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RF Transistor for Low Noise Amplifier

12 V, 100 mA, $f_T = 10$ GHz typ.

This RF transistor is designed for low noise amplifier applications. MCPH package is suitable for use under high temperature environment because it has superior heat radiation characteristics. This RF transistor is AEC-Q101 qualified and PPAP capable for automotive applications.

Features

- Low-noise Use: NF = 1.2 dB typ. (f = 1 GHz)
- High Cut-off Frequency: $f_T = 10$ GHz typ. $(V_{CE} = 5 \text{ V})$
- High Gain: $|S21e|^2 = 17 \text{ dB typ.}$ (f = 1 GHz)
- MCPH4 Package is Pin-compatible with SC-82FL
- AEC-Q101 Qualified and PPAP Capable
- These Devices are Pb–Free, Halogen Free/BFR Free and are RoHS Compliant

Typical Applications

- Low Noise Amplifier for Digital Radio
- Low Noise Amplifier for TV
- Low Noise Amplifier for FM Radio
- RF Amplifier for UHF Application

MAXIMUM RATINGS at $T_A = 25^{\circ}C$

Rating	Symbol	Value	Unit
Collector to Base Voltage	V_{CBO}	20	V
Collector to Emitter Voltage	V_{CEO}	12	V
Emitter to Base Voltage	V_{EBO}	2	V
Collector Current	I _C	100	mA
Collector Dissipation	P _C	450	mW
Operating Junction and Storage Temperature	T _J , T _{stg}	–55 to +150	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.



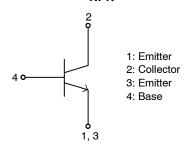
ON Semiconductor®

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SC-82FL MCPH4 CASE 419AR

ELECTRICAL CONNECTION NPN



MARKING DIAGRAM



GQ = Specific Device Code XX = Lot Number

ORDERING INFORMATION

Device	Package	Shipping [†]
NSVF4015SG4T1G	SC-82FL (Pb-Free)	3000 / Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.

Table 1. ELECTRICAL CHARACTERISTICS at T_A = 25°C (Note 1)

				Value		
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector Cutoff Current	I _{CBO}	V _{CB} = 5 V, I _E = 0 A			1.0	μΑ
Emitter Cutoff Current	I _{EBO}	V _{EB} = 1 V, I _C = 0 A			1.0	μΑ
DC Current Gain	h _{FE}	V _{CE} = 5 V, I _C = 50 mA	60		150	
Gain-Bandwidth Product	f _T	V _{CE} = 5 V, I _C = 30 mA	8	10		GHz
Forward Transfer Gain	S21e ²	$V_{CE} = 5 \text{ V}, I_{C} = 30 \text{ mA}, f = 1 \text{ GHz}$	14	17		dB
Noise Figure	NF	V _{CE} = 5 V, I _C = 10 mA, f = 1 GHz		1.2	1.8	dB

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

1. Pay attention to handling since it is liable to be affected by static electricity due to the high–frequency process adopted.

TYPICAL CHARACTERISTICS

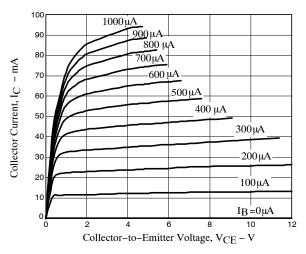


Figure 1. I_C vs. V_{CE}

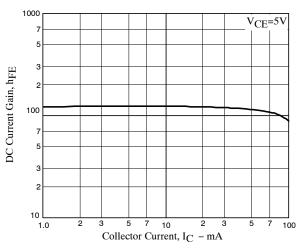


Figure 3. h_{FE} vs. I_C

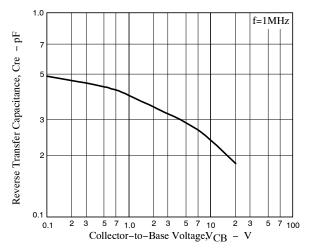


Figure 5. Cre vs. V_{CB}

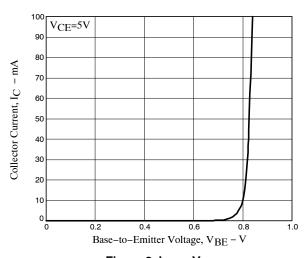


Figure 2. I_{C} vs. V_{BE}

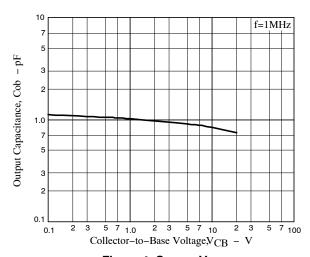


Figure 4. C_{ob} vs. V_{CB}

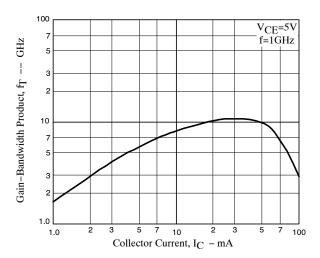


Figure 6. f_T vs. I_C

TYPICAL CHARACTERISTICS

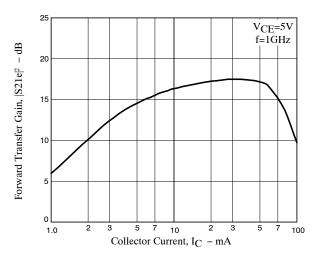


Figure 7. |S21e|2 vs. I_C

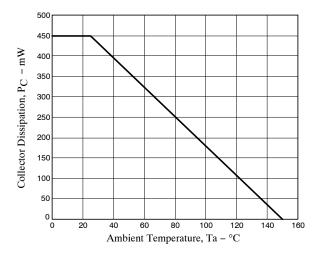


Figure 9. P_C vs. T_A

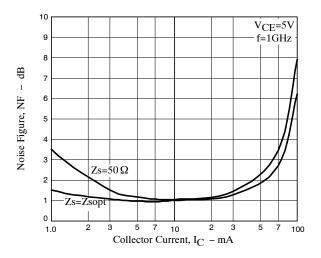


Figure 8. NF vs. I_C

S Parameters	(Common er	mitter)						
CE=3V, IC=1	0mA							
Freq(MHz)	S11	∠S11	S21	∠S21	S12	∠ S12	S22	∠S22
100	0.763	-38.0	22.980	155.3	0.018	71.5	0.923	-22.7
200	0.733	-71.8	20.122	135.9	0.031	58.6	0.798	-40.2
300	0.702	-98.5	17.019	121.3	0.038	50.6	0.703	-53.5
400	0.690	-116.5	14.110	110.7	0.043	46.3	0.626	-62.9
500	0.701	-127.2	12.307	103.5	0.048	45.0	0.592	-67.4
600	0.679	-137.1	10.431	97.5	0.050	43.7	0.531	-72.0
700	0.663	-145.1	8.949	92.7	0.052	43.6	0.484	-75.2
800	0.651	-152.1	7.848	88.4	0.054	43.9	0.446	-78.7
900	0.646	-157.6	6.993	84.8	0.057	44.0	0.422	-81.6
1000	0.639	-162.3	6.272	81.9	0.059	45.1	0.404	-84.4
1200	0.635	-170.2	5.211	76.5	0.063	47.1	0.375	-88.7
1400	0.634	-176.5	4.462	71.7	0.068	49.1	0.362	-92.4
1600	0.633	177.9	3.907	67.3	0.073	51.2	0.352	-95.9
1800	0.636	173.2	3.463	63.4	0.079	52.7	0.351	-99.0
2000	0.637	169.1	3.122	59.5	0.085	54.3	0.352	-102.3
2200	0.637	164.9	2.838	55.8	0.091	55.5	0.356	-105.2
2400	0.638	161.0	2.604	52.1	0.098	56.5	0.364	-108.1
2600	0.639	157.3	2.413	48.7	0.105	57.2	0.372	-111.1
2800	0.642	153.7	2.244	45.1	0.112	57.9	0.384	-113.5
3000	0.641	150.0	2.095	41.8	0.120	57.8	0.396	-116.2

