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TP2SC3356R25

NPN Switching Transistor

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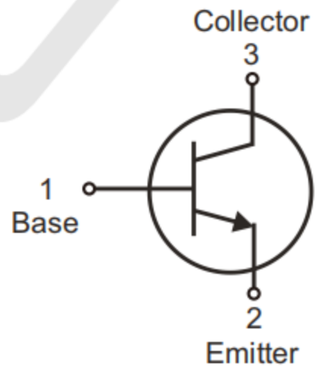
Features

- Low noise and high gain.
- High power gain.
- Designed for low noise amplifier.

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Circuit Diagram



Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-Base voltage	V_{CBO}	20	V
Collector-Emitter voltage	V_{CEO}	12	V
Emitter-Base voltage	V_{EBO}	3	V
Collector current - continuous	I_C	100	mA
Collector dissipation	P_C	200	mW
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	-65~+150	°C

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Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Collector-Base breakdown voltage	I_C =10μA , I_E=0	$V_{(BR)CBO}$	20			V
Collector-Emitter breakdown voltage	I_C =1mA , I_B=0	$V_{(BR)CEO}$	12			V
Emitter-Base breakdown voltage	I_E =10μA , I_C=0	$V_{(BR)EBO}$	3			V
Collector cut-off current	V_{CB}=10V , I_E=0	I_{CBO}			1	μA
Emitter cut-off current	V_{EB}=1V , I_C=0	I_{EBO}			1	μA
DC current gain	V_{CE}=10V , I_C=20mA	h_{FE}	50	120	300	
Transition frequency	V_{CE}=10V , I_C=20mA	f_T		7		GHz
Insertion power gain	V_{CE}=10V , I_C=20mA , f=1GHZ	$\|S_{21e}\|^2$		11.5		dB
Feed-back capacitance	V_{CB}=10V , I_E=0 , f=1MHZ	Cre		0.55	1.0	pF
Noise Figure	V_{CB}=10V , I_C=7mA , f=1GHZ	NF		1.1	2.0	dB

Classification Of hFE

Part No.	2SC3356Q-G	2SC3356R-G	2SC3356S-G
Range	50-100	80-160	125-250
Marking	R23	R24	R25

Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

Fig.1 - Total Power Dissipation Vs. Ambient Temperature

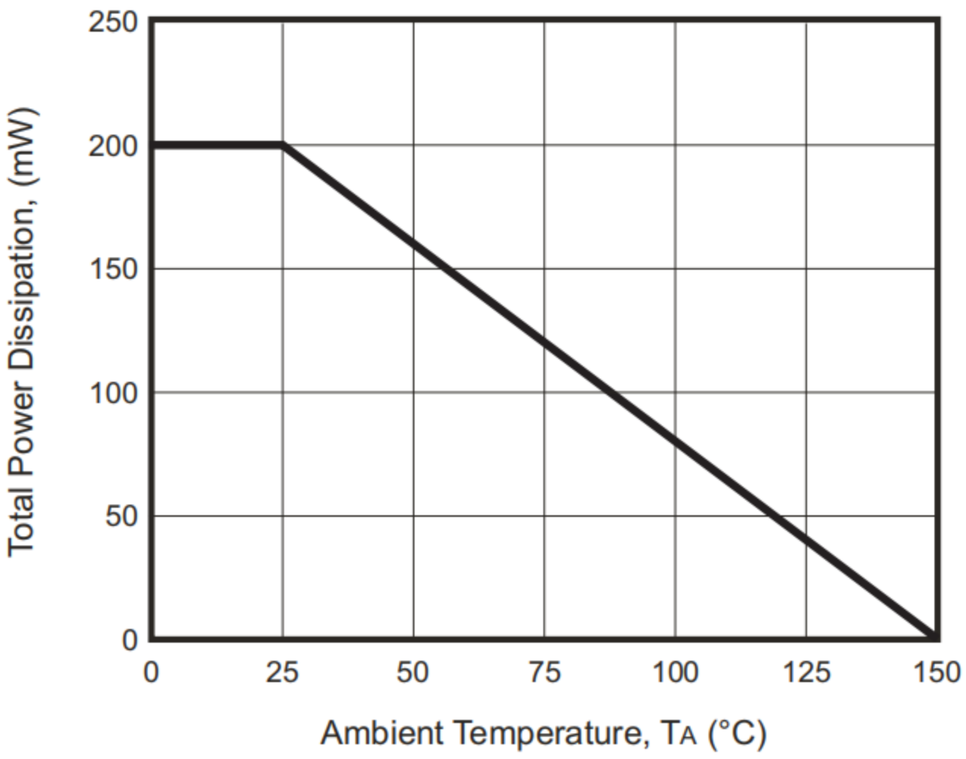


Fig.2 - Feed-back Capacitance Vs. Collector To Base Voltage

