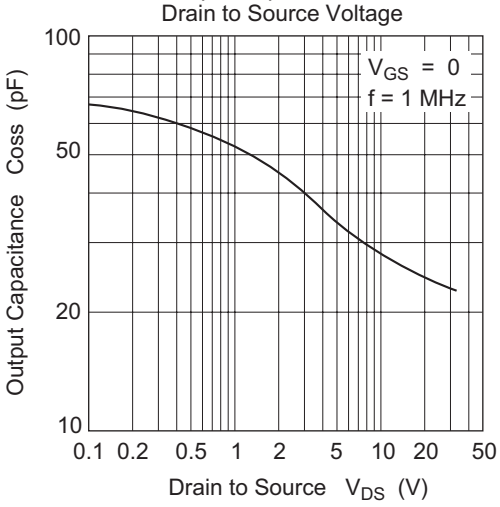
Gate to Source Cutoff Voltage vs. Ambient Temperature



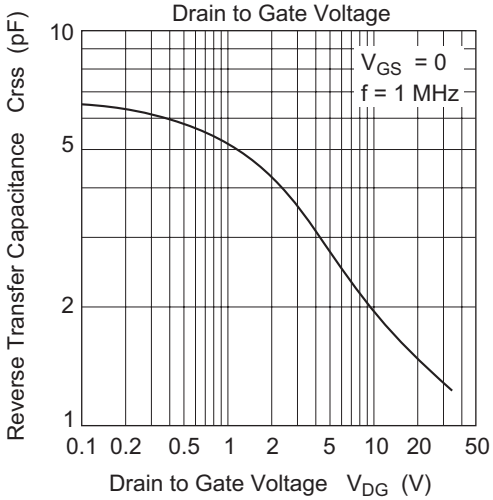
Input Capacitance vs. Gate to Source Voltage



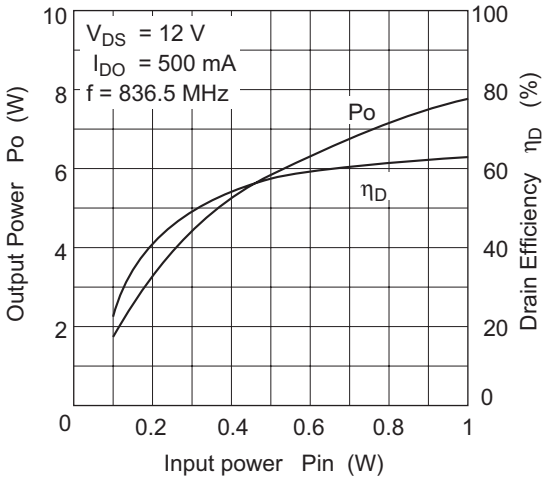
Output Capacitance vs. Drain to Source Voltage



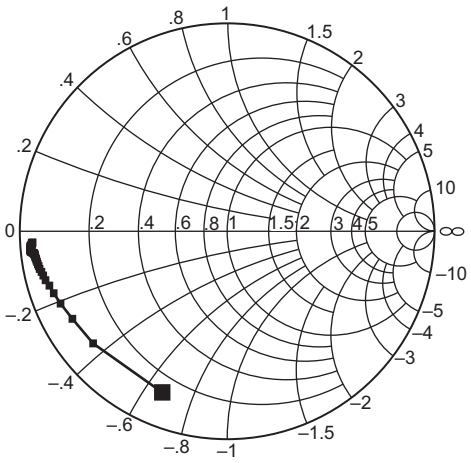
Reverse Transfer Capacitance vs. Drain to Gate Voltage



Output Power, Drain Efficiency vs. Input Power



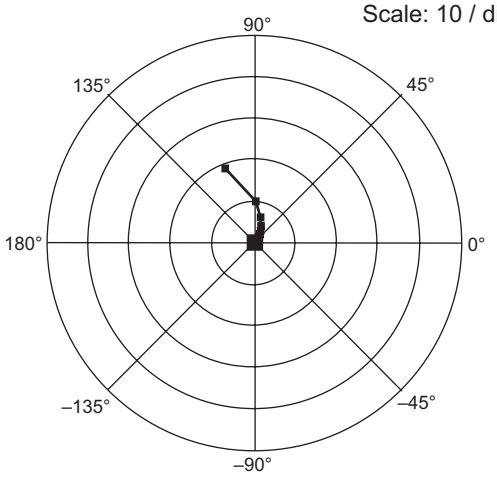
S_{11} Parameter vs. Frequency



Test condition: V_{DS} = 12 V, Z_O = 50 Ω
50 to 2550 MHz (50 MHz step)
■—■ (I_D = 500 mA)

S_{21} Parameter vs. Frequency

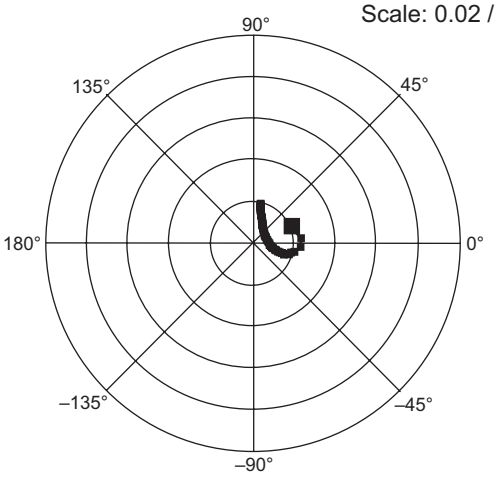
Scale: 10 / div.



Test condition: V_{DS} = 12 V, Z_O = 50 Ω
50 to 2550 MHz (50 MHz step)
■—■ (I_D = 500 mA)

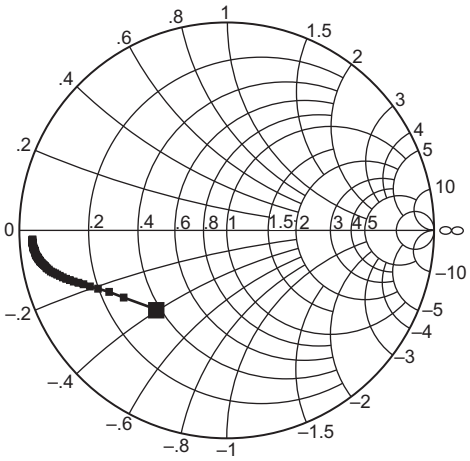
S_{12} Parameter vs. Frequency

Scale: 0.02 / div.