Emag(MIII)	S11	∠S11	S21	∠S21	S12	∠ S12	S22	∠S22
Freq(MHz)	0.542	-76.9	42.437	142.3	0.013	63.9	0.801	-36.2
200	0.542			119.6	0.013		0.602	-56.8
300	0.588	-118.2 -138.6	30.735 22.677	106.5	0.020	53.9 52.3	0.602	-69.3
400	0.626	-150.0	17.506	98.4	0.024	53.8	0.303	-77.9
500	0.626	-155.0	14.522	92.7	0.027	55.6	0.423	-77.9
600	0.630	-161.3	12.035	88.5	0.031	57.8	0.423	-83.6
700	0.630	-161.3	10.249	85.2	0.033	59.8	0.350	-86.9
							-	-
800	0.626	-170.9	8.902	82.2	0.042	61.3	0.327	-90.4
900	0.627	-174.7	7.888	79.5	0.045	62.3	0.314	-93.2
1000	0.626	-177.8	7.046	77.3	0.049	63.4	0.303	-96.1
1200	0.629	176.7	5.835	73.1	0.057	65.4	0.287	-100.4
1400	0.631	171.9	4.976	69.2	0.065	66.2	0.282	-103.8
1600	0.633	167.7	4.344	65.6	0.073	66.5	0.280	-106.9
1800	0.637	163.9	3.854	62.0	0.082	66.8	0.281	-109.7
2000	0.638	160.5	3.474	58.7	0.090	66.6	0.287	-112.5
2200	0.638	156.8	3.160	55.5	0.099	66.5	0.293	-115.1
2400	0.640	153.5	2.900	52.2	0.108	65.8	0.302	-117.3
2600	0.640	150.2	2.684	49.0	0.117	65.2	0.312	-119.5
2800 3000	0.642 0.640	146.9 143.6	2.499 2.337	45.9 42.8	0.125 0.134	64.3 63.6	0.324 0.337	-121.6 -123.8
CE=3V, IC=5	0mA							
Frea(MHz)	IS11I	∠S11	IS21I	∠S21	IS12I	∠ S12	IS22I	∠S22
	S11 0.514	∠\$11 -1103	S21 43.067	∠S21	S12 0.011	∠ S12	S22 0.700	∠S22 -40 9
100	0.514	-110.3	43.067	133.3	0.011	59.0	0.700	-40.9
100	0.514 0.607	-110.3 -141.4	43.067 29.221	133.3 112.3	0.011 0.016	59.0 53.1	0.700 0.495	-40.9 -58.9
100 200 300	0.514 0.607 0.642	-110.3 -141.4 -154.9	43.067 29.221 20.818	133.3 112.3 101.0	0.011 0.016 0.019	59.0 53.1 55.3	0.700 0.495 0.417	-40.9 -58.9 -68.7
200 300 400	0.514 0.607 0.642 0.657	-110.3 -141.4 -154.9 -162.5	43.067 29.221 20.818 15.865	133.3 112.3 101.0 94.1	0.011 0.016 0.019 0.023	59.0 53.1 55.3 58.5	0.700 0.495 0.417 0.376	-40.9 -58.9 -68.7 -75.5
100 200 300 400 500	0.514 0.607 0.642 0.657 0.660	-110.3 -141.4 -154.9 -162.5 -165.8	43.067 29.221 20.818 15.865 13.033	133.3 112.3 101.0 94.1 88.9	0.011 0.016 0.019 0.023 0.027	59.0 53.1 55.3 58.5 61.4	0.700 0.495 0.417 0.376 0.360	-40.9 -58.9 -68.7 -75.5 -75.7
100 200 300 400 500 600	0.514 0.607 0.642 0.657 0.660 0.659	-110.3 -141.4 -154.9 -162.5 -165.8 -170.3	43.067 29.221 20.818 15.865 13.033 10.812	133.3 112.3 101.0 94.1 88.9 85.3	0.011 0.016 0.019 0.023 0.027 0.030	59.0 53.1 55.3 58.5 61.4 64.0	0.700 0.495 0.417 0.376 0.360 0.330	-40.9 -58.9 -68.7 -75.5 -75.7 -78.7
100 200 300 400 500 600 700	0.514 0.607 0.642 0.657 0.660 0.659 0.658	-110.3 -141.4 -154.9 -162.5 -165.8 -170.3 -174.3	43.067 29.221 20.818 15.865 13.033 10.812 9.213	133.3 112.3 101.0 94.1 88.9 85.3 82.3	0.011 0.016 0.019 0.023 0.027 0.030 0.034	59.0 53.1 55.3 58.5 61.4 64.0 66.1	0.700 0.495 0.417 0.376 0.360 0.330 0.307	-40.9 -58.9 -68.7 -75.5 -75.7 -78.7 -81.5
100 200 300 400 500 600 700 800	0.514 0.607 0.642 0.657 0.660 0.659 0.658 0.660	-110.3 -141.4 -154.9 -162.5 -165.8 -170.3 -174.3 -177.8	43.067 29.221 20.818 15.865 13.033 10.812 9.213 7.995	133.3 112.3 101.0 94.1 88.9 85.3 82.3 79.5	0.011 0.016 0.019 0.023 0.027 0.030 0.034 0.038	59.0 53.1 55.3 58.5 61.4 64.0 66.1 67.8	0.700 0.495 0.417 0.376 0.360 0.330 0.307 0.291	-40.9 -58.9 -68.7 -75.5 -75.7 -78.7 -81.5 -84.5
100 200 300 400 500 600 700 800 900	0.514 0.607 0.642 0.657 0.660 0.659 0.658 0.660 0.663	-110.3 -141.4 -154.9 -162.5 -165.8 -170.3 -174.3 -177.8 179.2	43.067 29.221 20.818 15.865 13.033 10.812 9.213 7.995 7.097	133.3 112.3 101.0 94.1 88.9 85.3 82.3 79.5 77.1	0.011 0.016 0.019 0.023 0.027 0.030 0.034 0.038 0.042	59.0 53.1 55.3 58.5 61.4 64.0 66.1 67.8 68.6	0.700 0.495 0.417 0.376 0.360 0.330 0.307 0.291 0.284	-40.9 -58.9 -68.7 -75.5 -75.7 -78.7 -81.5 -84.5 -87.1
100 200 300 400 500 600 700 800 900 1000	0.514 0.607 0.642 0.657 0.660 0.659 0.658 0.660 0.663 0.662	-110.3 -141.4 -154.9 -162.5 -165.8 -170.3 -174.3 -177.8 179.2 176.6	43.067 29.221 20.818 15.865 13.033 10.812 9.213 7.995 7.097 6.333	133.3 112.3 101.0 94.1 88.9 85.3 82.3 79.5 77.1 74.8	0.011 0.016 0.019 0.023 0.027 0.030 0.034 0.038 0.042 0.046	59.0 53.1 55.3 58.5 61.4 64.0 66.1 67.8 68.6 69.6	0.700 0.495 0.417 0.376 0.360 0.330 0.307 0.291 0.284 0.277	-40.9 -58.9 -68.7 -75.5 -75.7 -78.7 -81.5 -84.5 -87.1 -89.7
100 200 300 400 500 600 700 800 900 1000 1200	0.514 0.607 0.642 0.657 0.660 0.659 0.658 0.660 0.663 0.662 0.666	-110.3 -141.4 -154.9 -162.5 -165.8 -170.3 -174.3 -177.8 179.2 176.6 172.0	43.067 29.221 20.818 15.865 13.033 10.812 9.213 7.995 7.097 6.333 5.247	133.3 112.3 101.0 94.1 88.9 85.3 82.3 79.5 77.1 74.8 70.8	0.011 0.016 0.019 0.023 0.027 0.030 0.034 0.038 0.042 0.046 0.055	59.0 53.1 55.3 58.5 61.4 64.0 66.1 67.8 68.6 69.6 70.9	0.700 0.495 0.417 0.376 0.360 0.330 0.307 0.291 0.284 0.277 0.268	-40.9 -58.9 -68.7 -75.5 -75.7 -78.7 -81.5 -84.5 -87.1 -89.7 -93.7