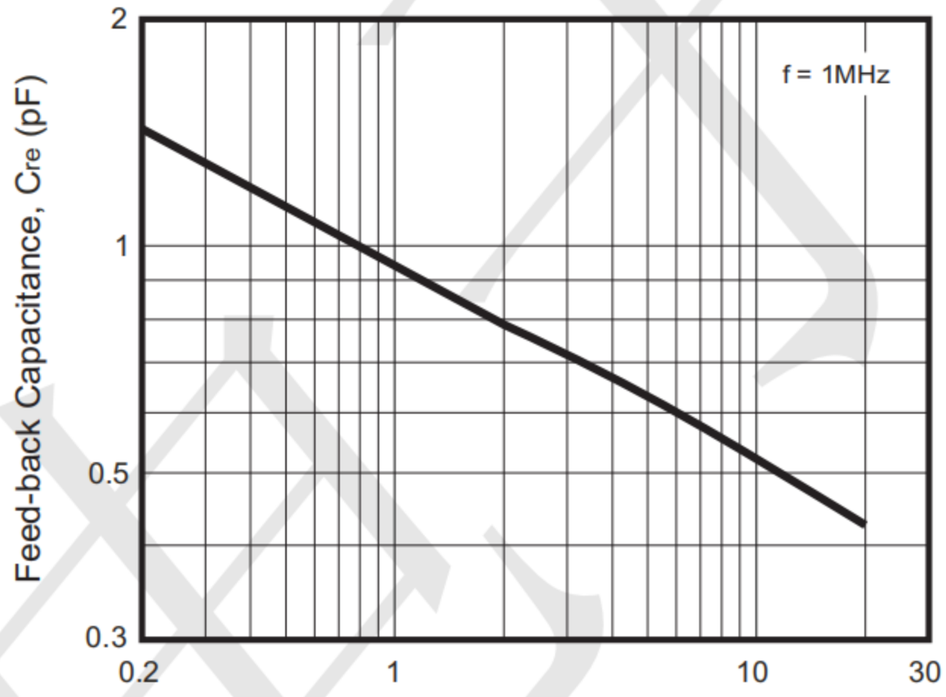


Fig.3 - Dc Current Gain Vs. Collector Current

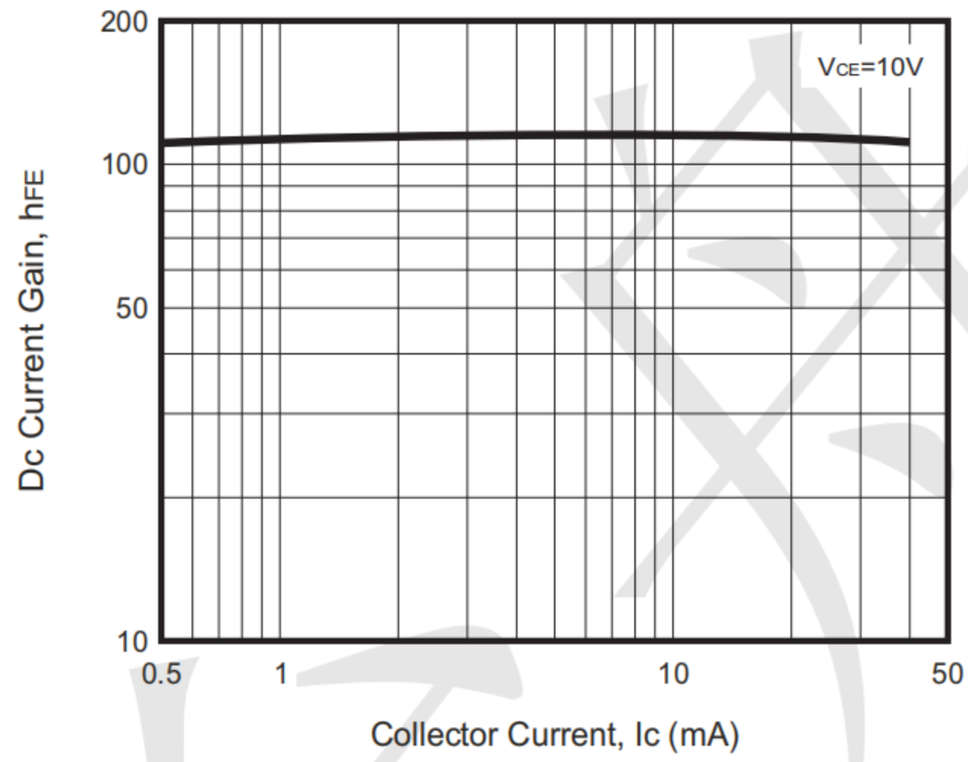


Fig.4 - Insertion Gain Vs. Collector Current

