



SGF25

For C- to X-band local oscillator and amplifier

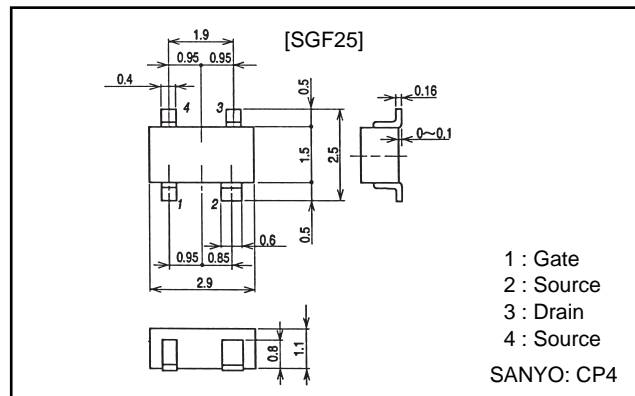
Features

- Super miniaturized plastic-mold package(CP4).
- High reliability achieved by original manufacturing technology(adopting a protection coat).
- Available for surface mounting and automatic inserting.

Package Dimensions

unit: mm

2134A



Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain to source voltage	V_{DS}		6.0	V
Gate to source voltage	V_{GS}		-5.0	V
Drain current	I_D		100	mA
Dissipation power	P_D		200	mW
Junction temperature	T_j		150	°C
Storage temperature	T_{stg}		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate to source breakdown voltage	$V_{(BR)GSO}$	$I_{GS}=-10\mu A$	-5.0			V
Zero gate voltage drain current	I_{DSS}	$V_{DS}=3V, V_{GS}=0$	30	45	65	mA
Gate to source cutoff voltage	$V_{GS(off)}$	$V_{DS}=3V, I_D=100\mu A$	-0.5	-1.5	-3.0	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=3V, I_D=10mA$		40		mS
Minimum noise figure	NFmin	$V_{DS}=3V, I_D=10mA$ $f=12GHz$		2.5		dB
Associated gain	Ga			5.5		dB
Maximum available gain	MAG			7.0		dB

SGF25

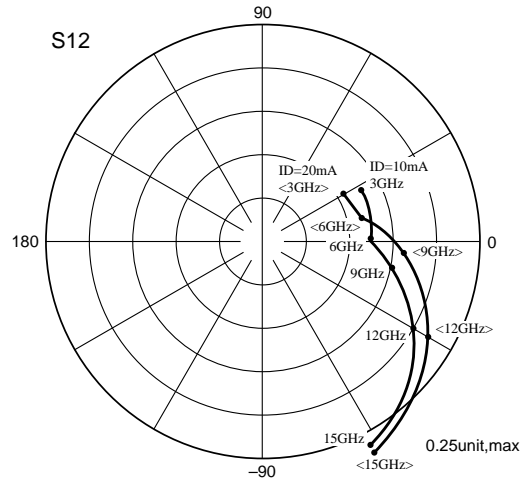
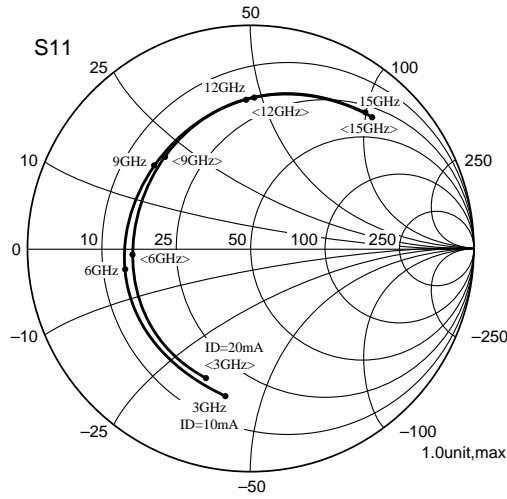
Vds=3V, Ids=10mA
SGF25