Test condition: V_{DS} = 12 V, Z_O = 50 Ω
50 to 2550 MHz (50 MHz step)
■—■ (I_D = 500 mA)

S_{22} Parameter vs. Frequency



Test condition: V_{DS} = 12 V, Z_O = 50 Ω
50 to 2550 MHz (50 MHz step)
■—■ (I_D = 500 mA)

S Parameter

(V_{DS} = 4.5 V, I_D = 300 mA, Z_O = 50 Ω)

f (MHz)	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
50	0.814	-126.4	14.75	105.9	0.0257	15.0	0.630	-152.3
100	0.818	-149.2	7.58	85.9	0.0275	2.3	0.700	-161.2
150	0.830	-156.6	4.89	75.0	0.0272	-9.2	0.732	-163.7
200	0.849	-160.6	3.42	67.2	0.0249	-14.6	0.763	-165.2
250	0.866	-163.2	2.56	61.0	0.0235	-19.0	0.789	-166.2
300	0.879	-165.0	1.99	56.1	0.0216	-19.7	0.811	-167.1
350	0.893	-166.5	1.60	52.1	0.0196	-22.7	0.827	-167.9
400	0.902	-167.7	1.31	49.0	0.0185	-23.0	0.842	-168.6
450	0.909	-168.7	1.10	46.3	0.0171	-23.9	0.852	-169.2
500	0.917	-169.5	0.93	44.0	0.0158	-24.0	0.862	-169.8
550	0.921	-170.3	0.81	42.0	0.0146	-22.9	0.871	-170.3
600	0.925	-170.9	0.71	40.3	0.0138	-21.7	0.878	-170.8
650	0.927	-171.5	0.62	38.7	0.0128	-21.5	0.884	-171.2
700	0.930	-171.9	0.56	37.3	0.0119	-19.5	0.889	-171.6
750	0.931	-172.3	0.50	35.9	0.0112	-16.8	0.894	-171.9
800	0.932	-172.6	0.45	34.7	0.0106	-14.2	0.899	-172.2
850	0.933	-172.9	0.41	33.6	0.0096	-12.6	0.903	-172.6
900	0.934	-173.1	0.38	32.5	0.0093	-8.3	0.906	-172.9
950	0.934	-173.3	0.35	31.5	0.0089	-6.2	0.909	-173.0
1000	0.935	-173.5	0.32	30.6	0.0085	-1.3	0.911	-173.3
1050	0.935	-173.5	0.30	29.8	0.0083	2.2	0.913	-173.6
1100	0.935	-173.6	0.28	28.8	0.0080	6.6	0.916	-173.7
1150	0.936	-173.6	0.26	27.9	0.0077	12.7	0.918	-174.0
1200	0.936	-173.5	0.24	27.3	0.0076	17.6	0.921	-174.1
1250	0.939	-173.3	0.22	26.7	0.0076	23.9	0.924	-174.4
1300	0.946	-173.3	0.21	26.5	0.0077	30.3	0.924	-174.6
1350	0.954	-173.6	0.20	26.6	0.0082	33.8	0.926	-174.8
1400	0.962	-174.1	0.19	26.6	0.0084	37.6	0.927	-174.9
1450	0.963	-174.6	0.18	26.2	0.0088	39.5	0.928	-175.1
1500	0.961	-174.8	0.17	25.7	0.0089	41.8	0.929	-175.2
1550	0.959	-175.1	0.17	25.0	0.0090	44.4	0.932	-175.3
1600	0.956	-175.2	0.16	24.4	0.0094	47.9	0.933	-175.5
1650	0.954	-175.3	0.15	23.7	0.0097	50.7	0.934	-175.8
1700	0.953	-175.5	0.15	23.1	0.0099	53.4	0.935	-175.9
1750	0.951	-175.6	0.14	22.6	0.0102	54.7	0.936	-176.1
1800	0.951	-175.7	0.14	22.1	0.0106	57.5	0.936	-176.3
1850	0.951	-175.8	0.13	21.6	0.0111	59.1	0.937	-176.5
1900	0.950	-175.8	0.12	21.2	0.0114	62.0	0.937	-176.6
1950	0.951	-175.9	0.12	20.8	0.0118	63.6	0.938	-176.9
2000	0.951	-175.9	0.12	20.5	0.0121	64.7	0.938	-177.0
2050	0.949	-175.9	0.11	20.3	0.0125	66.5	0.939	-177.2
2100	0.948	-176.0	0.11	20.1	0.0133	68.2	0.939	-177.3
2150	0.946	-176.1	0.10	19.9	0.0134	69.7	0.939	-177.6
2200	0.947	-176.2	0.10	19.7	0.0142	70.8	0.940	-177.6
2250	0.946	-176.2	0.10	19.7	0.0145	71.0	0.941	-177.8
2300	0.946	-176.4	0.09	19.4	0.0153	72.6	0.941	-178.0
2350	0.946	-176.5	0.09	19.3	0.0157	73.2	0.942	-178.2
2400	0.947	-176.5	0.09	19.3	0.0161	73.3	0.941	-178.5
2450	0.945	-176.5	0.09	19.1	0.0165	73.9	0.941	-178.8
2500	0.944	-176.7	0.08	19.1	0.0168	75.4	0.941	-178.9
2550	0.943	-176.7	0.08	19.3	0.0173	75.5	0.939	-179.0