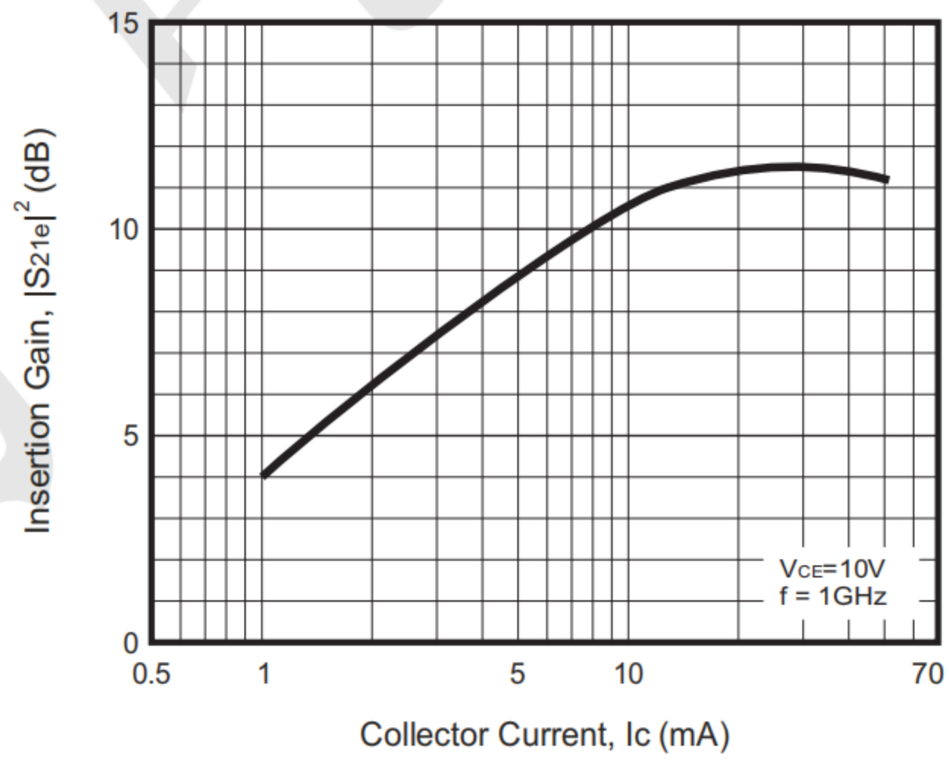


Fig.5 - Gain Bandwidth Product Vs. Collector Current

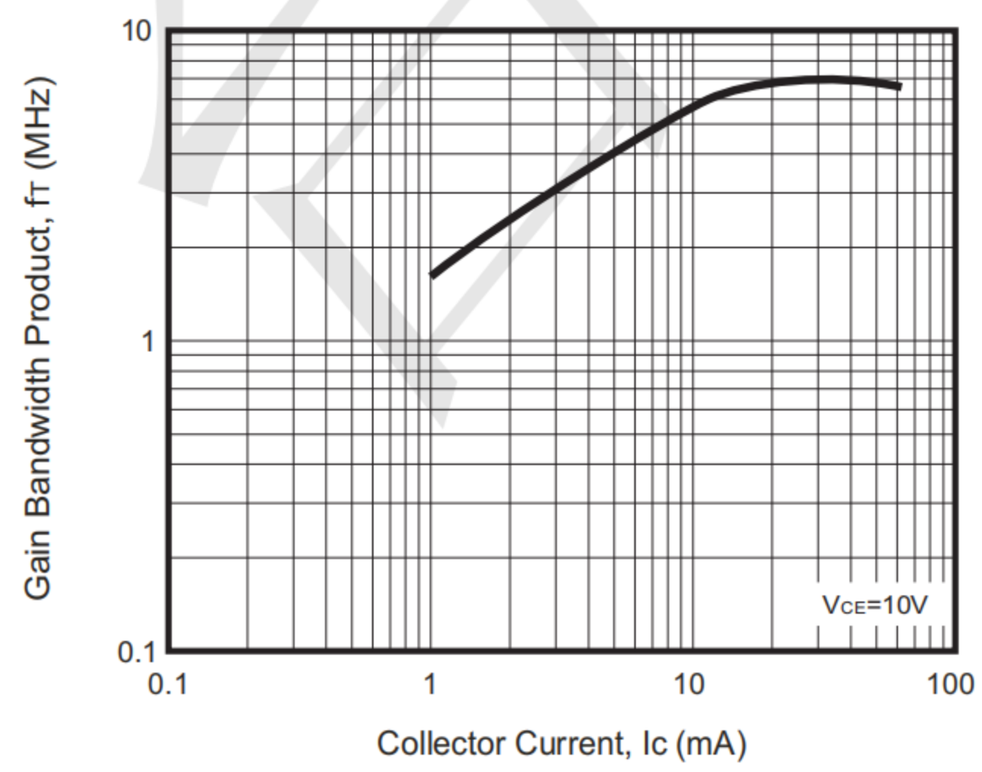
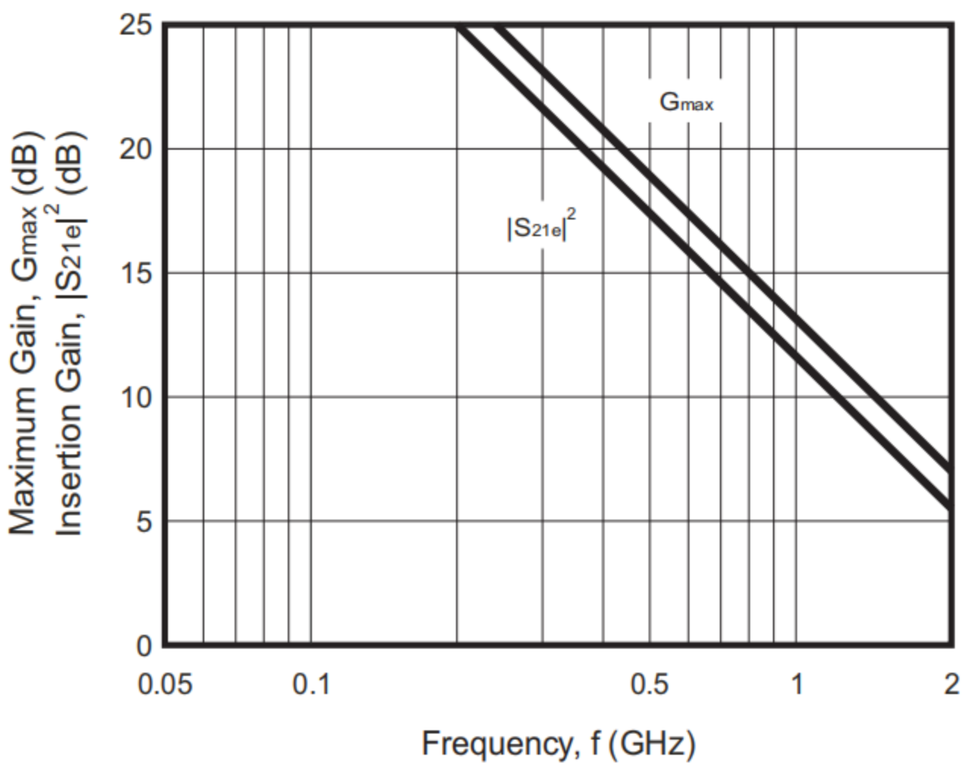
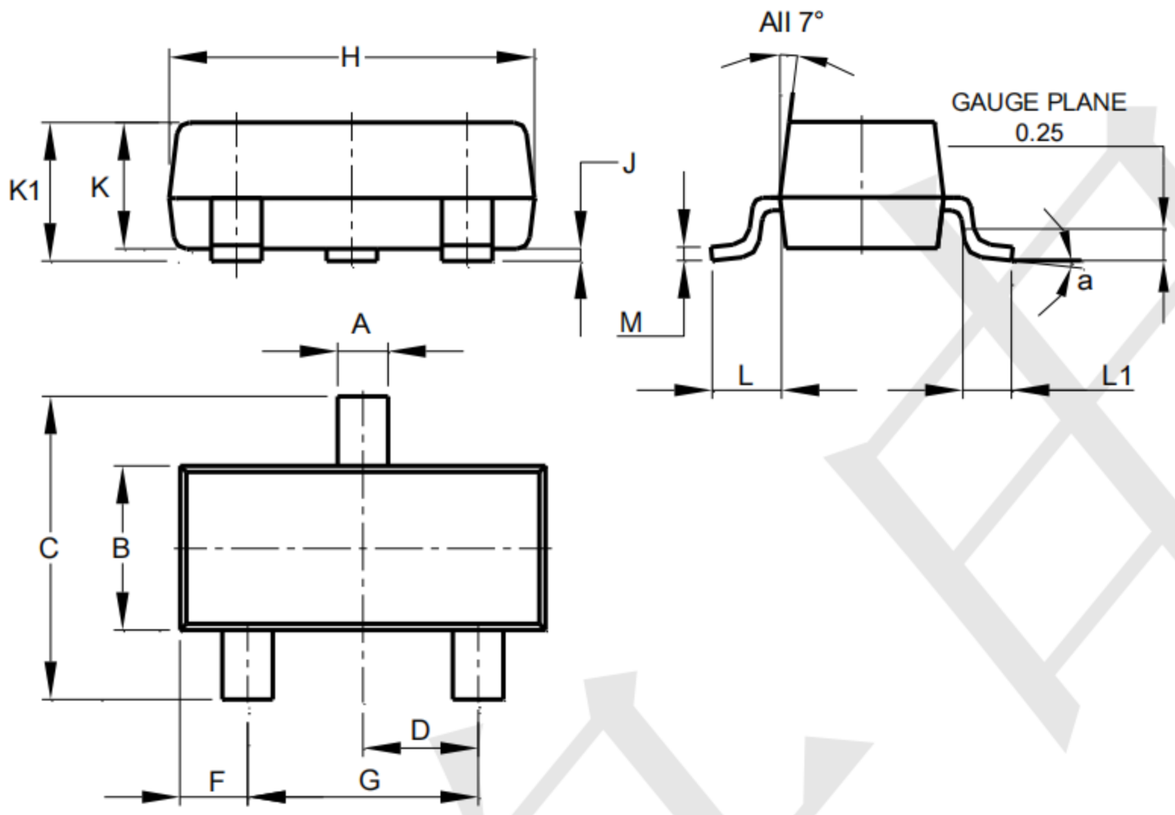