100 200 300 400 500 600 700 800 900 1000 1200 1400	0.514 0.607 0.642 0.657 0.660 0.659 0.658 0.660 0.663 0.662 0.666 0.670	-110.3 -141.4 -154.9 -162.5 -165.8 -170.3 -174.3 -177.8 179.2 176.6 172.0 167.9	43.067 29.221 20.818 15.865 13.033 10.812 9.213 7.995 7.097 6.333 5.247 4.475	133.3 112.3 101.0 94.1 88.9 85.3 82.3 79.5 77.1 74.8 70.8 67.0	0.011 0.016 0.019 0.023 0.027 0.030 0.034 0.038 0.042 0.046 0.055 0.063	59.0 53.1 55.3 58.5 61.4 64.0 66.1 67.8 68.6 69.6 70.9 71.3	0.700 0.495 0.417 0.376 0.360 0.330 0.307 0.291 0.284 0.277 0.268 0.269	-40.9 -58.9 -68.7 -75.5 -75.7 -78.7 -81.5 -84.5 -87.1 -89.7 -93.7 -97.1
100 200 300 400 500 600 700 800 900 1000 1200 1400 1600	0.514 0.607 0.642 0.657 0.660 0.659 0.658 0.660 0.663 0.662 0.666 0.670 0.673	-110.3 -141.4 -154.9 -162.5 -165.8 -170.3 -174.3 -177.8 179.2 176.6 172.0 167.9 164.1	43.067 29.221 20.818 15.865 13.033 10.812 9.213 7.995 7.097 6.333 5.247 4.475 3.897	133.3 112.3 101.0 94.1 88.9 85.3 82.3 79.5 77.1 74.8 70.8 67.0 63.4	0.011 0.016 0.019 0.023 0.027 0.030 0.034 0.038 0.042 0.046 0.055 0.063 0.072	59.0 53.1 55.3 58.5 61.4 64.0 66.1 67.8 68.6 69.6 70.9 71.3 71.5	0.700 0.495 0.417 0.376 0.360 0.330 0.307 0.291 0.284 0.277 0.268 0.269 0.270	-40.9 -58.9 -68.7 -75.5 -75.7 -78.7 -81.5 -84.5 -87.1 -89.7 -93.7 -97.1 -100.2
100 200 300 400 500 600 700 800 900 1000 1200 1400 1600 1800	0.514 0.607 0.642 0.657 0.660 0.659 0.658 0.660 0.663 0.662 0.666 0.670 0.673 0.676	-110.3 -141.4 -154.9 -162.5 -165.8 -170.3 -174.3 -177.8 179.2 176.6 172.0 167.9 164.1 160.6	43.067 29.221 20.818 15.865 13.033 10.812 9.213 7.995 7.097 6.333 5.247 4.475 3.897 3.469	133.3 112.3 101.0 94.1 88.9 85.3 82.3 79.5 77.1 74.8 70.8 67.0 63.4 59.9	0.011 0.016 0.019 0.023 0.027 0.030 0.034 0.038 0.042 0.046 0.055 0.063 0.072 0.080	59.0 53.1 55.3 58.5 61.4 64.0 66.1 67.8 68.6 69.6 70.9 71.3 71.5 71.4	0.700 0.495 0.417 0.376 0.360 0.330 0.307 0.291 0.284 0.277 0.268 0.269 0.270 0.275	-40.9 -58.9 -68.7 -75.5 -75.7 -78.7 -81.5 -84.5 -87.1 -89.7 -93.7 -97.1 -100.2 -103.3
100 200 300 400 500 600 700 800 900 1000 1200 1400 1600 1800 2000	0.514 0.607 0.642 0.657 0.660 0.659 0.658 0.660 0.663 0.662 0.666 0.670 0.673 0.676 0.678	-110.3 -141.4 -154.9 -162.5 -165.8 -170.3 -174.3 -177.8 179.2 176.6 172.0 167.9 164.1 160.6 157.5	43.067 29.221 20.818 15.865 13.033 10.812 9.213 7.995 7.097 6.333 5.247 4.475 3.897 3.469 3.113	133.3 112.3 101.0 94.1 88.9 85.3 82.3 79.5 77.1 74.8 70.8 67.0 63.4 59.9 56.5	0.011 0.016 0.019 0.023 0.027 0.030 0.034 0.038 0.042 0.046 0.055 0.063 0.072 0.080 0.089	59.0 53.1 55.3 58.5 61.4 64.0 66.1 67.8 68.6 69.6 70.9 71.3 71.5 71.4 71.0	0.700 0.495 0.417 0.376 0.360 0.330 0.307 0.291 0.284 0.277 0.268 0.269 0.270 0.275 0.284	-40.9 -58.9 -68.7 -75.5 -75.7 -78.7 -81.5 -84.5 -87.1 -89.7 -93.7 -97.1 -100.2 -103.3 -106.5
100 200 300 400 500 600 700 800 900 1000 1200 1400 1600 1800 2000 2200	0.514 0.607 0.642 0.657 0.660 0.659 0.658 0.660 0.663 0.662 0.666 0.670 0.673 0.676 0.678	-110.3 -141.4 -154.9 -162.5 -165.8 -170.3 -174.3 -177.8 179.2 176.6 172.0 167.9 164.1 160.6 157.5 154.1	43.067 29.221 20.818 15.865 13.033 10.812 9.213 7.995 7.097 6.333 5.247 4.475 3.897 3.469 3.113 2.836	133.3 112.3 101.0 94.1 88.9 85.3 82.3 79.5 77.1 74.8 70.8 67.0 63.4 59.9 56.5 53.1	0.011 0.016 0.019 0.023 0.027 0.030 0.034 0.038 0.042 0.046 0.055 0.063 0.072 0.080 0.089 0.098	59.0 53.1 55.3 58.5 61.4 64.0 66.1 67.8 68.6 69.6 70.9 71.3 71.5 71.4 71.0 70.4	0.700 0.495 0.417 0.376 0.360 0.330 0.307 0.291 0.284 0.277 0.268 0.269 0.270 0.275 0.284 0.293	-40.9 -58.9 -68.7 -75.5 -75.7 -78.7 -81.5 -84.5 -87.1 -89.7 -93.7 -97.1 -100.2 -103.3 -106.5 -109.3
100 200 300 400 500 600 700 800 900 1000 1200 1400 1800 2000 2200 2400	0.514 0.607 0.642 0.657 0.660 0.659 0.658 0.660 0.663 0.662 0.666 0.670 0.673 0.676 0.678 0.679 0.681	-110.3 -141.4 -154.9 -162.5 -165.8 -170.3 -174.3 -177.8 179.2 176.6 172.0 167.9 164.1 160.6 157.5 154.1 150.9	43.067 29.221 20.818 15.865 13.033 10.812 9.213 7.995 7.097 6.333 5.247 4.475 3.897 3.469 3.113 2.836 2.598	133.3 112.3 101.0 94.1 88.9 85.3 82.3 79.5 77.1 74.8 70.8 67.0 63.4 59.9 56.5 53.1 49.8	0.011 0.016 0.019 0.023 0.027 0.030 0.034 0.038 0.042 0.046 0.055 0.063 0.072 0.080 0.089 0.098 0.107	59.0 53.1 55.3 58.5 61.4 64.0 66.1 67.8 68.6 69.6 70.9 71.3 71.5 71.4 71.0 70.4 69.8	0.700 0.495 0.417 0.376 0.360 0.330 0.307 0.291 0.284 0.277 0.268 0.269 0.270 0.275 0.284 0.293 0.304	-40.9 -58.9 -68.7 -75.5 -75.7 -78.7 -81.5 -84.5 -87.1 -89.7 -93.7 -97.1 -100.2 -103.3 -106.5 -109.3
100 200 300 400 500 600 700 800 900 1000 1200 1400 1600 1800 2000 2200	0.514 0.607 0.642 0.657 0.660 0.659 0.658 0.660 0.663 0.662 0.666 0.670 0.673 0.676 0.678	-110.3 -141.4 -154.9 -162.5 -165.8 -170.3 -174.3 -177.8 179.2 176.6 172.0 167.9 164.1 160.6 157.5 154.1	43.067 29.221 20.818 15.865 13.033 10.812 9.213 7.995 7.097 6.333 5.247 4.475 3.897 3.469 3.113 2.836	133.3 112.3 101.0 94.1 88.9 85.3 82.3 79.5 77.1 74.8 70.8 67.0 63.4 59.9 56.5 53.1	0.011 0.016 0.019 0.023 0.027 0.030 0.034 0.038 0.042 0.046 0.055 0.063 0.072 0.080 0.089 0.098	59.0 53.1 55.3 58.5 61.4 64.0 66.1 67.8 68.6 69.6 70.9 71.3 71.5 71.4 71.0 70.4	0.700 0.495 0.417 0.376 0.360 0.330 0.307 0.291 0.284 0.277 0.268 0.269 0.270 0.275 0.284 0.293	-40.9 -58.9 -68.7 -75.5 -75.7 -78.7 -81.5 -84.5 -87.1 -89.7 -93.7 -97.1 -100.2 -103.3 -106.5 -109.3