(V_{DS} = 6 V, I_D = 300 mA, Z_O = 50 Ω)

f (MHz)	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
50	0.813	-123.5	16.60	106.7	0.0261	19.7	0.595	-146.1
100	0.819	-147.4	8.55	85.9	0.0266	-1.8	0.671	-157.1
150	0.831	-155.2	5.50	74.7	0.0265	-8.1	0.707	-160.4
200	0.852	-159.6	3.84	66.7	0.0238	-15.0	0.743	-162.3
250	0.868	-162.4	2.86	60.5	0.0219	-18.9	0.772	-163.7
300	0.881	-164.4	2.23	55.7	0.0201	-21.0	0.796	-164.9
350	0.895	-166.0	1.78	51.8	0.0190	-23.2	0.813	-165.9
400	0.904	-167.3	1.46	48.7	0.0176	-23.9	0.829	-166.7
450	0.911	-168.4	1.22	46.0	0.0163	-23.7	0.841	-167.5
500	0.918	-169.3	1.04	43.8	0.0151	-23.1	0.851	-168.2
550	0.923	-170.1	0.90	41.7	0.0139	-23.2	0.861	-168.8
600	0.926	-170.6	0.79	40.0	0.0131	-22.2	0.870	-169.4
650	0.928	-171.2	0.70	38.3	0.0122	-20.0	0.876	-169.8
700	0.931	-171.7	0.62	36.8	0.0115	-18.8	0.882	-170.3
750	0.932	-172.1	0.56	35.4	0.0107	-16.9	0.887	-170.6
800	0.933	-172.4	0.51	34.1	0.0101	-14.7	0.893	-171.0
850	0.934	-172.8	0.46	32.8	0.0095	-10.2	0.897	-171.4
900	0.935	-173.0	0.42	31.7	0.0089	-7.1	0.901	-171.7
950	0.936	-173.2	0.39	30.6	0.0084	-3.8	0.904	-171.9
1000	0.936	-173.4	0.36	29.6	0.0081	1.1	0.906	-172.3
1050	0.937	-173.4	0.33	28.7	0.0079	4.6	0.909	-172.5
1100	0.937	-173.5	0.31	27.7	0.0074	10.5	0.913	-172.7
1150	0.937	-173.6	0.29	26.7	0.0072	13.7	0.915	-173.0
1200	0.937	-173.5	0.27	25.9	0.0073	19.9	0.918	-173.2
1250	0.939	-173.5	0.25	25.2	0.0074	25.8	0.922	-173.4
1300	0.943	-173.4	0.23	24.6	0.0072	32.2	0.922	-173.7
1350	0.948	-173.5	0.22	24.3	0.0079	38.3	0.925	-173.9
1400	0.957	-173.8	0.21	24.3	0.0083	42.0	0.926	-174.1
1450	0.961	-174.1	0.20	24.2	0.0086	43.6	0.927	-174.3
1500	0.963	-174.5	0.19	24.0	0.0087	46.9	0.928	-174.5
1550	0.962	-174.9	0.18	23.4	0.0090	47.5	0.931	-174.6
1600	0.958	-175.1	0.17	22.9	0.0094	50.3	0.932	-174.8
1650	0.955	-175.2	0.17	22.1	0.0096	54.1	0.933	-175.1
1700	0.954	-175.4	0.16	21.6	0.0101	55.7	0.935	-175.2
1750	0.952	-175.6	0.15	21.0	0.0103	58.8	0.936	-175.4
1800	0.952	-175.6	0.15	20.5	0.0106	61.0	0.936	-175.7
1850	0.952	-175.8	0.14	19.9	0.0110	63.1	0.938	-175.8
1900	0.951	-175.8	0.14	19.4	0.0113	64.2	0.937	-176.0
1950	0.951	-175.8	0.13	19.0	0.0120	66.3	0.938	-176.3
2000	0.951	-175.9	0.13	18.6	0.0123	67.7	0.938	-176.4
2050	0.949	-175.8	0.12	18.2	0.0127	69.5	0.939	-176.6
2100	0.948	-175.9	0.12	18.0	0.0133	70.7	0.940	-176.8
2150	0.947	-176.0	0.11	17.8	0.0138	71.9	0.940	-177.0
2200	0.947	-176.2	0.11	17.5	0.0144	72.9	0.941	-177.1
2250	0.947	-176.1	0.11	17.3	0.0149	73.8	0.942	-177.3
2300	0.946	-176.3	0.10	17.1	0.0153	74.0	0.941	-177.5
2350	0.946	-176.4	0.10	17.0	0.0158	74.7	0.943	-177.7
2400	0.947	-176.5	0.10	16.9	0.0163	75.3	0.942	-178.0
2450	0.945	-176.4	0.09	16.7	0.0166	75.9	0.942	-178.3
2500	0.944	-176.6	0.09	16.7	0.0174	76.2	0.942	-178.5
2550	0.943	-176.6	0.09	16.9	0.0178	77.0	0.940	-178.6

(V_{DS} = 7.5 V, I_D = 300 mA, Z_O = 50 Ω)

