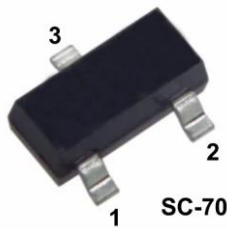
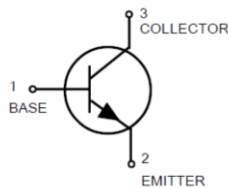


**DESCRIPTION**

The 2SC3356W is available in SC-70 package.

ORDERING INFORMATION

Package Type	Part Number
SC-70	2SC3356W
Note	SPQ:3,000pcs/Reel
AiT provides all RoHS products	

PIN DESCRIPTION**FEATURES**

- Low Noise and High Gain
NF = 1.1 dB TYP., Ga = 11 dB TYP.
@VCE = 10 V, IC = 7 mA, f = 1.0 GHz
- High Power Gain
MAG = 13 dB TYP. @VCE = 10 V, IC = 20 mA,
f = 1.0 GHz
- Ultra high frequency low noise transistor
- Silicon epitaxial bipolar process
- High power gain, low noise figure
- High dynamic range and ideal current characteristics
- Mainly used in VHF, UHF and CATV
- Available in SC-70 package

Pin#	Function
1	BASE
2	EMITTER
3	COLLECTOR

ABSOLUTE MAXIMUM RATINGS

TA=25°C, unless Otherwise noted

V _{CBO} , Collector-base breakdown voltage	20V
V _{CEO} , Collector-emitter breakdown voltage	12V
V _{EBO} , Emitter-base breakdown voltage	3.0V
I _C , Collector Current	100mA
P _C , Collector Power Dissipation	150mW
T _J , Junction Temperature	150°C
T _{STG} , Storage Temperature	-65°C~+150°C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.



ELECTRICAL CHARACTERISTICS

TJ = 25°C, unless otherwise specified.

Parameter	Symbol	Characteristic	Min	Typ.	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=10V, I_E = 0$	-	-	1.0	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=1.0V, I_C = 0$	-	-	1.0	μA
DC Current Gain	h_{FE}	$V_{CE}=3V, I_C=10mA$	82	170	270	-
Gain Bandwidth Product	f_T	$V_{CE}=10V, I_C=20mA$	-	7	-	GHz
Feedback Capacitance	C_{re}	$V_{CB} = 10 V, I_E = 0,$ $f = 1.0 MHz$	-	0.55	1.0	pF
Insertion Power Gain	$ S_{21E} ^2$	$V_{CE}=10V, I_C=20mA,$ $f=1.0GHz$	-	11.5	-	dB
Noise Factor	NF	$V_{CE}=10V, I_C=7mA,$ $f=1.0GHz$	-	1.1	2.0	dB

Note

- 1.Pulse Measurement PW 350 s, Duty Cycle 2 %
- 2.The emitter terminal and the case shall be connected to the guard terminal of the three-terminal capacitance bridge