CE=3V, IC=8			les: ·		I=		1 1	
Freq(MHz)	S11	∠S11	S21	∠S21	S12	∠ S12	S22	∠S22
100	0.662	-146.8	29.622	120.5	0.011	47.5	0.455	-44.8
200	0.751	-164.0	16.762	102.8	0.014	46.9	0.315	-52.9
300	0.774	-171.2	11.369	94.2	0.017	52.5	0.288	-57.1
400	0.783	-175.6	8.549	88.9	0.019	58.6	0.279	-61.3
500	0.778	-178.0	6.977	84.2	0.023	62.0	0.283	-61.0
600	0.778	179.0	5.801	81.0	0.027	66.0	0.272	-62.9
700	0.778	176.3	4.965	78.3	0.030	68.6	0.265	-65.2
800	0.780	173.9	4.316	75.7	0.034	70.2	0.260	-68.0
900	0.782	171.6	3.846	73.3	0.038	71.9	0.263	-70.7
1000	0.782	169.6	3.439	71.0	0.042	73.0	0.263	-73.7
1200	0.787	166.0	2.860	66.6	0.051	74.5	0.268	-78.5
1400	0.789	162.5	2.454	62.4	0.059	75.3	0.278	-83.1
1600	0.792	159.2	2.139	58.4	0.068	75.7	0.288	-87.5
1800	0.796	156.0	1.912	54.5	0.077	75.7	0.300	-91.7
2000	0.797	153.1	1.721	50.8	0.086	75.4	0.314	-96.1
2200	0.797	149.9	1.569	47.1	0.095	75.0	0.328	-100.0
2400	0.799	146.8	1.436	43.4	0.105	74.1	0.343	-103.8
2600	0.800	143.8	1.331	39.9	0.115	73.4	0.359	-107.4
2800	0.801	140.6	1.238	36.5	0.125	72.2	0.377	-110.9
3000	0.799	137.4	1.157	33.3	0.135	71.1	0.394	-114.4
CE=5V, IC=1 Freq(MHz)	S11	∠S11	S21	∠S21	S12	∠ S12	S22	∠S22
100	0.771	-35.8	23.180	156.3	0.017	70.7	0.000	
200	0.741	(0.2			0.016	72.7	0.933	-20.3
300		-68.2	20.484	137.3	0.018	60.4	0.933	-20.3 -36.2
200	0.706	-68.2 -94.4	20.484 17.503	137.3 122.8				
400	0.706 0.691	1			0.028	60.4	0.820	-36.2
		-94.4	17.503	122.8	0.028 0.035	60.4 53.0	0.820 0.722	-36.2 -48.5
400	0.691	-94.4 -112.7	17.503 14.633	122.8 111.9	0.028 0.035 0.040	60.4 53.0 48.5	0.820 0.722 0.656	-36.2 -48.5 -57.3
400 500	0.691 0.701	-94.4 -112.7 -123.8	17.503 14.633 12.817	122.8 111.9 104.7	0.028 0.035 0.040 0.044	60.4 53.0 48.5 47.2	0.820 0.722 0.656 0.622	-36.2 -48.5 -57.3 -61.7
400 500 600	0.691 0.701 0.677 0.659	-94.4 -112.7 -123.8 -133.9 -142.2	17.503 14.633 12.817 10.891 9.349	122.8 111.9 104.7 98.4 93.5	0.028 0.035 0.040 0.044 0.047 0.049	60.4 53.0 48.5 47.2 46.0 45.5	0.820 0.722 0.656 0.622 0.560 0.513	-36.2 -48.5 -57.3 -61.7 -66.0 -68.9
400 500 600 700	0.691 0.701 0.677	-94.4 -112.7 -123.8 -133.9	17.503 14.633 12.817 10.891	122.8 111.9 104.7 98.4	0.028 0.035 0.040 0.044 0.047	60.4 53.0 48.5 47.2 46.0	0.820 0.722 0.656 0.622 0.560	-36.2 -48.5 -57.3 -61.7 -66.0
400 500 600 700 800	0.691 0.701 0.677 0.659 0.646	-94.4 -112.7 -123.8 -133.9 -142.2 -149.5	17.503 14.633 12.817 10.891 9.349 8.209	122.8 111.9 104.7 98.4 93.5 89.1	0.028 0.035 0.040 0.044 0.047 0.049 0.051	60.4 53.0 48.5 47.2 46.0 45.5 45.7	0.820 0.722 0.656 0.622 0.560 0.513 0.474	-36.2 -48.5 -57.3 -61.7 -66.0 -68.9 -72.0
400 500 600 700 800 900	0.691 0.701 0.677 0.659 0.646 0.640	-94.4 -112.7 -123.8 -133.9 -142.2 -149.5 -155.2	17.503 14.633 12.817 10.891 9.349 8.209 7.315	122.8 111.9 104.7 98.4 93.5 89.1 85.3	0.028 0.035 0.040 0.044 0.047 0.049 0.051 0.053	60.4 53.0 48.5 47.2 46.0 45.5 45.7 46.1	0.820 0.722 0.656 0.622 0.560 0.513 0.474 0.449	-36.2 -48.5 -57.3 -61.7 -66.0 -68.9 -72.0 -74.7
400 500 600 700 800 900 1000	0.691 0.701 0.677 0.659 0.646 0.640 0.633	-94.4 -112.7 -123.8 -133.9 -142.2 -149.5 -155.2 -160.1	17.503 14.633 12.817 10.891 9.349 8.209 7.315 6.557	122.8 111.9 104.7 98.4 93.5 89.1 85.3 82.3	0.028 0.035 0.040 0.044 0.047 0.049 0.051 0.053 0.055	60.4 53.0 48.5 47.2 46.0 45.5 45.7 46.1 46.9	0.820 0.722 0.656 0.622 0.560 0.513 0.474 0.449	-36.2 -48.5 -57.3 -61.7 -66.0 -68.9 -72.0 -74.7 -77.4
400 500 600 700 800 900 1000 1200	0.691 0.701 0.677 0.659 0.646 0.640 0.633 0.628	-94.4 -112.7 -123.8 -133.9 -142.2 -149.5 -155.2 -160.1 -168.2	17.503 14.633 12.817 10.891 9.349 8.209 7.315 6.557 5.459	122.8 111.9 104.7 98.4 93.5 89.1 85.3 82.3 76.8	0.028 0.035 0.040 0.044 0.047 0.049 0.051 0.053 0.055 0.060	60.4 53.0 48.5 47.2 46.0 45.5 45.7 46.1 46.9 49.0	0.820 0.722 0.656 0.622 0.560 0.513 0.474 0.449 0.428	-36.2 -48.5 -57.3 -61.7 -66.0 -68.9 -72.0 -74.7 -77.4 -81.4
400 500 600 700 800 900 1000 1200 1400	0.691 0.701 0.677 0.659 0.646 0.640 0.633 0.628	-94.4 -112.7 -123.8 -133.9 -142.2 -149.5 -155.2 -160.1 -168.2 -174.7	17.503 14.633 12.817 10.891 9.349 8.209 7.315 6.557 5.459 4.663	122.8 111.9 104.7 98.4 93.5 89.1 85.3 82.3 76.8 71.9	0.028 0.035 0.040 0.044 0.047 0.049 0.051 0.053 0.055 0.060 0.064	60.4 53.0 48.5 47.2 46.0 45.5 45.7 46.1 46.9 49.0 51.0	0.820 0.722 0.656 0.622 0.560 0.513 0.474 0.449 0.428 0.399 0.385	-36.2 -48.5 -57.3 -61.7 -66.0 -68.9 -72.0 -74.7 -77.4 -81.4 -84.9
400 500 600 700 800 900 1000 1200 1400 1600	0.691 0.701 0.677 0.659 0.646 0.640 0.633 0.628 0.625	-94.4 -112.7 -123.8 -133.9 -142.2 -149.5 -155.2 -160.1 -168.2 -174.7 179.5	17.503 14.633 12.817 10.891 9.349 8.209 7.315 6.557 5.459 4.663 4.086	122.8 111.9 104.7 98.4 93.5 89.1 85.3 82.3 76.8 71.9 67.5	0.028 0.035 0.040 0.044 0.047 0.049 0.051 0.053 0.055 0.060 0.064 0.069	60.4 53.0 48.5 47.2 46.0 45.5 45.7 46.1 46.9 49.0 51.0 53.3	0.820 0.722 0.656 0.622 0.560 0.513 0.474 0.449 0.428 0.399 0.385 0.373	-36.2 -48.5 -57.3 -61.7 -66.0 -68.9 -72.0 -74.7 -77.4 -81.4 -84.9 -88.4
400 500 600 700 800 900 1000 1200 1400 1600 1800	0.691 0.701 0.677 0.659 0.646 0.640 0.633 0.628 0.625 0.625	-94.4 -112.7 -123.8 -133.9 -142.2 -149.5 -155.2 -160.1 -168.2 -174.7 179.5 174.7	17.503 14.633 12.817 10.891 9.349 8.209 7.315 6.557 5.459 4.663 4.086 3.616	122.8 111.9 104.7 98.4 93.5 89.1 85.3 82.3 76.8 71.9 67.5 63.5	0.028 0.035 0.040 0.044 0.047 0.049 0.051 0.053 0.055 0.060 0.064 0.069 0.075	60.4 53.0 48.5 47.2 46.0 45.5 45.7 46.1 46.9 49.0 51.0 53.3 54.8	0.820 0.722 0.656 0.622 0.560 0.513 0.474 0.449 0.428 0.399 0.385 0.373 0.372	-36.2 -48.5 -57.3 -61.7 -66.0 -68.9 -72.0 -74.7 -77.4 -81.4 -84.9 -88.4 -91.5
400 500 600 700 800 900 1000 1200 1400 1600 1800 2000	0.691 0.701 0.677 0.659 0.646 0.640 0.633 0.628 0.625 0.625	-94.4 -112.7 -123.8 -133.9 -142.2 -149.5 -155.2 -160.1 -168.2 -174.7 179.5 174.7 170.5	17.503 14.633 12.817 10.891 9.349 8.209 7.315 6.557 5.459 4.663 4.086 3.616 3.260	122.8 111.9 104.7 98.4 93.5 89.1 85.3 82.3 76.8 71.9 67.5 63.5 59.5	0.028 0.035 0.040 0.044 0.047 0.049 0.051 0.053 0.055 0.060 0.064 0.069 0.075 0.080	60.4 53.0 48.5 47.2 46.0 45.5 45.7 46.1 46.9 49.0 51.0 53.3 54.8 56.6	0.820 0.722 0.656 0.622 0.560 0.513 0.474 0.449 0.428 0.399 0.385 0.373 0.372 0.372	-36.2 -48.5 -57.3 -61.7 -66.0 -68.9 -72.0 -74.7 -77.4 -81.4 -84.9 -88.4 -91.5
400 500 600 700 800 900 1000 1200 1400 1600 1800 2000 2200	0.691 0.701 0.677 0.659 0.646 0.640 0.633 0.628 0.625 0.625 0.627	-94.4 -112.7 -123.8 -133.9 -142.2 -149.5 -155.2 -160.1 -168.2 -174.7 179.5 174.7 170.5 166.2	17.503 14.633 12.817 10.891 9.349 8.209 7.315 6.557 5.459 4.663 4.086 3.616 3.260 2.960	122.8 111.9 104.7 98.4 93.5 89.1 85.3 82.3 76.8 71.9 67.5 63.5 59.5 55.7	0.028 0.035 0.040 0.044 0.047 0.049 0.051 0.053 0.055 0.060 0.064 0.069 0.075 0.080 0.086	60.4 53.0 48.5 47.2 46.0 45.5 45.7 46.1 46.9 49.0 51.0 53.3 54.8 56.6 57.9	0.820 0.722 0.656 0.622 0.560 0.513 0.474 0.449 0.428 0.399 0.385 0.373 0.372 0.372 0.376	-36.2 -48.5 -57.3 -61.7 -66.0 -68.9 -72.0 -74.7 -77.4 -81.4 -84.9 -88.4 -91.5 -94.9 -98.0
400 500 600 700 800 900 1000 1200 1400 1600 1800 2000 2200 2400	0.691 0.701 0.677 0.659 0.646 0.640 0.633 0.628 0.625 0.625 0.625 0.627 0.628 0.628	-94.4 -112.7 -123.8 -133.9 -142.2 -149.5 -155.2 -160.1 -168.2 -174.7 179.5 174.7 170.5 166.2 162.2	17.503 14.633 12.817 10.891 9.349 8.209 7.315 6.557 5.459 4.663 4.086 3.616 3.260 2.960 2.715	122.8 111.9 104.7 98.4 93.5 89.1 85.3 82.3 76.8 71.9 67.5 63.5 59.5 55.7 52.0	0.028 0.035 0.040 0.044 0.047 0.049 0.051 0.053 0.055 0.060 0.064 0.069 0.075 0.080 0.086 0.093	60.4 53.0 48.5 47.2 46.0 45.5 45.7 46.1 46.9 49.0 51.0 53.3 54.8 56.6 57.9 58.9	0.820 0.722 0.656 0.622 0.560 0.513 0.474 0.449 0.428 0.399 0.385 0.373 0.372 0.372 0.376 0.383	-36.2 -48.5 -57.3 -61.7 -66.0 -68.9 -72.0 -74.7 -77.4 -81.4 -84.9 -88.4 -91.5 -94.9 -98.0 -101.1