f (MHz)	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
50	0.817	-120.2	17.99	107.7	0.0266	16.9	0.567	-140.0
100	0.820	-145.5	9.32	86.1	0.0271	1.4	0.646	-153.4
150	0.836	-153.9	5.98	74.6	0.0255	-7.4	0.687	-157.4
200	0.856	-158.7	4.16	66.6	0.0229	-16.2	0.726	-159.8
250	0.873	-161.8	3.09	60.4	0.0214	-17.7	0.757	-161.5
300	0.886	-164.0	2.41	55.6	0.0204	-20.7	0.783	-163.0
350	0.899	-165.7	1.93	51.7	0.0187	-22.6	0.802	-164.2
400	0.907	-167.0	1.58	48.6	0.0167	-22.6	0.819	-165.1
450	0.914	-168.1	1.33	46.0	0.0157	-22.9	0.831	-166.0
500	0.920	-169.1	1.13	43.6	0.0147	-22.9	0.842	-166.8
550	0.923	-169.9	0.98	41.5	0.0136	-23.8	0.852	-167.4
600	0.927	-170.5	0.86	39.7	0.0126	-21.4	0.862	-168.0
650	0.929	-171.1	0.76	37.9	0.0118	-19.3	0.869	-168.6
700	0.931	-171.6	0.68	36.3	0.0109	-18.5	0.875	-169.1
750	0.932	-172.0	0.61	34.8	0.0104	-16.7	0.882	-169.5
800	0.933	-172.4	0.55	33.3	0.0095	-13.6	0.888	-169.8
850	0.933	-172.7	0.50	32.0	0.0091	-9.5	0.893	-170.3
900	0.935	-172.9	0.46	30.8	0.0086	-7.1	0.897	-170.6
950	0.935	-173.1	0.42	29.6	0.0080	-2.2	0.901	-170.9
1000	0.935	-173.3	0.39	28.6	0.0076	1.1	0.904	-171.3
1050	0.936	-173.3	0.36	27.5	0.0072	6.5	0.907	-171.6
1100	0.936	-173.4	0.33	26.5	0.0071	11.6	0.911	-171.8
1150	0.936	-173.5	0.31	25.4	0.0068	16.1	0.913	-172.1
1200	0.937	-173.5	0.29	24.6	0.0070	24.8	0.917	-172.4
1250	0.938	-173.4	0.27	23.8	0.0069	29.9	0.921	-172.6
1300	0.941	-173.4	0.25	23.1	0.0070	35.7	0.921	-172.9
1350	0.946	-173.5	0.24	22.6	0.0074	40.3	0.924	-173.1
1400	0.954	-173.7	0.22	22.5	0.0080	43.8	0.925	-173.3
1450	0.959	-174.0	0.21	22.2	0.0084	47.3	0.927	-173.6
1500	0.962	-174.3	0.20	22.1	0.0086	49.9	0.928	-173.8
1550	0.962	-174.7	0.19	21.7	0.0090	52.7	0.930	-173.9
1600	0.960	-174.9	0.18	21.3	0.0094	55.3	0.932	-174.1
1650	0.957	-175.2	0.18	20.7	0.0096	57.5	0.933	-174.5
1700	0.956	-175.3	0.17	20.1	0.0100	59.4	0.935	-174.6
1750	0.953	-175.5	0.16	19.6	0.0106	61.7	0.936	-174.8
1800	0.953	-175.6	0.16	19.1	0.0107	63.4	0.937	-175.1
1850	0.952	-175.8	0.15	18.4	0.0111	65.9	0.938	-175.3
1900	0.951	-175.8	0.14	18.0	0.0117	66.6	0.938	-175.5
1950	0.951	-175.8	0.14	17.4	0.0120	68.4	0.939	-175.8
2000	0.951	-175.9	0.13	17.1	0.0126	70.4	0.939	-175.9
2050	0.949	-175.9	0.13	16.6	0.0130	71.7	0.939	-176.1
2100	0.948	-175.9	0.12	16.3	0.0134	72.6	0.940	-176.3
2150	0.946	-176.1	0.12	15.9	0.0139	73.7	0.941	-176.5
2200	0.946	-176.2	0.12	15.7	0.0146	74.5	0.942	-176.7
2250	0.946	-176.2	0.11	15.5	0.0151	75.8	0.943	-176.8
2300	0.945	-176.3	0.11	15.1	0.0156	75.9	0.942	-177.1
2350	0.945	-176.5	0.10	15.0	0.0161	75.9	0.943	-177.3
2400	0.946	-176.5	0.10	14.9	0.0167	76.9	0.943	-177.6
2450	0.945	-176.5	0.10	14.5	0.0171	77.0	0.943	-177.8
2500	0.943	-176.7	0.09	14.5	0.0176	78.2	0.942	-178.1
2550	0.942	-176.7	0.09	14.5	0.0180	78.0	0.941	-178.2

(V_{DS} = 12 V, I_D = 300 mA, Z_O = 50 Ω)

