2SC5620

FOR HIGH FREQUENCY AMPLIFY APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

2SC5620 is a super mini package resin sealed silicon NPN epitaxial transistor.

It is designed for high frequency voltage application.

FEATURE

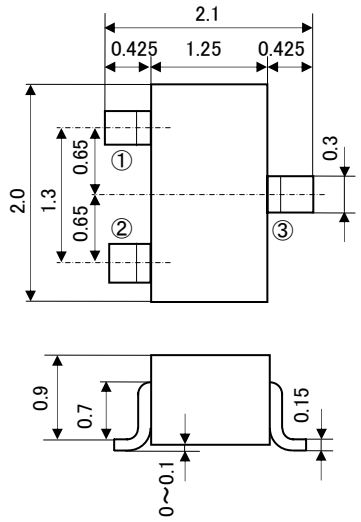
- High gain bandwidth product. fT=4.5GHz
- High gain, low noise.
- Can operate at low voltage.
- Super mini package for easy mounting.

APPLICATION

For TV tuners, High frequency voltage amplifier, Cellular phone system

OUTLINE DRAWING

Unit: mm



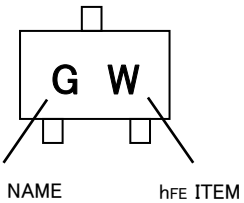
TERMINAL CONNECTOR
①: BASE
②: EMITTER
③: COLLECTOR

JEITA: SC-70

MAXIMUM RATINGS (Ta=25℃)

Symbol	Parameter	Ratings	Unit
VCBO	Collector to Base voltage	20	V
VCEO	Collector to Emitter voltage	12	V
VEBO	Emitter to Base voltage	3	V
IC	Collector current	50	mA
PC	Collector dissipation	125	mW
Tj	Junction temperature	+150	℃
Tstg	Storage temperature	−55～+150	℃

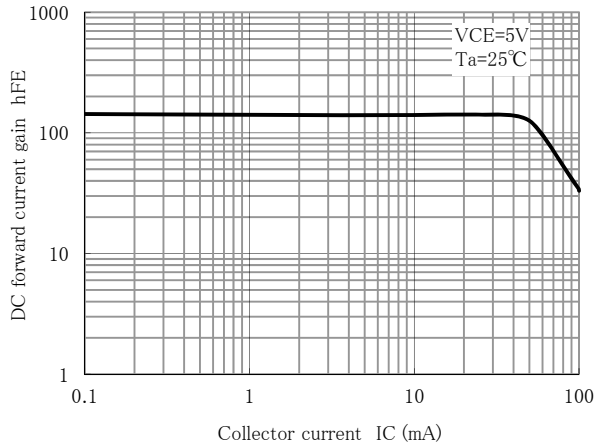
MARKING



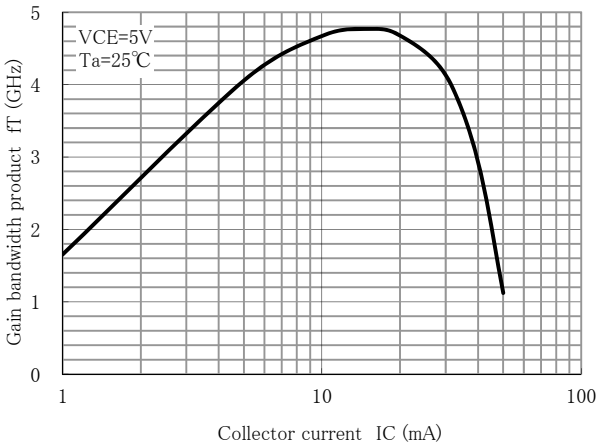
ELECTRICAL CHARACTERISTICS (Ta=25℃)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
ICBO	Collector cut off current	VCB=10V, IE=0mA	−	−	1.0	μA
IEBO	Emitter cut off current	VEB=1V, IC=0mA	−	−	1.0	μA
hFE	DC forward current gain	VCE=5V , IC=20mA	50	−	250	−
fT	Gain bandwidth product	VCE=5V, IE=20mA	−	4.5	−	GHz
Cob	Collector output capacitance	VCB=5V, IE=0mA , f=1MHz	−	1.0	−	pF
$\|S21\|^2$	Insertion power gain	VCE=5V, IC=20mA , f=1GHz	7.5	9.0	−	dB
NF	Noise figure	VCE=5V, IC=5mA , f=1GHz	−	1.5	−	dB