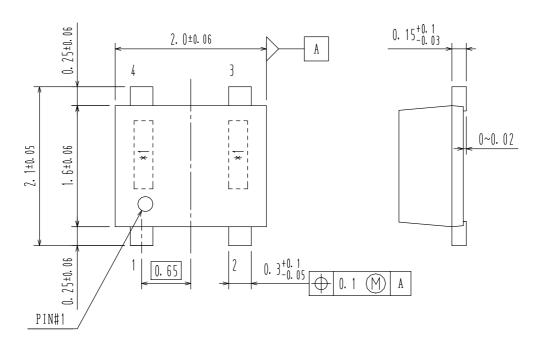
CE=5V, IC=3								
Freq(MHz)	S11	∠S11	S21	∠S21	S12	∠ S12	S22	∠S22
100	0.542	-70.6	43.013	144.3	0.012	66.3	0.826	-31.8
200	0.577	-112.5	32.303	121.4	0.018	56.3	0.636	-50.4
300	0.599	-134.2	24.068	107.8	0.022	55.0	0.539	-61.6
400	0.611	-146.5	18.636	99.4	0.025	55.5	0.478	-69.3
500	0.620	-151.9	15.457	93.6	0.029	57.7	0.454	-71.4
600	0.614	-158.6	12.813	89.2	0.033	59.6	0.410	-74.7
700	0.611	-164.1	10.898	85.6	0.036	61.5	0.376	-77.5
800	0.610	-168.7	9.470	82.5	0.039	62.9	0.351	-80.5
900	0.611	-172.7	8.381	79.8	0.043	64.1	0.337	-83.2
1000	0.610	-176.0	7.487	77.5	0.047	65.3	0.324	-85.8
1200	0.612	178.3	6.186	73.2	0.054	66.8	0.306	-89.7
1400	0.615	173.4	5.277	69.2	0.062	67.7	0.299	-93.1
1600	0.617	169.0	4.596	65.6	0.070	68.2	0.296	-96.3
1800	0.620	165.1	4.085	62.0	0.078	68.6	0.297	-99.3
2000	0.622	161.6	3.669	58.7	0.086	68.4	0.301	-102.5
2200	0.622	158.0	3.344	55.5	0.095	68.3	0.307	-105.1
2400	0.625	154.6	3.065	52.1	0.103	67.8	0.316	-107.9
2600	0.625	151.3	2.835	48.8	0.112	67.2	0.326	-110.5
2800	0.628	148.0	2.638	45.7	0.120	66.5	0.339	-113.0
3000	0.626	144.6	2.464	42.6	0.129	65.6	0.352	-115.5
CE=5V, IC=5 Freq(MHz)	S11	∠S11	S21	∠S21	S12	∠ S12	S22	∠S22
100	0.479	-97.2	42.927	137.2	0.010	63.4	0.761	-35.0
200	0.566	-132.9	32.978				1	-33.0
300			32.370	115.4	0.015	56.7	0.560	-51.6
	0.603	-148.8	23.718	115.4				
400	0.603 0.620				0.015	56.7	0.560	-51.6
		-148.8	23.718	103.2	0.015 0.018	56.7 58.0	0.560 0.485	-51.6 -60.6
400	0.620	-148.8 -157.8	23.718 18.120	103.2 95.7	0.015 0.018 0.021	56.7 58.0 60.4	0.560 0.485 0.427	-51.6 -60.6 -66.9
400 500	0.620 0.625	-148.8 -157.8 -161.4	23.718 18.120 14.893	103.2 95.7 90.4	0.015 0.018 0.021 0.025	56.7 58.0 60.4 63.7	0.560 0.485 0.427 0.410	-51.6 -60.6 -66.9 -68.0
400 500 600	0.620 0.625 0.624 0.624	-148.8 -157.8 -161.4 -166.7 -171.0	23.718 18.120 14.893 12.324 10.482	103.2 95.7 90.4 86.4 83.2	0.015 0.018 0.021 0.025 0.029 0.032	56.7 58.0 60.4 63.7 66.0	0.560 0.485 0.427 0.410 0.375 0.348	-51.6 -60.6 -66.9 -68.0 -70.7
400 500 600 700	0.620 0.625 0.624	-148.8 -157.8 -161.4 -166.7	23.718 18.120 14.893 12.324	95.7 90.4 86.4	0.015 0.018 0.021 0.025 0.029	56.7 58.0 60.4 63.7 66.0 68.0	0.560 0.485 0.427 0.410 0.375	-51.6 -60.6 -66.9 -68.0 -70.7
400 500 600 700 800	0.620 0.625 0.624 0.624 0.626	-148.8 -157.8 -161.4 -166.7 -171.0 -174.8	23.718 18.120 14.893 12.324 10.482 9.088	95.7 90.4 86.4 83.2 80.4	0.015 0.018 0.021 0.025 0.029 0.032 0.036	56.7 58.0 60.4 63.7 66.0 68.0 69.2	0.560 0.485 0.427 0.410 0.375 0.348 0.328	-51.6 -60.6 -66.9 -68.0 -70.7 -73.2 -75.9
400 500 600 700 800 900	0.620 0.625 0.624 0.624 0.626 0.628	-148.8 -157.8 -161.4 -166.7 -171.0 -174.8 -178.1	23.718 18.120 14.893 12.324 10.482 9.088 8.053	95.7 90.4 86.4 83.2 80.4 77.9	0.015 0.018 0.021 0.025 0.029 0.032 0.036 0.040	56.7 58.0 60.4 63.7 66.0 68.0 69.2 70.4	0.560 0.485 0.427 0.410 0.375 0.348 0.328 0.317	-51.6 -60.6 -66.9 -68.0 -70.7 -73.2 -75.9 -78.4
400 500 600 700 800 900 1000	0.620 0.625 0.624 0.624 0.626 0.628	-148.8 -157.8 -161.4 -166.7 -171.0 -174.8 -178.1 179.1	23.718 18.120 14.893 12.324 10.482 9.088 8.053 7.184	103.2 95.7 90.4 86.4 83.2 80.4 77.9 75.6	0.015 0.018 0.021 0.025 0.029 0.032 0.036 0.040 0.044	56.7 58.0 60.4 63.7 66.0 68.0 69.2 70.4 70.9	0.560 0.485 0.427 0.410 0.375 0.348 0.328 0.317 0.308	-51.6 -60.6 -66.9 -68.0 -70.7 -73.2 -75.9 -78.4 -80.9
400 500 600 700 800 900 1000 1200	0.620 0.625 0.624 0.624 0.626 0.628 0.628 0.633	-148.8 -157.8 -161.4 -166.7 -171.0 -174.8 -178.1 179.1 174.2	23.718 18.120 14.893 12.324 10.482 9.088 8.053 7.184 5.943	103.2 95.7 90.4 86.4 83.2 80.4 77.9 75.6 71.5	0.015 0.018 0.021 0.025 0.029 0.032 0.036 0.040 0.044	56.7 58.0 60.4 63.7 66.0 68.0 69.2 70.4 70.9 72.2	0.560 0.485 0.427 0.410 0.375 0.348 0.328 0.317 0.308 0.295	-51.6 -60.6 -66.9 -68.0 -70.7 -73.2 -75.9 -78.4 -80.9 -84.6
400 500 600 700 800 900 1000 1200 1400	0.620 0.625 0.624 0.624 0.626 0.628 0.628 0.633 0.636	-148.8 -157.8 -161.4 -166.7 -171.0 -174.8 -178.1 179.1 174.2 169.8	23.718 18.120 14.893 12.324 10.482 9.088 8.053 7.184 5.943 5.061	103.2 95.7 90.4 86.4 83.2 80.4 77.9 75.6 71.5 67.7	0.015 0.018 0.021 0.025 0.029 0.032 0.036 0.040 0.044 0.052 0.060	56.7 58.0 60.4 63.7 66.0 68.0 69.2 70.4 70.9 72.2 72.7	0.560 0.485 0.427 0.410 0.375 0.348 0.328 0.317 0.308 0.295 0.292	-51.6 -60.6 -66.9 -68.0 -70.7 -73.2 -75.9 -78.4 -80.9 -84.6 -88.2
400 500 600 700 800 900 1000 1200 1400 1600	0.620 0.625 0.624 0.624 0.626 0.628 0.628 0.633 0.636 0.640	-148.8 -157.8 -161.4 -166.7 -171.0 -174.8 -178.1 179.1 174.2 169.8 165.9	23.718 18.120 14.893 12.324 10.482 9.088 8.053 7.184 5.943 5.061 4.407	103.2 95.7 90.4 86.4 83.2 80.4 77.9 75.6 71.5 67.7 64.1	0.015 0.018 0.021 0.025 0.029 0.032 0.036 0.040 0.044 0.052 0.060 0.069	56.7 58.0 60.4 63.7 66.0 68.0 69.2 70.4 70.9 72.2 72.7	0.560 0.485 0.427 0.410 0.375 0.348 0.328 0.317 0.308 0.295 0.292	-51.6 -60.6 -66.9 -68.0 -70.7 -73.2 -75.9 -78.4 -80.9 -84.6 -88.2 -91.5
400 500 600 700 800 900 1000 1200 1400 1600 1800	0.620 0.625 0.624 0.624 0.626 0.628 0.628 0.633 0.636 0.640 0.643	-148.8 -157.8 -161.4 -166.7 -171.0 -174.8 -178.1 179.1 174.2 169.8 165.9 162.3	23.718 18.120 14.893 12.324 10.482 9.088 8.053 7.184 5.943 5.061 4.407 3.917	103.2 95.7 90.4 86.4 83.2 80.4 77.9 75.6 71.5 67.7 64.1 60.6	0.015 0.018 0.021 0.025 0.029 0.032 0.036 0.040 0.044 0.052 0.060 0.069 0.077	56.7 58.0 60.4 63.7 66.0 68.0 69.2 70.4 70.9 72.2 72.7 72.7 72.6	0.560 0.485 0.427 0.410 0.375 0.348 0.328 0.317 0.308 0.295 0.292 0.292	-51.6 -60.6 -66.9 -68.0 -70.7 -73.2 -75.9 -78.4 -80.9 -84.6 -88.2 -91.5 -94.7
400 500 600 700 800 900 1000 1200 1400 1600 1800 2000	0.620 0.625 0.624 0.624 0.626 0.628 0.628 0.633 0.636 0.640 0.643 0.645	-148.8 -157.8 -161.4 -166.7 -171.0 -174.8 -178.1 179.1 174.2 169.8 165.9 162.3 159.1	23.718 18.120 14.893 12.324 10.482 9.088 8.053 7.184 5.943 5.061 4.407 3.917 3.518	103.2 95.7 90.4 86.4 83.2 80.4 77.9 75.6 71.5 67.7 64.1 60.6 57.2	0.015 0.018 0.021 0.025 0.029 0.032 0.036 0.040 0.044 0.052 0.060 0.069 0.077 0.086	56.7 58.0 60.4 63.7 66.0 68.0 69.2 70.4 70.9 72.2 72.7 72.7 72.6 72.3	0.560 0.485 0.427 0.410 0.375 0.348 0.328 0.317 0.308 0.295 0.292 0.292 0.292 0.301	-51.6 -60.6 -66.9 -68.0 -70.7 -73.2 -75.9 -78.4 -80.9 -84.6 -88.2 -91.5 -94.7 -98.1
400 500 600 700 800 900 1000 1200 1400 1600 1800 2000 2200	0.620 0.625 0.624 0.624 0.626 0.628 0.628 0.633 0.636 0.640 0.643 0.645 0.646	-148.8 -157.8 -161.4 -166.7 -171.0 -174.8 -178.1 179.1 174.2 169.8 165.9 162.3 159.1 155.6	23.718 18.120 14.893 12.324 10.482 9.088 8.053 7.184 5.943 5.061 4.407 3.917 3.518 3.202	103.2 95.7 90.4 86.4 83.2 80.4 77.9 75.6 71.5 67.7 64.1 60.6 57.2 54.0	0.015 0.018 0.021 0.025 0.029 0.032 0.036 0.040 0.044 0.052 0.060 0.069 0.077 0.086 0.094	56.7 58.0 60.4 63.7 66.0 68.0 69.2 70.4 70.9 72.2 72.7 72.7 72.6 72.3 71.8	0.560 0.485 0.427 0.410 0.375 0.348 0.328 0.317 0.308 0.295 0.292 0.292 0.292 0.301 0.309	-51.6 -60.6 -66.9 -68.0 -70.7 -73.2 -75.9 -78.4 -80.9 -84.6 -88.2 -91.5 -94.7 -98.1 -101.1
400 500 600 700 800 900 1000 1200 1400 1600 1800 2000 2200 2400	0.620 0.625 0.624 0.624 0.626 0.628 0.628 0.633 0.636 0.640 0.643 0.645 0.646 0.648	-148.8 -157.8 -161.4 -166.7 -171.0 -174.8 -178.1 179.1 174.2 169.8 165.9 162.3 159.1 155.6 152.4	23.718 18.120 14.893 12.324 10.482 9.088 8.053 7.184 5.943 5.061 4.407 3.917 3.518 3.202 2.931	103.2 95.7 90.4 86.4 83.2 80.4 77.9 75.6 71.5 67.7 64.1 60.6 57.2 54.0 50.6	0.015 0.018 0.021 0.025 0.029 0.032 0.036 0.040 0.044 0.052 0.060 0.069 0.077 0.086 0.094 0.103	56.7 58.0 60.4 63.7 66.0 68.0 69.2 70.4 70.9 72.2 72.7 72.6 72.3 71.8 71.1	0.560 0.485 0.427 0.410 0.375 0.348 0.328 0.317 0.308 0.295 0.292 0.292 0.292 0.301 0.309 0.319	-51.6 -60.6 -66.9 -68.0 -70.7 -73.2 -75.9 -78.4 -80.9 -84.6 -88.2 -91.5 -94.7 -98.1 -101.1 -104.0

