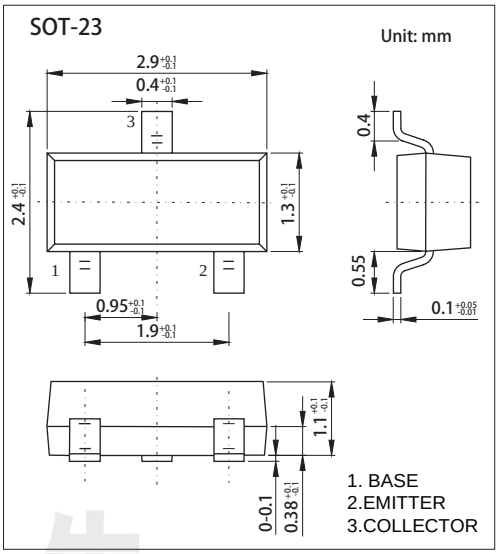
NPN Transistors

2SC3356



■ Features

- Low Noise and High Gain
- High Power Gain

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	20	V
Collector - Emitter Voltage	V_{CEO}	12	
Emitter - Base Voltage	V_{EBO}	3	
Collector Current - Continuous	I_C	100	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_J	150	℃
Storage Temperature	T_{stg}	-65 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collecto- base breakdown voltage	V_{CBO}	I_C= 100 μA， I_E=0	20			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 1 mA， I_B=0	12			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 μA， I_C=0	3			
Collector cut-off current	I_{CBO}	V_{CB}= 10 V , I_E=0			1	μA
Emitter cut-off current	I_{EBO}	V_{EB}= 1V , I_C=0			1	
DC current gain	h_{FE}	V_{CE}= 10V, I_C= 20mA	50		300	
Noise Figure	NF	V_{CE}=10V, I_C=7mA, f=1GHz			2	dB
Feed-Back Capacitance	C_{re}	V_{CB}=10V, I_E=0, f=1MHz			1	pF
Transition frequency	f_T	V_{CE}= 20V, I_C= 10mA,f=30MHz	50			MHz

■ Classification of hFE

Rank	A	B	C
Range	50-160	160-240	240-300
Marking	R25		

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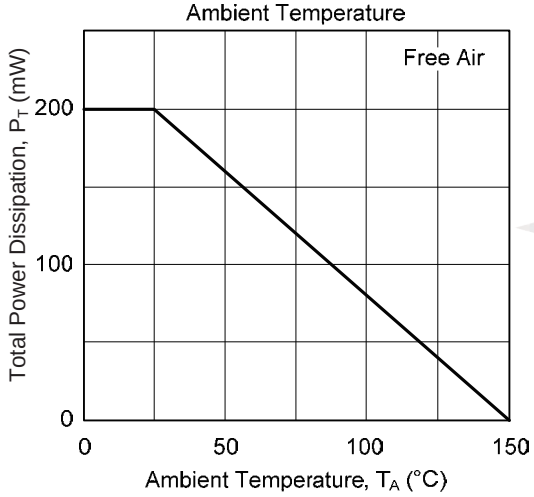
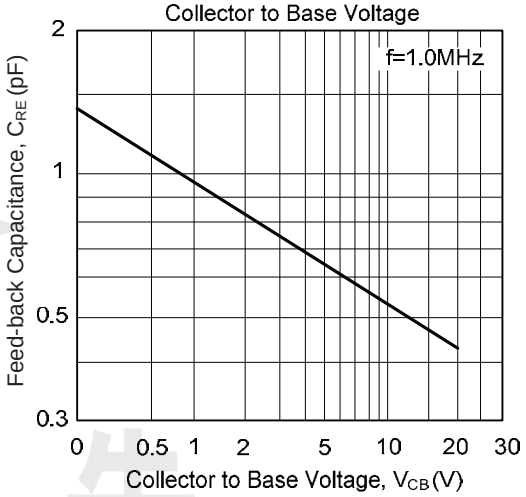
■ Typical Characterisitics