f (MHz)	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
50	0.835	-112.4	19.94	111.2	0.0210	19.4	0.509	-128.1
100	0.840	-140.6	10.54	87.7	0.0250	2.9	0.592	-145.3
150	0.852	-150.8	6.75	75.7	0.0223	-7.7	0.640	-151.1
200	0.872	-156.6	4.69	67.5	0.0215	-12.4	0.685	-154.5
250	0.886	-160.3	3.50	61.3	0.0199	-16.4	0.718	-156.7
300	0.896	-162.9	2.74	56.6	0.0185	-19.0	0.746	-158.6
350	0.907	-164.9	2.21	52.5	0.0169	-20.1	0.768	-160.1
400	0.914	-166.4	1.83	49.2	0.0157	-21.9	0.788	-161.2
450	0.919	-167.6	1.53	46.2	0.0147	-22.3	0.804	-162.2
500	0.925	-168.6	1.31	43.5	0.0136	-22.7	0.818	-163.2
550	0.928	-169.6	1.14	41.0	0.0126	-22.5	0.831	-164.0
600	0.930	-170.2	1.00	38.8	0.0118	-22.0	0.843	-164.7
650	0.932	-170.9	0.88	36.6	0.0109	-20.2	0.853	-165.3
700	0.934	-171.4	0.79	34.7	0.0098	-18.3	0.862	-166.0
750	0.935	-171.9	0.71	32.8	0.0092	-16.3	0.871	-166.5
800	0.936	-172.3	0.64	31.0	0.0085	-12.5	0.878	-167.0
850	0.936	-172.7	0.58	29.4	0.0078	-9.5	0.885	-167.6
900	0.937	-172.9	0.53	28.0	0.0075	-2.8	0.891	-168.1
950	0.937	-173.2	0.48	26.5	0.0070	1.0	0.896	-168.4
1000	0.938	-173.4	0.45	25.2	0.0064	5.0	0.900	-169.0
1050	0.937	-173.5	0.41	24.0	0.0064	11.0	0.904	-169.4
1100	0.936	-173.7	0.38	22.7	0.0060	17.4	0.909	-169.7
1150	0.936	-173.8	0.35	21.5	0.0060	27.5	0.912	-170.1
1200	0.935	-173.8	0.33	20.5	0.0061	32.9	0.916	-170.4
1250	0.935	-173.8	0.30	19.5	0.0062	37.6	0.920	-170.8
1300	0.936	-173.7	0.28	18.7	0.0067	46.3	0.922	-171.1
1350	0.939	-173.8	0.26	17.9	0.0069	50.3	0.925	-171.4
1400	0.946	-173.8	0.25	17.5	0.0075	53.6	0.926	-171.7
1450	0.950	-173.9	0.23	17.2	0.0080	56.9	0.928	-172.0
1500	0.955	-174.0	0.22	17.0	0.0085	60.2	0.929	-172.3
1550	0.958	-174.4	0.21	16.7	0.0090	61.2	0.932	-172.5
1600	0.959	-174.6	0.20	16.4	0.0094	63.3	0.934	-172.8
1650	0.959	-174.9	0.19	16.0	0.0101	65.8	0.935	-173.1
1700	0.959	-175.2	0.18	15.7	0.0102	68.0	0.937	-173.4
1750	0.958	-175.5	0.17	15.3	0.0109	68.1	0.938	-173.6
1800	0.958	-175.6	0.17	14.9	0.0113	70.7	0.939	-173.9
1850	0.958	-175.8	0.16	14.5	0.0118	71.0	0.940	-174.1
1900	0.957	-175.9	0.15	14.2	0.0122	72.3	0.940	-174.4
1950	0.957	-176.0	0.15	13.8	0.0127	73.1	0.941	-174.7
2000	0.957	-176.2	0.14	13.4	0.0132	74.4	0.941	-174.9
2050	0.955	-176.2	0.14	12.9	0.0137	75.4	0.941	-175.1
2100	0.954	-176.3	0.13	12.6	0.0142	76.7	0.943	-175.3
2150	0.952	-176.4	0.13	12.1	0.0148	77.6	0.943	-175.6
2200	0.952	-176.6	0.12	11.7	0.0153	77.7	0.944	-175.7
2250	0.952	-176.6	0.12	11.5	0.0159	78.7	0.945	-175.9
2300	0.951	-176.8	0.12	11.0	0.0163	79.1	0.945	-176.2
2350	0.951	-177.0	0.11	10.8	0.0169	78.7	0.946	-176.4
2400	0.952	-177.1	0.11	10.5	0.0173	79.2	0.945	-176.7
2450	0.950	-177.0	0.10	10.3	0.0179	79.5	0.945	-177.0
2500	0.949	-177.3	0.10	10.0	0.0185	80.0	0.945	-177.2
2550	0.948	-177.3	0.10	10.1	0.0191	80.1	0.944	-177.4

(V_{DS} = 4.5 V, I_D = 500 mA, Z_O = 50 Ω)

f (MHz)	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
50	0.818	-126.6	14.27	106.4	0.0256	19.6	0.656	-157.5
100	0.829	-149.6	7.33	86.6	0.0256	0.6	0.725	-164.6
150	0.840	-157.0	4.73	76.1	0.0242	-7.6	0.752	-166.6
200	0.859	-161.1	3.32	68.7	0.0229	-12.1	0.778	-167.8
250	0.873	-163.7	2.49	62.9	0.0207	-15.8	0.800	-168.5
300	0.885	-165.6	1.95	58.5	0.0192	-18.4	0.818	-169.3
350	0.898	-167.0	1.57	54.8	0.0178	-20.1	0.831	-169.9
400	0.906	-168.2	1.30	51.9	0.0169	-19.5	0.844	-170.4
450	0.912	-169.2	1.09	49.5	0.0157	-19.3	0.852	-170.8
500	0.919	-170.0	0.93	47.5	0.0148	-19.1	0.861	-171.2
550	0.923	-170.7	0.81	45.5	0.0138	-18.1	0.870	-171.8
600	0.926	-171.3	0.71	43.8	0.0131	-16.4	0.875	-172.2
650	0.928	-171.8	0.63	42.2	0.0123	-15.8	0.879	-172.4
700	0.930	-172.2	0.57	40.9	0.0116	-13.5	0.883	-172.7
750	0.931	-172.6	0.51	39.6	0.0109	-10.5	0.887	-172.7
800	0.932	-172.9	0.47	38.3	0.0104	-7.8	0.895	-172.9
850	0.932	-173.2	0.43	37.0	0.0100	-5.6	0.900	-173.4
900	0.934	-173.4	0.39	35.9	0.0095	-2.5	0.901	-173.7
950	0.934	-173.6	0.36	34.9	0.0093	-0.8	0.903	-173.8
1000	0.934	-173.7	0.33	33.9	0.0087	4.0	0.905	-174.0
1050	0.935	-173.7	0.31	33.0	0.0087	8.3	0.907	-174.2
1100	0.935	-173.8	0.29	32.0	0.0082	13.3	0.910	-174.3
1150	0.935	-173.8	0.27	31.0	0.0080	18.3	0.913	-174.5
1200	0.937	-173.6	0.25	30.3	0.0080	22.4	0.916	-174.6
1250	0.941	-173.5	0.24	29.8	0.0083	27.1	0.919	-174.8
1300	0.948	-173.5	0.22	29.6	0.0085	32.7	0.919	-175.0
1350	0.955	-174.0	0.21	29.5	0.0087	35.4	0.921	-175.2
1400	0.961	-174.4	0.20	29.2	0.0091	37.6	0.922	-175.3
1450	0.960	-174.8	0.19	28.6	0.0092	40.0	0.924	-175.4
1500	0.959	-175.0	0.19	28.1	0.0093	43.1	0.925	-175.5
1550	0.957	-175.3	0.18	27.3	0.0096	45.2	0.929	-175.6
1600	0.954	-175.4	0.17	26.6	0.0099	49.1	0.930	-175.9
1650	0.952	-175.5	0.16	25.8	0.0102	51.3	0.930	-176.2
1700	0.951	-175.6	0.16	25.2	0.0104	52.6	0.930	-176.4
1750	0.950	-175.8	0.15	24.6	0.0108	55.8	0.930	-176.5
1800	0.950	-175.8	0.14	24.0	0.0111	57.1	0.929	-176.6
1850	0.950	-175.9	0.14	23.6	0.0114	59.7	0.929	-176.6
1900	0.949	-175.9	0.13	23.2	0.0118	61.5	0.930	-176.6
1950	0.949	-176.0	0.13	22.8	0.0122	63.3	0.935	-176.8
2000	0.950	-176.1	0.12	22.4	0.0126	65.0	0.936	-177.1
2050	0.948	-176.0	0.12	22.0	0.0131	66.4	0.937	-177.4
2100	0.947	-176.1	0.11	21.8	0.0135	68.0	0.936	-177.6
2150	0.945	-176.2	0.11	21.4	0.0141	69.3	0.935	-177.8
2200	0.945	-176.3	0.11	21.3	0.0146	70.8	0.935	-177.9
2250	0.945	-176.3	0.10	21.2	0.0151	71.0	0.936	-177.9
2300	0.944	-176.5	0.10	20.8	0.0155	72.4	0.937	-178.1
2350	0.944	-176.6	0.10	20.7	0.0160	72.5	0.939	-178.3
2400	0.946	-176.7	0.10	20.6	0.0165	72.8	0.938	-178.6
2450	0.944	-176.6	0.09	20.5	0.0169	73.9	0.938	-178.9
2500	0.943	-176.8	0.09	20.3	0.0173	74.0	0.938	-179.1
2550	0.942	-176.8	0.09	20.4	0.0178	74.8	0.936	-179.2