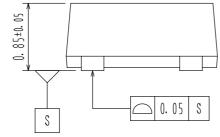
CE=5V, IC=8								
Freq(MHz)	S11	∠\$11	S21	∠S21	S12	∠ S12	S22	∠S22
100	0.558	-133.0	39.014	127.8	0.009	54.5	0.618	-33.7
200	0.671	-155.6	23.364	107.6	0.012	52.6	0.457	-41.5
300	0.704	-165.1	16.107	97.6	0.014	57.5	0.415	-45.4
400	0.718	-170.7	12.150	91.5	0.017	62.9	0.395	-49.0
500	0.716	-173.4	9.907	86.7	0.021	66.8	0.385	-50.4
600	0.717	-177.0	8.214	83.3	0.024	69.5	0.378	-52.4
700	0.718	179.9	7.015	80.4	0.028	72.5	0.364	-54.4
800	0.720	177.1	6.091	77.8	0.031	73.9	0.354	-57.0
900	0.723	174.5	5.413	75.3	0.035	75.7	0.351	-59.7
1000	0.723	172.3	4.829	72.9	0.039	76.8	0.346	-62.4
1200	0.728	168.3	4.009	68.8	0.047	78.1	0.343	-67.0
1400	0.731	164.7	3.423	64.7	0.055	78.9	0.347	-71.8
1600	0.735	161.2	2.987	60.8	0.063	78.9	0.352	-76.2
1800	0.738	157.9	2.662	57.1	0.072	79.1	0.359	-80.6
2000	0.740	155.0	2.393	53.5	0.081	78.7	0.369	-85.3
2200	0.741	151.7	2.179	50.0	0.090	78.2	0.379	-89.5
2400	0.743	148.6	1.993	46.4	0.099	77.4	0.391	-93.5
2600	0.744	145.6	1.843	43.0	0.109	76.5	0.404	-97.4
2800	0.746	142.4	1.716	39.6	0.119	75.4	0.418	-101.3
3000	0.744	139.2	1.601	36.3	0.129	74.2	0.433	-105.1
CE=8V, IC=1 Freq(MHz)	S11	∠S11	S21	∠S21	S12	∠ S12	S22	∠S22
100	0.784	-33.9	22.973	157.1	0.014	73.5	0.941	-18.1
200	0.754	-64.8	20.491	138.6	0.025	62.4	0.839	-32.6
300	0.715	-90.5	17.690	124.1	0.032	55.0	0.739	-44.1
400	0.697	-109.0	14.905	113.1	0.037	50.3	0.685	-52.2
500	0.704	-120.4	13.108	105.8	0.041	49.3	0.652	-56.5
600	0.678	-130.9	11.176	99.3	0.044	47.7	0.591	-60.6
700	0.659)),,,	0.044		1	00.0
	0.057	-139.5	9.599	94.2	0.044	47.3	0.544	-63.3
800		-139.5 -146.9	9.599 8.439					
800 900	0.645 0.638	1		94.2	0.046	47.3	0.544	-63.3
	0.645	-146.9	8.439	94.2 89.7	0.046 0.048	47.3 47.3	0.544 0.504	-63.3 -66.1
900	0.645 0.638	-146.9 -152.9	8.439 7.523	94.2 89.7 85.8	0.046 0.048 0.050	47.3 47.3 47.5	0.544 0.504 0.478	-63.3 -66.1 -68.7
900 1000	0.645 0.638 0.629	-146.9 -152.9 -158.0	8.439 7.523 6.746	94.2 89.7 85.8 82.7	0.046 0.048 0.050 0.052	47.3 47.3 47.5 48.6	0.544 0.504 0.478 0.457	-63.3 -66.1 -68.7 -71.2
900 1000 1200	0.645 0.638 0.629 0.623	-146.9 -152.9 -158.0 -166.3	8.439 7.523 6.746 5.618	94.2 89.7 85.8 82.7 77.1	0.046 0.048 0.050 0.052 0.056	47.3 47.3 47.5 48.6 50.5	0.544 0.504 0.478 0.457 0.427	-63.3 -66.1 -68.7 -71.2 -75.0
900 1000 1200 1400	0.645 0.638 0.629 0.623 0.621	-146.9 -152.9 -158.0 -166.3 -173.1	8.439 7.523 6.746 5.618 4.797	94.2 89.7 85.8 82.7 77.1 72.1	0.046 0.048 0.050 0.052 0.056 0.060	47.3 47.3 47.5 48.6 50.5 52.6	0.544 0.504 0.478 0.457 0.427 0.411	-63.3 -66.1 -68.7 -71.2 -75.0 -78.5
900 1000 1200 1400 1600	0.645 0.638 0.629 0.623 0.621 0.620	-146.9 -152.9 -158.0 -166.3 -173.1 -179.0	8.439 7.523 6.746 5.618 4.797 4.199	94.2 89.7 85.8 82.7 77.1 72.1 67.5	0.046 0.048 0.050 0.052 0.056 0.060	47.3 47.3 47.5 48.6 50.5 52.6 55.0	0.544 0.504 0.478 0.457 0.427 0.411 0.399	-63.3 -66.1 -68.7 -71.2 -75.0 -78.5 -81.8
900 1000 1200 1400 1600 1800	0.645 0.638 0.629 0.623 0.621 0.620 0.622	-146.9 -152.9 -158.0 -166.3 -173.1 -179.0 176.1	8.439 7.523 6.746 5.618 4.797 4.199 3.717	94.2 89.7 85.8 82.7 77.1 72.1 67.5 63.4	0.046 0.048 0.050 0.052 0.056 0.060 0.065 0.071	47.3 47.3 47.5 48.6 50.5 52.6 55.0 56.9	0.544 0.504 0.478 0.457 0.427 0.411 0.399 0.398	-63.3 -66.1 -68.7 -71.2 -75.0 -78.5 -81.8 -85.2
900 1000 1200 1400 1600 1800 2000	0.645 0.638 0.629 0.623 0.621 0.620 0.622 0.623	-146.9 -152.9 -158.0 -166.3 -173.1 -179.0 176.1 171.8	8.439 7.523 6.746 5.618 4.797 4.199 3.717 3.348	94.2 89.7 85.8 82.7 77.1 72.1 67.5 63.4 59.4	0.046 0.048 0.050 0.052 0.056 0.060 0.065 0.071 0.076	47.3 47.5 48.6 50.5 52.6 55.0 56.9 58.6	0.544 0.504 0.478 0.457 0.427 0.411 0.399 0.398 0.397	-63.3 -66.1 -68.7 -71.2 -75.0 -78.5 -81.8 -85.2 -88.5
900 1000 1200 1400 1600 1800 2000 2200	0.645 0.638 0.629 0.623 0.621 0.620 0.622 0.623 0.623	-146.9 -152.9 -158.0 -166.3 -173.1 -179.0 176.1 171.8 167.4	8.439 7.523 6.746 5.618 4.797 4.199 3.717 3.348 3.039	94.2 89.7 85.8 82.7 77.1 72.1 67.5 63.4 59.4 55.5	0.046 0.048 0.050 0.052 0.056 0.060 0.065 0.071 0.076 0.082	47.3 47.5 48.6 50.5 52.6 55.0 56.9 58.6 60.1	0.544 0.504 0.478 0.457 0.427 0.411 0.399 0.398 0.397 0.401	-63.3 -66.1 -68.7 -71.2 -75.0 -78.5 -81.8 -85.2 -88.5 -91.7
900 1000 1200 1400 1600 1800 2000 2200 2400	0.645 0.638 0.629 0.623 0.621 0.620 0.622 0.623 0.623 0.625	-146.9 -152.9 -158.0 -166.3 -173.1 -179.0 176.1 171.8 167.4 163.5	8.439 7.523 6.746 5.618 4.797 4.199 3.717 3.348 3.039 2.786	94.2 89.7 85.8 82.7 77.1 72.1 67.5 63.4 59.4 55.5 51.8	0.046 0.048 0.050 0.052 0.056 0.060 0.065 0.071 0.076 0.082 0.089	47.3 47.5 48.6 50.5 52.6 55.0 56.9 58.6 60.1 61.4	0.544 0.504 0.478 0.457 0.427 0.411 0.399 0.398 0.397 0.401 0.407	-63.3 -66.1 -68.7 -71.2 -75.0 -78.5 -81.8 -85.2 -88.5 -91.7 -95.0