TYPICAL PERFORMANCE CHARACTERISTICS

Fig 1. Total Power Dissipation vs. Ambient Temperature

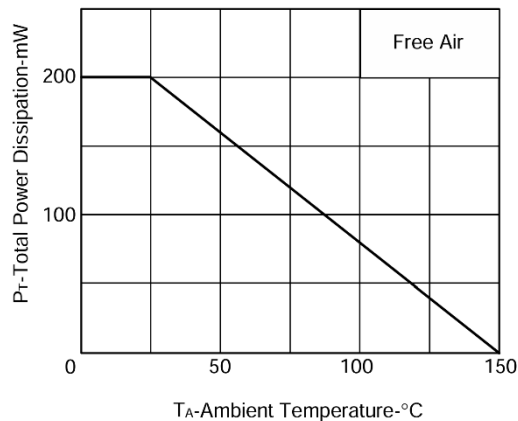


Fig 2. Feedback Capacitance vs. Collector to Base Voltage

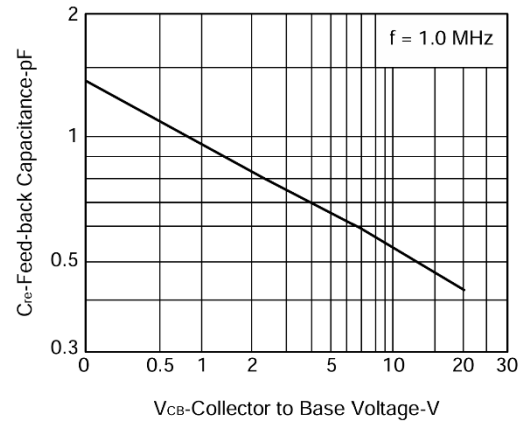




Fig 3. DC Current Gain vs. Collector Current

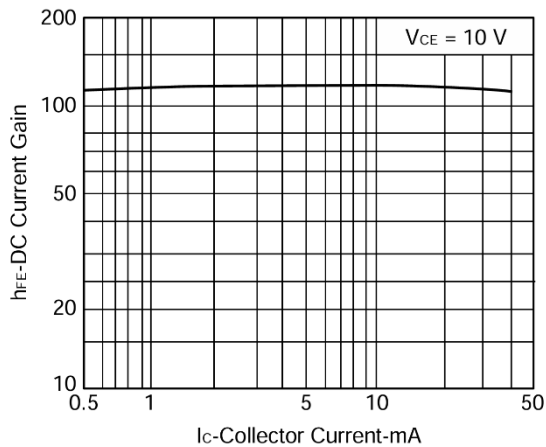


Fig 4. Insertion Gain vs. Collector Current

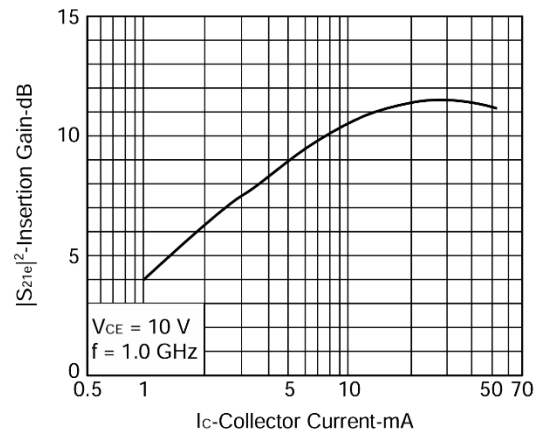


Fig 5. Gain Bandwidth Product vs. Collector Current

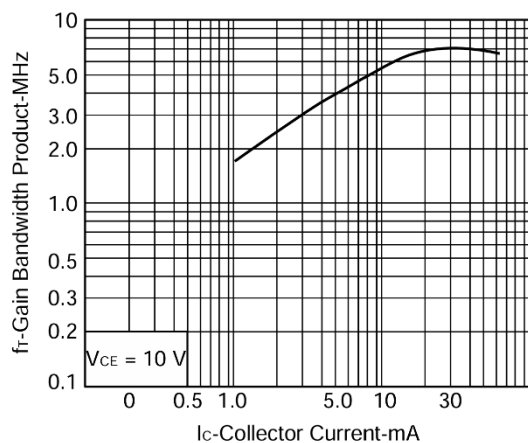


Fig 6. Insertion Gain, Maximum Gain vs. Frequency