(V_{DS} = 6 V, I_D = 500 mA, Z_O = 50 Ω)

f (MHz)	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
50	0.819	-123.7	16.07	106.8	0.0245	18.4	0.615	-151.4
100	0.826	-147.5	8.25	86.2	0.0251	0.2	0.692	-160.6
150	0.841	-155.4	5.29	75.4	0.0241	-7.5	0.726	-163.4
200	0.861	-159.9	3.69	67.9	0.0219	-12.3	0.757	-165.0
250	0.876	-162.9	2.76	62.2	0.0206	-16.2	0.781	-166.2
300	0.888	-164.9	2.15	57.9	0.0188	-17.8	0.801	-167.2
350	0.901	-166.5	1.73	54.3	0.0175	-19.0	0.815	-167.9
400	0.908	-167.8	1.43	51.5	0.0163	-19.6	0.829	-168.6
450	0.914	-168.8	1.21	49.1	0.0153	-19.6	0.838	-169.1
500	0.920	-169.7	1.04	47.0	0.0142	-18.6	0.848	-169.6
550	0.924	-170.5	0.90	44.9	0.0134	-18.1	0.857	-170.2
600	0.926	-171.0	0.79	43.2	0.0128	-16.9	0.863	-170.6
650	0.928	-171.6	0.71	41.5	0.0119	-16.3	0.869	-171.0
700	0.930	-172.0	0.63	40.0	0.0112	-12.8	0.873	-171.3
750	0.931	-172.4	0.57	38.5	0.0104	-11.1	0.879	-171.4
800	0.933	-172.8	0.52	37.1	0.0100	-7.9	0.888	-171.6
850	0.933	-173.1	0.47	35.7	0.0095	-5.6	0.893	-172.1
900	0.934	-173.2	0.44	34.5	0.0089	-2.4	0.895	-172.4
950	0.934	-173.4	0.40	33.3	0.0086	1.5	0.898	-172.6
1000	0.935	-173.6	0.37	32.2	0.0081	3.1	0.900	-172.8
1050	0.936	-173.6	0.34	31.2	0.0081	9.1	0.903	-173.1
1100	0.936	-173.7	0.32	30.1	0.0079	14.8	0.907	-173.2
1150	0.936	-173.7	0.30	29.1	0.0077	19.8	0.909	-173.4
1200	0.937	-173.7	0.28	28.1	0.0076	24.8	0.913	-173.6
1250	0.939	-173.7	0.26	27.3	0.0080	30.3	0.917	-173.8
1300	0.943	-173.6	0.24	26.8	0.0079	34.6	0.917	-174.0
1350	0.949	-173.8	0.23	26.4	0.0081	38.4	0.920	-174.2
1400	0.957	-174.1	0.22	26.3	0.0087	42.1	0.921	-174.4
1450	0.960	-174.4	0.21	26.1	0.0090	44.5	0.922	-174.5
1500	0.960	-174.8	0.20	25.7	0.0091	47.0	0.924	-174.6
1550	0.959	-175.1	0.19	25.0	0.0096	48.8	0.928	-174.8
1600	0.956	-175.2	0.18	24.3	0.0097	51.7	0.930	-175.1
1650	0.954	-175.4	0.18	23.6	0.0100	54.2	0.929	-175.4
1700	0.952	-175.5	0.17	22.9	0.0102	56.0	0.930	-175.6
1750	0.951	-175.7	0.16	22.2	0.0108	58.8	0.930	-175.7
1800	0.950	-175.7	0.15	21.6	0.0110	61.3	0.929	-175.9
1850	0.950	-175.9	0.15	21.1	0.0114	62.8	0.930	-175.9
1900	0.949	-175.9	0.14	20.7	0.0118	64.5	0.930	-176.0
1950	0.949	-176.0	0.14	20.3	0.0123	66.7	0.935	-176.2
2000	0.950	-176.0	0.13	19.8	0.0127	67.5	0.937	-176.5
2050	0.948	-176.0	0.13	19.4	0.0131	68.3	0.937	-176.8
2100	0.947	-176.0	0.12	19.0	0.0136	70.5	0.937	-177.0
2150	0.945	-176.2	0.12	18.8	0.0141	71.5	0.936	-177.2
2200	0.945	-176.3	0.11	18.6	0.0147	72.5	0.936	-177.3
2250	0.945	-176.3	0.11	18.4	0.0152	73.4	0.937	-177.4
2300	0.944	-176.5	0.11	18.1	0.0156	73.9	0.938	-177.6
2350	0.944	-176.6	0.10	17.9	0.0162	74.3	0.940	-177.8
2400	0.945	-176.6	0.10	17.7	0.0166	74.9	0.939	-178.1
2450	0.944	-176.6	0.10	17.5	0.0170	75.5	0.939	-178.4
2500	0.942	-176.8	0.09	17.3	0.0177	76.2	0.939	-178.6
2550	0.941	-176.8	0.09	17.4	0.0183	76.5	0.937	-178.7