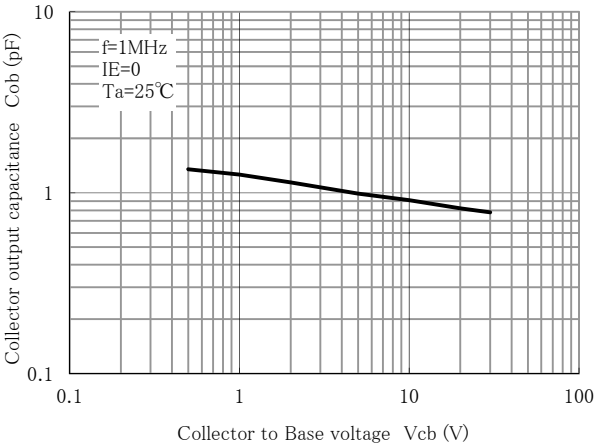
hFE – IC



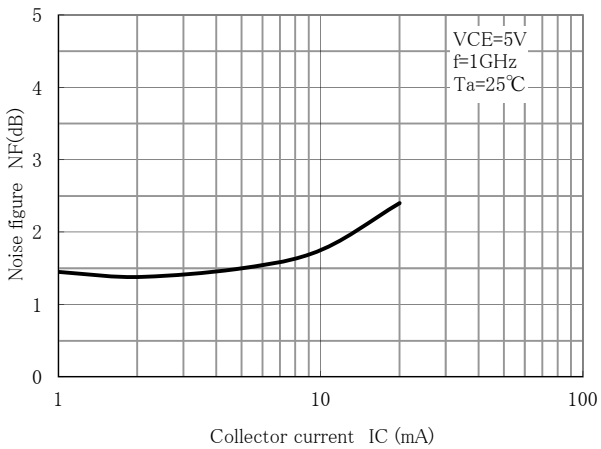
fT – IC



Cob – Vcb



NF – IC

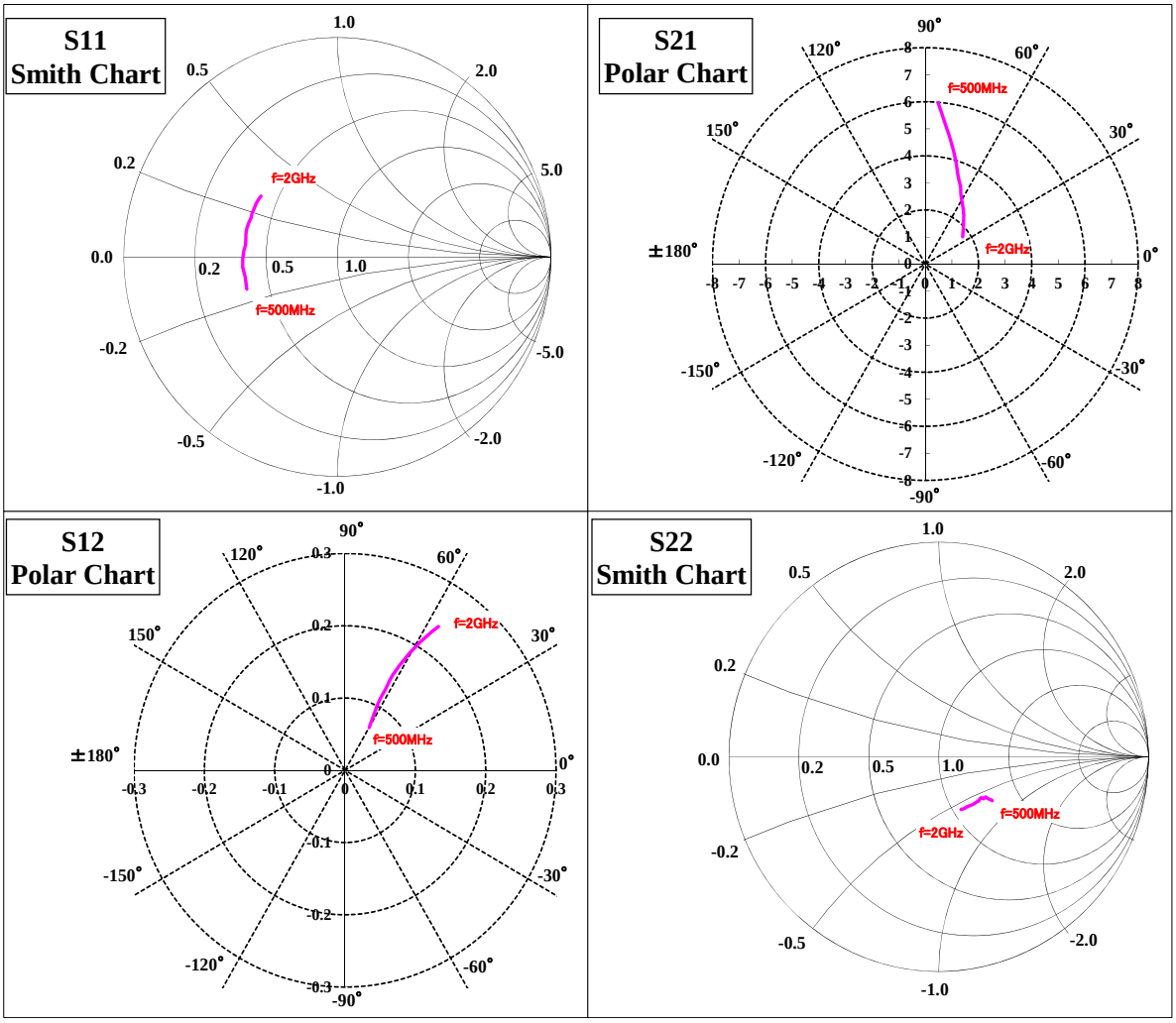


2SC5620

FOR HIGH FREQUENCY AMPLIFY APPLICATION
SILICON NPN EPITAXIAL TYPE

VCE=5V/IC=20mA

Frequency	S11		S21		S12		S22	
(MHz)	Mag	Ang(deg)	Mag	Ang(deg)	Mag	Ang(deg)	Mag	Ang(deg)
500	0.449	−160.9	5.972	85.3	0.068	59.9	0.326	−38.7
600	0.442	−168.1	5.047	80.6	0.079	61.2	0.319	−38.8
700	0.446	−174.0	4.400	76.3	0.089	62.2	0.311	−39.3
800	0.443	−179.4	3.869	72.4	0.100	62.9	0.295	−39.8
900	0.439	176.8	3.456	69.0	0.111	63.2	0.291	−40.1
1000	0.434	172.7	3.142	65.0	0.123	63.0	0.289	−42.4
1100	0.437	169.1	2.872	62.2	0.133	62.9	0.278	−43.2
1200	0.441	165.7	2.673	58.8	0.144	62.9	0.277	−44.8
1300	0.443	162.9	2.499	55.3	0.156	62.3	0.280	−47.4
1400	0.443	159.2	2.345	52.0	0.168	61.8	0.277	−49.3
1500	0.441	156.0	2.209	49.4	0.179	61.0	0.276	−51.9
1600	0.446	153.4	2.090	46.5	0.191	60.2	0.274	−54.4
1700	0.447	151.1	1.975	43.9	0.203	59.2	0.271	−57.6
1800	0.452	147.5	1.891	41.1	0.216	58.3	0.268	−60.2
1900	0.452	145.1	1.807	38.4	0.228	57.3	0.270	−63.7
2000	0.453	142.3	1.730	35.7	0.239	56.3	0.267	−66.4



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