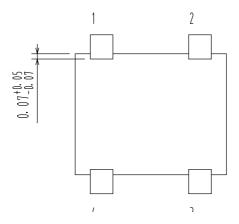
CE=8V, IC=3 Freq(MHz)	S11	∠S11	S21	∠S21	S12	∠ S12	S22	∠S22
100	0.556	-65.2	43.179	145.8	0.011	67.8	0.846	-28.0
200	0.578	-106.8	32.894	123.0	0.017	57.9	0.669	-44.6
300	0.576	-129.7	24.775	109.1	0.021	56.2	0.584	-54.7
400	0.604	-142.8	19.256	100.3	0.021	57.0	0.512	-61.6
500	0.614	-148.7	15.997	94.4	0.028	59.0	0.488	-63.9
600	0.606	-155.8	13.266	89.8	0.031	60.8	0.443	-66.9
700	0.603	-161.6	11.285	86.1	0.034	62.5	0.409	-69.3
800	0.602	-166.5	9.802	82.9	0.037	64.2	0.382	-72.0
900	0.602	-170.7	8.672	80.0	0.041	65.4	0.366	-74.3
1000	0.600	-174.1	7.739	77.6	0.044	66.3	0.352	-76.7
1200	0.603	179.9	6.401	73.3	0.051	68.1	0.333	-80.3
1400	0.605	174.9	5.453	69.2	0.059	69.2	0.325	-83.7
1600	0.607	170.4	4.753	65.4	0.066	69.8	0.321	-87.0
1800	0.611	166.4	4.215	61.8	0.074	70.0	0.321	-90.2
2000	0.613	162.9	3.791	58.4	0.082	69.9	0.325	-93.4
2200	0.614	159.2	3.445	55.1	0.090	70.1	0.330	-96.5
2400	0.616	155.8	3.155	51.7	0.099	69.6	0.339	-99.4
2600	0.617	152.4	2.916	48.4	0.107	69.1	0.349	-102.4
		1						
2800	0.619	149.1	2.711	45.2	0.115	68.5	0.361	-105.3
3000	0.619	149.1 145.7	2.711 2.531	45.2 42.0	0.115 0.124	68.5 67.5	0.361	-
3000 CE=8V, IC=5	0.619							-105.3 -108.2 ∠S22
3000 CE=8V, IC=5	0.619 0mA	145.7	2.531	42.0	0.124	67.5	0.375	-108.2
3000 CE=8V, IC=5 Freq(MHz)	0.619 0mA S11	145.7 ∠S11	2.531 S21	42.0 ∠S21	0.124 S12	67.5 ∠ S12	0.375 S22	-108.2 ∠S22
3000 CE=8V, IC=50 Freq(MHz)	0.619 0mA S11 0.477	145.7 ∠S11 -88.8	2.531 S21 42.926	42.0 ∠S21 139.6	0.124 S12 0.009	67.5 ∠ S12 65.5	0.375 S22 0.793	-108.2 ∠S22 -30.4
3000 CE=8V, IC=50 Freq(MHz) 100 200	0.619 0mA S11 0.477 0.554	145.7 ∠S11 -88.8 -127.0	2.531 S21 42.926 34.154	42.0 ∠S21 139.6 117.2	0.124 S12 0.009 0.014	67.5 ∠ S12 65.5 59.2	0.375 S22 0.793 0.603	-108.2 ∠S22 -30.4 -45.1
3000 CE=8V, IC=50 Freq(MHz) 100 200 300	0.619 0mA S11 0.477 0.554 0.589	∠S11 -88.8 -127.0 -144.5	2.531 S21 42.926 34.154 24.758	42.0 ∠S21 139.6 117.2 104.4	0.124 S12 0.009 0.014 0.017	67.5 ∠ S12 65.5 59.2 59.1	0.375 S22 0.793 0.603 0.529	-108.2 ∠S22 -30.4 -45.1 -53.1
3000 CE=8V, IC=50 Freq(MHz) 100 200 300 400 500 600	0.619 0mA S11 0.477 0.554 0.589 0.606	∠S11 -88.8 -127.0 -144.5 -154.4 -158.4 -164.1	2.531 S21 42.926 34.154 24.758 18.954	42.0 ∠S21 139.6 117.2 104.4 96.6 91.2 87.0	0.124 S12 0.009 0.014 0.017 0.020	67.5 ∠ S12 65.5 59.2 59.1 61.9 64.8 67.3	0.375 S22 0.793 0.603 0.529 0.478	-108.2 ∠S22 -30.4 -45.1 -53.1 -58.7 -60.2 -62.6
3000 CE=8V, IC=50 Freq(MHz) 100 200 300 400 500	0.619 0mA S11 0.477 0.554 0.589 0.606 0.613	∠S11 -88.8 -127.0 -144.5 -154.4 -158.4	2.531 S21 42.926 34.154 24.758 18.954 15.585	42.0 ∠S21 139.6 117.2 104.4 96.6 91.2 87.0 83.7	0.124 S12 0.009 0.014 0.017 0.020 0.024 0.027 0.031	67.5 ∠ S12 65.5 59.2 59.1 61.9 64.8 67.3 69.1	0.375 S22 0.793 0.603 0.529 0.478 0.453	-108.2 ∠S22 -30.4 -45.1 -53.1 -58.7 -60.2 -62.6 -64.8
3000 CE=8V, IC=50 Freq(MHz) 100 200 300 400 500 600	0.619 0mA S11 0.477 0.554 0.589 0.606 0.613 0.611	2S11 -88.8 -127.0 -144.5 -154.4 -168.8 -172.8	2.531 S21 42.926 34.154 24.758 18.954 15.585 12.888	42.0 ∠S21 139.6 117.2 104.4 96.6 91.2 87.0	0.124 S12 0.009 0.014 0.017 0.020 0.024 0.027	67.5 ∠ S12 65.5 59.2 59.1 61.9 64.8 67.3	0.375 S22 0.793 0.603 0.529 0.478 0.453 0.416	-108.2 ∠S22 -30.4 -45.1 -53.1 -58.7 -60.2 -62.6
3000 CE=8V, IC=50 Freq(MHz) 100 200 300 400 500 600 700 800 900	0.619 0mA S11 0.477 0.554 0.589 0.606 0.613 0.611 0.611 0.613 0.616	∠S11 -88.8 -127.0 -144.5 -154.4 -158.4 -164.1 -168.8 -172.8 -176.3	2.531 S21 42.926 34.154 24.758 18.954 15.585 12.888 10.954 9.503 8.407	42.0 ∠S21 139.6 117.2 104.4 96.6 91.2 87.0 83.7 80.7 78.1	0.124 S12 0.009 0.014 0.017 0.020 0.024 0.027 0.031 0.034 0.038	67.5 2 S12 65.5 59.2 59.1 61.9 64.8 67.3 69.1 70.4 71.5	0.375 S22 0.793 0.603 0.529 0.478 0.453 0.416 0.388 0.366 0.355	-108.2 -30.4 -45.1 -53.1 -58.7 -60.2 -62.6 -64.8 -67.2 -69.5
3000 CE=8V, IC=50 Freq(MHz) 100 200 300 400 500 600 700 800 900 1000	0.619 0mA S11 0.477 0.554 0.589 0.606 0.613 0.611 0.611 0.613 0.616 0.615	145.7 ∠S11 -88.8 -127.0 -144.5 -154.4 -158.4 -164.1 -168.8 -172.8 -176.3 -179.2	2.531 S21 42.926 34.154 24.758 18.954 15.585 12.888 10.954 9.503 8.407 7.494	42.0 ∠S21 139.6 117.2 104.4 96.6 91.2 87.0 83.7 80.7 78.1 75.7	0.124 S12 0.009 0.014 0.017 0.020 0.024 0.027 0.031 0.034 0.038 0.042	67.5 ∠ S12 65.5 59.2 59.1 61.9 64.8 67.3 69.1 70.4 71.5 72.3	0.375 S22 0.793 0.603 0.529 0.478 0.453 0.416 0.388 0.366 0.355 0.343	-108.2 -30.4 -45.1 -53.1 -58.7 -60.2 -62.6 -64.8 -67.2 -69.5 -71.9
3000 CE=8V, IC=5 Freq(MHz) 100 200 300 400 500 600 700 800 900 1000 1200	0.619 0mA S11 0.477 0.554 0.589 0.606 0.613 0.611 0.611 0.613 0.616 0.615 0.619	2S11 -88.8 -127.0 -144.5 -154.4 -158.4 -164.1 -168.8 -172.8 -176.3 -179.2 175.7	2.531 S21 42.926 34.154 24.758 18.954 15.585 12.888 10.954 9.503 8.407 7.494 6.192	42.0 ∠S21 139.6 117.2 104.4 96.6 91.2 87.0 83.7 80.7 78.1 75.7 71.6	0.124 S12 0.009 0.014 0.017 0.020 0.024 0.027 0.031 0.034 0.038 0.042 0.049	67.5 ∠ S12 65.5 59.2 59.1 61.9 64.8 67.3 69.1 70.4 71.5 72.3 73.7	0.375 S22 0.793 0.603 0.529 0.478 0.453 0.416 0.388 0.366 0.355 0.343 0.329	-108.2 -30.4 -45.1 -53.1 -58.7 -60.2 -62.6 -64.8 -67.2 -69.5 -71.9 -75.5
3000 CE=8V, IC=5 Freq(MHz) 100 200 300 400 500 600 700 800 900 1000 1200 1400	0.619 0mA S11 0.477 0.554 0.589 0.606 0.613 0.611 0.611 0.613 0.616 0.615 0.619 0.623	145.7 ∠S11 -88.8 -127.0 -144.5 -154.4 -158.4 -164.1 -168.8 -172.8 -176.3 -179.2 175.7 171.2	2.531 S21 42.926 34.154 24.758 18.954 15.585 12.888 10.954 9.503 8.407 7.494 6.192 5.272	42.0 ∠S21 139.6 117.2 104.4 96.6 91.2 87.0 83.7 80.7 78.1 75.7 71.6 67.7	0.124 S12 0.009 0.014 0.017 0.020 0.024 0.027 0.031 0.034 0.038 0.042 0.049 0.057	67.5 2 S12 65.5 59.2 59.1 61.9 64.8 67.3 69.1 70.4 71.5 72.3 73.7 74.1	0.375 S22 0.793 0.603 0.529 0.478 0.453 0.416 0.388 0.366 0.355 0.343 0.329 0.324	-108.2 -30.4 -45.1 -53.1 -58.7 -60.2 -62.6 -64.8 -67.2 -69.5 -71.9 -75.5 -79.0