(V_{DS} = 7.5 V, I_D = 500 mA, Z_O = 50 Ω)

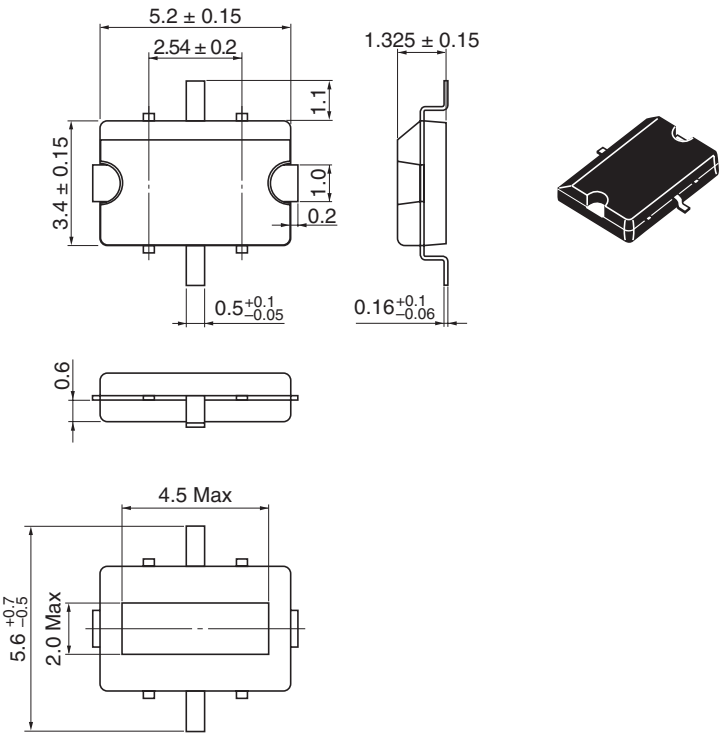
f (MHz)	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
50	0.821	-120.3	17.31	107.6	0.0224	17.9	0.584	-145.8
100	0.827	-145.4	8.91	86.2	0.0252	-0.4	0.664	-156.9
150	0.844	-153.9	5.68	75.1	0.0223	-5.2	0.703	-160.5
200	0.865	-158.9	3.95	67.6	0.0209	-13.2	0.738	-162.6
250	0.881	-162.2	2.95	62.0	0.0197	-15.3	0.764	-164.1
300	0.893	-164.4	2.30	57.7	0.0183	-17.8	0.785	-165.3
350	0.904	-166.2	1.86	54.2	0.0170	-18.7	0.801	-166.2
400	0.912	-167.6	1.54	51.3	0.0161	-19.9	0.815	-166.9
450	0.917	-168.7	1.30	48.8	0.0147	-19.7	0.826	-167.5
500	0.922	-169.6	1.12	46.6	0.0141	-19.0	0.837	-168.0
550	0.926	-170.5	0.98	44.3	0.0130	-18.6	0.847	-168.7
600	0.928	-171.1	0.86	42.4	0.0124	-17.3	0.854	-169.2
650	0.929	-171.7	0.76	40.5	0.0113	-15.9	0.860	-169.6
700	0.931	-172.1	0.68	38.8	0.0109	-15.5	0.866	-169.9
750	0.932	-172.6	0.62	37.2	0.0102	-12.2	0.872	-170.1
800	0.933	-173.0	0.56	35.6	0.0095	-10.0	0.882	-170.3
850	0.933	-173.3	0.51	34.0	0.0089	-5.4	0.888	-170.9
900	0.934	-173.5	0.47	32.6	0.0086	-3.6	0.891	-171.3
950	0.933	-173.7	0.43	31.3	0.0080	0.6	0.895	-171.4
1000	0.933	-173.9	0.40	30.1	0.0077	3.6	0.898	-171.8
1050	0.932	-173.9	0.37	28.9	0.0075	10.2	0.901	-172.0
1100	0.931	-174.0	0.34	27.7	0.0071	16.6	0.905	-172.2
1150	0.931	-174.1	0.32	26.4	0.0071	21.0	0.908	-172.5
1200	0.930	-174.0	0.30	25.5	0.0070	26.1	0.912	-172.7
1250	0.932	-173.8	0.27	24.6	0.0073	32.2	0.916	-172.9
1300	0.936	-173.6	0.26	24.1	0.0073	38.2	0.917	-173.2
1350	0.942	-173.7	0.24	23.7	0.0079	42.6	0.919	-173.4
1400	0.951	-173.9	0.23	23.6	0.0084	45.5	0.921	-173.6
1450	0.956	-174.2	0.22	23.3	0.0087	47.9	0.923	-173.8
1500	0.959	-174.5	0.21	23.1	0.0090	51.7	0.924	-173.9
1550	0.960	-174.9	0.20	22.6	0.0092	53.1	0.929	-174.1
1600	0.958	-175.1	0.19	21.9	0.0097	55.3	0.930	-174.4
1650	0.957	-175.4	0.18	21.3	0.0101	57.3	0.930	-174.8
1700	0.956	-175.6	0.17	20.7	0.0106	60.3	0.931	-175.0
1750	0.955	-175.8	0.17	20.0	0.0110	61.2	0.931	-175.1
1800	0.955	-175.9	0.16	19.5	0.0111	63.5	0.930	-175.3
1850	0.955	-176.1	0.15	19.0	0.0115	66.1	0.931	-175.4
1900	0.954	-176.2	0.15	18.7	0.0120	66.5	0.932	-175.5
1950	0.954	-176.3	0.14	18.2	0.0124	68.5	0.936	-175.7
2000	0.954	-176.4	0.14	17.7	0.0131	69.9	0.938	-176.0
2050	0.952	-176.4	0.13	17.2	0.0134	70.6	0.938	-176.3
2100	0.951	-176.5	0.13	16.9	0.0138	72.1	0.938	-176.5
2150	0.950	-176.6	0.12	16.6	0.0144	73.1	0.937	-176.8
2200	0.950	-176.8	0.12	16.4	0.0149	74.1	0.937	-176.8
2250	0.949	-176.8	0.11	16.2	0.0155	75.0	0.938	-176.9
2300	0.949	-177.0	0.11	15.7	0.0160	74.9	0.939	-177.2
2350	0.949	-177.1	0.11	15.5	0.0167	75.7	0.941	-177.4
2400	0.950	-177.2	0.10	15.2	0.0169	75.9	0.941	-177.7
2450	0.949	-177.2	0.10	15.1	0.0173	76.2	0.940	-178.0
2500	0.948	-177.4	0.10	15.0	0.0179	77.0	0.940	-178.2
2550	0.946	-177.5	0.09	15.0	0.0184	77.1	0.939	-178.4