Frequency (MHz)	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
3000.0000	0.680	-98.6	3.086	93.5	0.131	27.6	0.556	-68.8
4000.0000	0.621	-123.5	2.750	72.2	0.130	16.3	0.480	-85.8
5000.0000	0.584	-147.0	2.445	51.8	0.128	8.1	0.418	-102.7
6000.0000	0.564	-168.7	2.175	32.6	0.128	2.7	0.372	-120.5
7000.0000	0.561	171.7	1.943	14.4	0.133	-1.3	0.343	-140.0
8000.0000	0.570	153.6	1.747	-2.9	0.141	-5.5	0.332	-161.5
9000.0000	0.590	136.8	1.579	-19.6	0.152	-10.4	0.339	175.7
10000.0000	0.616	120.9	1.431	-35.9	0.166	-16.1	0.364	153.2
11000.0000	0.648	105.7	1.297	-51.8	0.183	-22.7	0.403	131.8
12000.0000	0.684	91.1	1.174	-67.3	0.203	-30.6	0.454	112.2
13000.0000	0.724	77.1	1.059	-82.4	0.225	-39.9	0.511	94.1
14000.0000	0.765	63.5	0.951	-97.1	0.247	-50.6	0.570	77.0
15000.0000	0.805	50.1	0.847	-111.4	0.266	-62.2	0.627	60.6

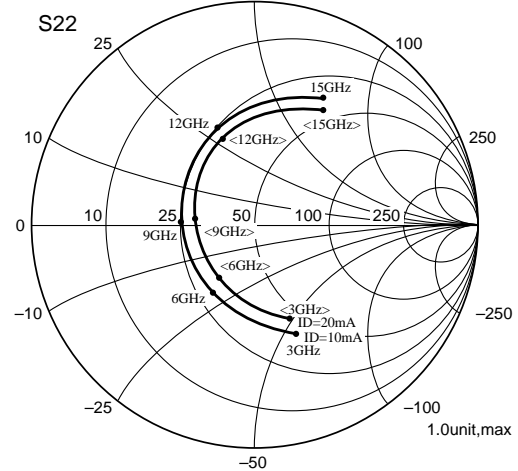
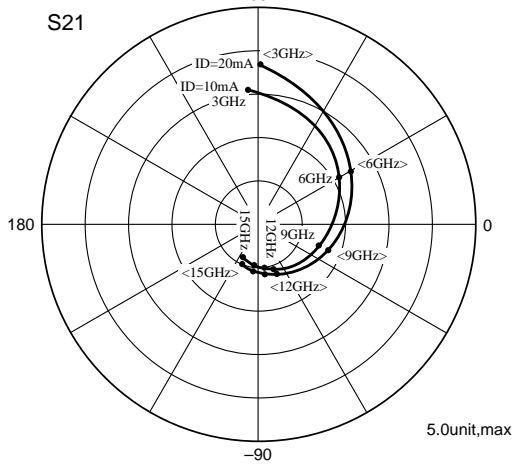
Vds=3V, Ids=20mA
SGF25

Frequency (MHz)	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
3000.0000	0.626	-107.6	3.654	89.5	0.112	30.7	0.465	-71.1
4000.0000	0.576	-132.7	3.187	68.6	0.113	22.4	0.395	-87.4
5000.0000	0.548	-155.9	2.779	49.0	0.116	16.9	0.340	-103.7
6000.0000	0.539	-176.8	2.435	30.6	0.123	12.8	0.301	-121.4
7000.0000	0.544	164.5	2.153	13.2	0.134	8.3	0.278	-141.5
8000.0000	0.561	147.3	1.924	-3.3	0.149	2.6	0.272	-164.0
9000.0000	0.586	131.3	1.735	-19.3	0.165	-4.4	0.283	172.2
10000.0000	0.616	116.0	1.573	-35.0	0.182	-12.1	0.312	149.1
11000.0000	0.650	101.4	1.428	-50.4	0.200	-20.5	0.355	127.9
12000.0000	0.688	87.5	1.297	-65.5	0.220	-29.7	0.409	108.8
13000.0000	0.728	74.0	1.176	-80.4	0.240	-40.0	0.469	91.2
14000.0000	0.771	60.8	1.063	-95.0	0.259	-51.2	0.530	74.7
15000.0000	0.812	47.9	0.955	-109.4	0.276	-63.0	0.589	58.8

S-parameter



V_{DS}=3V
I_D=10mA,20mA



< > : I_{ds}=20mA

START 3 GHz
STOP 15 GHz
STEP 1 GHz

■ No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.

■ Anyone purchasing any products described or contained herein for an above-mentioned use shall:

- ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use;
- ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.

■ Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

This catalog provides information as of October, 1997. Specifications and information herein are subject to change without notice.