3000 CE=8V, IC=50 Freq(MHz) 100 200 300 400 500 600 700 800 900 1000 1200 1400 1600	0.619 0mA S11 0.477 0.554 0.589 0.606 0.613 0.611 0.613 0.616 0.615 0.619 0.623 0.626	2S11 -88.8 -127.0 -144.5 -154.4 -158.4 -164.1 -168.8 -172.8 -176.3 -179.2 175.7 171.2 167.2	2.531 S21 42.926 34.154 24.758 18.954 15.585 12.888 10.954 9.503 8.407 7.494 6.192 5.272 4.586	42.0 ∠S21 139.6 117.2 104.4 96.6 91.2 87.0 83.7 80.7 78.1 75.7 71.6 67.7 64.0	0.124 S12 0.009 0.014 0.017 0.020 0.024 0.027 0.031 0.034 0.038 0.042 0.049 0.057 0.065	67.5 2 S12 65.5 59.2 59.1 61.9 64.8 67.3 69.1 70.4 71.5 72.3 73.7 74.1 74.5	0.375 S22 0.793 0.603 0.529 0.478 0.453 0.416 0.388 0.366 0.355 0.343 0.329 0.324 0.323	-108.2 -30.4 -45.1 -53.1 -58.7 -60.2 -62.6 -64.8 -67.2 -69.5 -71.9 -75.5 -79.0 -82.4
3000 CE=8V, IC=50 Freq(MHz) 100 200 300 400 500 600 700 800 900 1000 1200 1400 1600 1800	0.619 0mA S11 0.477 0.554 0.589 0.606 0.613 0.611 0.613 0.616 0.615 0.619 0.623 0.626 0.631	2S11 -88.8 -127.0 -144.5 -154.4 -158.4 -164.1 -168.8 -172.8 -176.3 -179.2 175.7 171.2 167.2 163.5	2.531 S21 42.926 34.154 24.758 18.954 15.585 12.888 10.954 9.503 8.407 7.494 6.192 5.272 4.586 4.071	42.0 ∠S21 139.6 117.2 104.4 96.6 91.2 87.0 83.7 80.7 78.1 75.7 71.6 67.7 64.0 60.4	0.124 S12 0.009 0.014 0.017 0.020 0.024 0.027 0.031 0.034 0.038 0.042 0.049 0.057 0.065 0.073	67.5 ∠ S12 65.5 59.2 59.1 61.9 64.8 67.3 69.1 70.4 71.5 72.3 73.7 74.1 74.5 74.4	0.375 S22 0.793 0.603 0.529 0.478 0.453 0.416 0.388 0.366 0.355 0.343 0.329 0.324 0.323 0.325	-108.2 -30.4 -45.1 -53.1 -58.7 -60.2 -62.6 -64.8 -67.2 -69.5 -71.9 -75.5 -79.0 -82.4 -85.8
3000 CE=8V, IC=50 Freq(MHz) 100 200 300 400 500 600 700 800 900 1000 1200 1400 1600 1800 2000	0.619 0mA S11 0.477 0.554 0.589 0.606 0.613 0.611 0.613 0.616 0.615 0.619 0.623 0.626 0.631 0.633	145.7 ∠S11 -88.8 -127.0 -144.5 -154.4 -158.4 -164.1 -168.8 -172.8 -176.3 -179.2 175.7 171.2 167.2 163.5 160.2	2.531 S21 42.926 34.154 24.758 18.954 15.585 12.888 10.954 9.503 8.407 7.494 6.192 5.272 4.586 4.071 3.658	42.0 ∠S21 139.6 117.2 104.4 96.6 91.2 87.0 83.7 80.7 78.1 75.7 71.6 67.7 64.0 60.4 57.0	0.124 S12 0.009 0.014 0.017 0.020 0.024 0.027 0.031 0.034 0.042 0.049 0.057 0.065 0.073 0.081	67.5 ∠ S12 65.5 59.2 59.1 61.9 64.8 67.3 69.1 70.4 71.5 72.3 73.7 74.1 74.5 74.4 74.0	0.375 S22 0.793 0.603 0.529 0.478 0.453 0.416 0.388 0.366 0.355 0.343 0.329 0.324 0.323 0.325 0.331	-108.2 -30.4 -45.1 -53.1 -58.7 -60.2 -62.6 -64.8 -67.2 -69.5 -71.9 -75.5 -79.0 -82.4 -85.8 -89.4
3000 CE=8V, IC=5 Freq(MHz) 100 200 300 400 500 600 700 800 900 1000 1200 1400 1600 1800 2000 2200	0.619 0mA S11 0.477 0.554 0.589 0.606 0.613 0.611 0.613 0.616 0.615 0.619 0.623 0.626 0.631 0.633 0.634	145.7 ∠S11 -88.8 -127.0 -144.5 -154.4 -158.4 -164.1 -168.8 -172.8 -176.3 -179.2 175.7 171.2 167.2 163.5 160.2 156.7	2.531 S21 42.926 34.154 24.758 18.954 15.585 12.888 10.954 9.503 8.407 7.494 6.192 5.272 4.586 4.071 3.658 3.322	42.0 ∠S21 139.6 117.2 104.4 96.6 91.2 87.0 83.7 80.7 78.1 75.7 71.6 67.7 64.0 60.4 57.0 53.7	0.124 S12 0.009 0.014 0.017 0.020 0.024 0.027 0.031 0.034 0.038 0.042 0.049 0.057 0.065 0.073 0.081 0.090	67.5 2 S12 65.5 59.2 59.1 61.9 64.8 67.3 69.1 70.4 71.5 72.3 73.7 74.1 74.5 74.0 73.7	0.375 S22 0.793 0.603 0.529 0.478 0.453 0.416 0.388 0.366 0.355 0.343 0.329 0.324 0.323 0.325 0.331 0.337	-108.2 -30.4 -45.1 -53.1 -58.7 -60.2 -62.6 -64.8 -67.2 -69.5 -71.9 -75.5 -79.0 -82.4 -85.8 -89.4 -92.7
3000 CE=8V, IC=50 Freq(MHz) 100 200 300 400 500 600 700 800 900 1000 1200 1400 1600 1800 2000 2200 2400	0.619 0mA S11 0.477 0.554 0.589 0.606 0.613 0.611 0.613 0.616 0.615 0.619 0.623 0.626 0.631 0.633 0.634 0.637	145.7 ∠S11 -88.8 -127.0 -144.5 -154.4 -158.4 -164.1 -168.8 -172.8 -176.3 -179.2 175.7 171.2 167.2 163.5 160.2 156.7 153.5	2.531 S21 42.926 34.154 24.758 18.954 15.585 12.888 10.954 9.503 8.407 7.494 6.192 5.272 4.586 4.071 3.658 3.322 3.041	42.0 ∠S21 139.6 117.2 104.4 96.6 91.2 87.0 83.7 80.7 78.1 75.7 71.6 67.7 64.0 60.4 57.0 53.7 50.3	0.124 S12 0.009 0.014 0.017 0.020 0.024 0.027 0.031 0.034 0.038 0.042 0.049 0.057 0.065 0.073 0.081 0.090 0.099	67.5 2 S12 65.5 59.2 59.1 61.9 64.8 67.3 69.1 70.4 71.5 72.3 73.7 74.1 74.5 74.4 74.0 73.7 73.0	0.375 S22 0.793 0.603 0.529 0.478 0.453 0.416 0.388 0.366 0.355 0.343 0.329 0.324 0.323 0.325 0.331 0.337 0.347	-108.2 -30.4 -45.1 -53.1 -58.7 -60.2 -62.6 -64.8 -67.2 -69.5 -71.9 -75.5 -79.0 -82.4 -85.8 -89.4 -92.7 -95.9
3000 CE=8V, IC=5 Freq(MHz) 100 200 300 400 500 600 700 800 900 1000 1200 1400 1600 1800 2000 2200	0.619 0mA S11 0.477 0.554 0.589 0.606 0.613 0.611 0.613 0.616 0.615 0.619 0.623 0.626 0.631 0.633 0.634	145.7 ∠S11 -88.8 -127.0 -144.5 -154.4 -158.4 -164.1 -168.8 -172.8 -176.3 -179.2 175.7 171.2 167.2 163.5 160.2 156.7	2.531 S21 42.926 34.154 24.758 18.954 15.585 12.888 10.954 9.503 8.407 7.494 6.192 5.272 4.586 4.071 3.658 3.322	42.0 ∠S21 139.6 117.2 104.4 96.6 91.2 87.0 83.7 80.7 78.1 75.7 71.6 67.7 64.0 60.4 57.0 53.7	0.124 S12 0.009 0.014 0.017 0.020 0.024 0.027 0.031 0.034 0.038 0.042 0.049 0.057 0.065 0.073 0.081 0.090	67.5 2 S12 65.5 59.2 59.1 61.9 64.8 67.3 69.1 70.4 71.5 72.3 73.7 74.1 74.5 74.0 73.7	0.375 S22 0.793 0.603 0.529 0.478 0.453 0.416 0.388 0.366 0.355 0.343 0.329 0.324 0.323 0.325 0.331 0.337	-108.2 -30.4 -45.1 -53.1 -58.7 -60.2 -62.6 -64.8 -67.2 -69.5 -71.9 -75.5 -79.0 -82.4 -85.8 -89.4 -92.7

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