(V_{DS} = 12 V, I_D = 500 mA, Z_O = 50 Ω)

f (MHz)	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
50	0.838	-112.1	19.26	111.1	0.0193	23.2	0.510	-131.7
100	0.844	-140.2	10.13	87.8	0.0230	5.2	0.596	-147.5
150	0.859	-150.6	6.47	76.1	0.0227	-5.3	0.644	-152.9
200	0.878	-156.6	4.51	68.3	0.0201	-13.0	0.685	-156.0
250	0.890	-160.4	3.38	62.4	0.0187	-15.2	0.716	-158.1
300	0.899	-163.0	2.66	57.8	0.0179	-18.4	0.742	-159.7
350	0.909	-165.0	2.15	53.8	0.0167	-18.9	0.763	-160.9
400	0.914	-166.5	1.79	50.4	0.0156	-21.8	0.782	-161.9
450	0.919	-167.7	1.51	47.4	0.0145	-20.4	0.798	-162.8
500	0.924	-168.7	1.29	44.6	0.0133	-20.7	0.813	-163.5
550	0.927	-169.6	1.13	41.9	0.0125	-20.9	0.827	-164.3
600	0.929	-170.2	0.99	39.6	0.0114	-19.6	0.839	-165.0
650	0.931	-170.8	0.87	37.3	0.0106	-19.0	0.849	-165.6
700	0.933	-171.3	0.78	35.3	0.0097	-16.5	0.857	-166.2
750	0.933	-171.7	0.70	33.3	0.0089	-15.6	0.867	-166.7
800	0.935	-172.1	0.63	31.5	0.0084	-12.1	0.876	-167.1
850	0.936	-172.4	0.57	29.8	0.0076	-9.6	0.884	-167.8
900	0.937	-172.7	0.52	28.3	0.0075	-3.7	0.889	-168.3
950	0.937	-172.9	0.48	26.7	0.0070	2.1	0.894	-168.6
1000	0.938	-173.1	0.44	25.4	0.0066	8.4	0.898	-169.1
1050	0.938	-173.2	0.41	24.3	0.0063	13.2	0.902	-169.5
1100	0.939	-173.3	0.38	23.0	0.0064	22.6	0.907	-169.8
1150	0.939	-173.4	0.35	21.8	0.0062	27.8	0.911	-170.2
1200	0.939	-173.5	0.32	20.7	0.0062	34.0	0.915	-170.5
1250	0.941	-173.5	0.30	19.7	0.0066	39.4	0.919	-170.9
1300	0.943	-173.6	0.28	18.9	0.0068	46.0	0.920	-171.2
1350	0.945	-173.7	0.26	18.2	0.0073	51.6	0.923	-171.5
1400	0.951	-173.9	0.25	17.8	0.0078	54.1	0.924	-171.8
1450	0.954	-174.0	0.23	17.3	0.0083	57.4	0.927	-172.1
1500	0.956	-174.1	0.22	17.1	0.0087	59.7	0.928	-172.3
1550	0.958	-174.5	0.21	16.7	0.0090	63.7	0.932	-172.6
1600	0.958	-174.7	0.20	16.4	0.0095	64.6	0.934	-172.9
1650	0.957	-174.9	0.19	15.9	0.0100	65.3	0.934	-173.3
1700	0.956	-175.1	0.18	15.6	0.0104	67.4	0.935	-173.5
1750	0.955	-175.4	0.17	15.1	0.0111	68.6	0.936	-173.7
1800	0.954	-175.4	0.17	14.6	0.0114	69.8	0.936	-174.0
1850	0.954	-175.7	0.16	14.2	0.0118	71.6	0.938	-174.2
1900	0.953	-175.7	0.15	13.9	0.0124	72.1	0.937	-174.4
1950	0.952	-175.8	0.15	13.3	0.0129	73.0	0.940	-174.7
2000	0.952	-175.9	0.14	12.9	0.0133	74.9	0.941	-174.9
2050	0.950	-175.8	0.14	12.4	0.0138	75.6	0.942	-175.2
2100	0.949	-175.9	0.13	12.0	0.0144	76.7	0.942	-175.4
2150	0.947	-176.0	0.13	11.6	0.0148	77.0	0.942	-175.7
2200	0.947	-176.2	0.12	11.3	0.0155	78.5	0.942	-175.8
2250	0.947	-176.2	0.12	11.0	0.0160	78.6	0.943	-176.0
2300	0.946	-176.3	0.11	10.5	0.0165	79.1	0.944	-176.2
2350	0.946	-176.5	0.11	10.3	0.0170	79.0	0.945	-176.5
2400	0.947	-176.5	0.11	10.1	0.0175	79.3	0.944	-176.8
2450	0.945	-176.5	0.10	9.9	0.0180	80.0	0.944	-177.1
2500	0.944	-176.7	0.10	9.6	0.0186	80.4	0.944	-177.3
2550	0.943	-176.7	0.10	9.9	0.0189	80.0	0.943	-177.5

Package Dimensions

As of January, 2003
Unit: mm



Package Code	RP8P
JEDEC	—
JEITA	—
Mass (reference value)	0.08 g

Ordering Information

Part Name	Quantity	Shipping Container
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