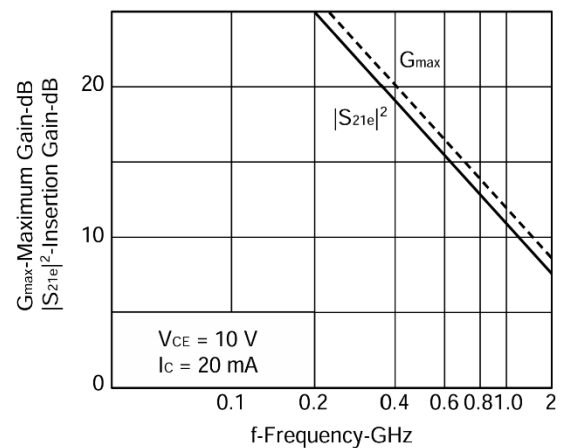


Fig 7. Noise Figure vs. Collector Current

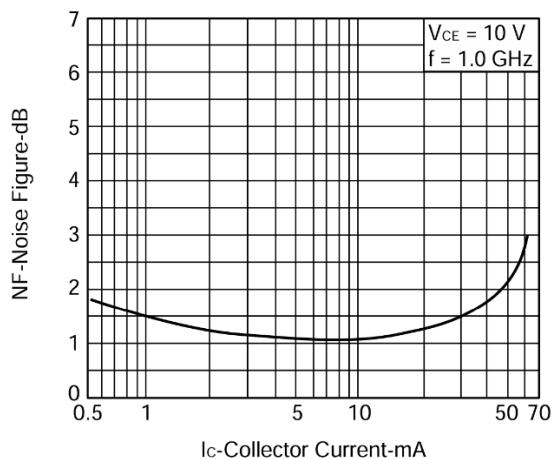
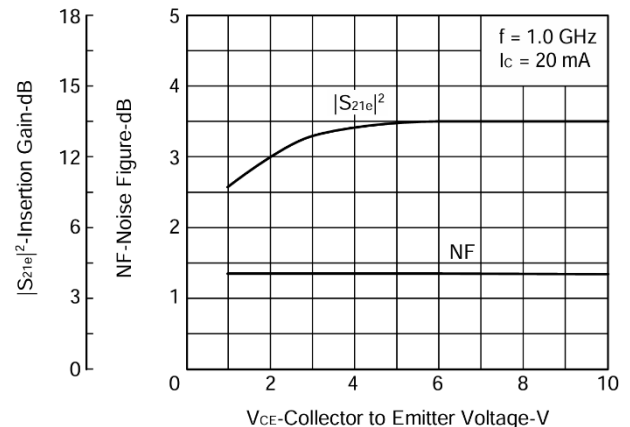


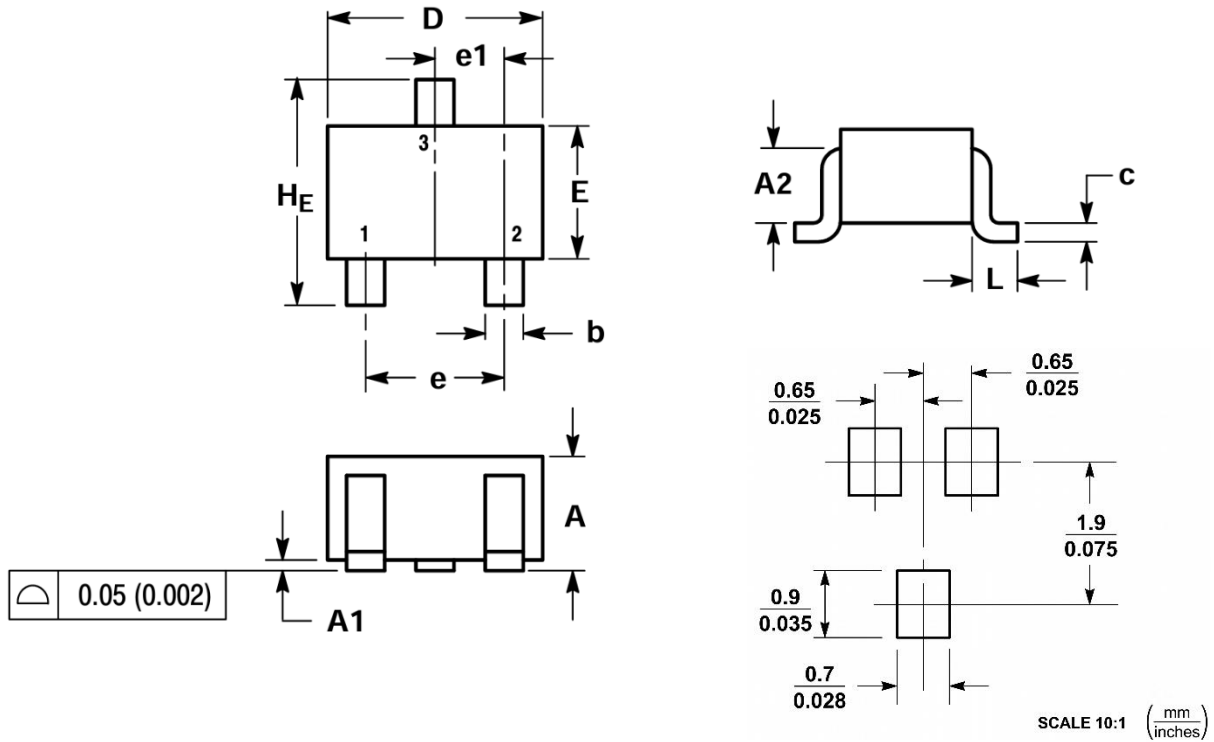
Fig 8. Noise Figure, Forward Insertion Gain vs. Collector to Emitter Voltage





PACKAGE INFORMATION

Dimension in SC-70 (Unit: mm):



Symbol	Millimeters	
	Min	Max
A	0.80	1.00
A1	0.00	0.10
A2	0.70 REF	
B	0.30	0.40
c	0.10	0.25
D	1.80	2.20
E	1.15	1.35
e	1.20	1.40
e1	0.650 BSC	
L	0.425 REF	
HE	2.00	2.40



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