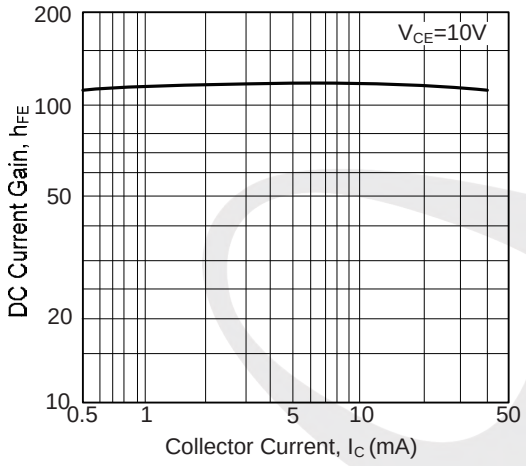
Total Power Dissipation vs. Ambient Temperature



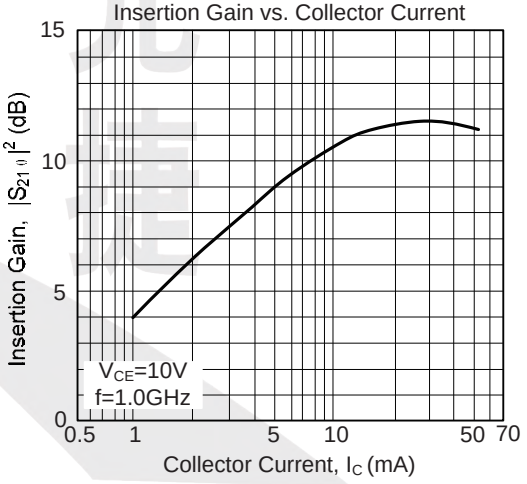
Feed-back Capacitance vs. Collector to Base Voltage



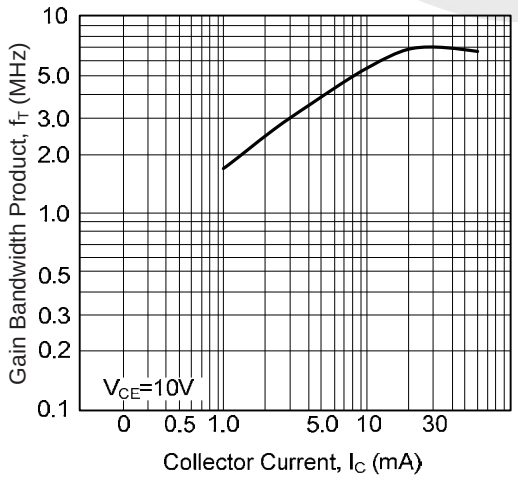
DC Current Gain vs. Collector Current



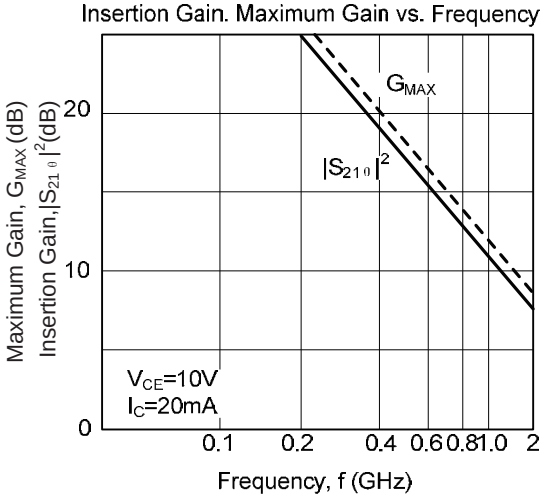
Insertion Gain vs. Collector Current



Gain Bandwidth Product vs. Collector Current



Insertion Gain. Maximum Gain vs. Frequency



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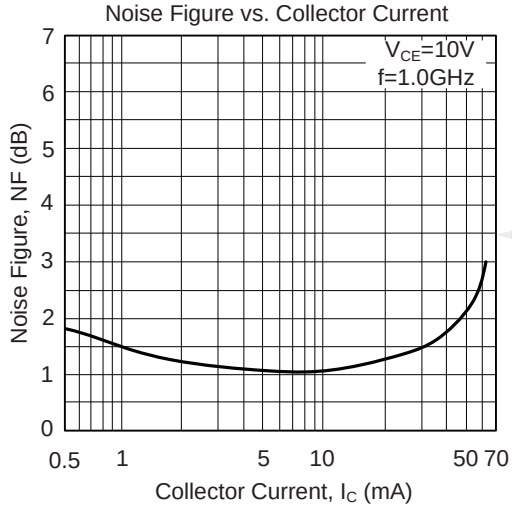
■ Typical Characterisitics

Noise Figure vs. Collector Current



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