Fig.6 - Insertion Gain, Max. Gain Vs. Frequency

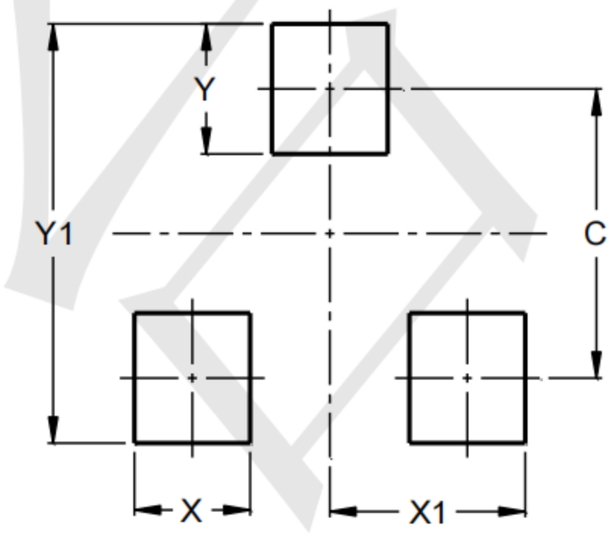


Outline Drawing - SOT23



SOT23			
Dim	Min	Max	Typ
A	0.37	0.51	0.40
B	1.20	1.40	1.30
C	2.30	2.50	2.40
D	0.89	1.03	0.915
F	0.45	0.60	0.535
G	1.78	2.05	1.83
H	2.80	3.00	2.90
J	0.013	0.10	0.05
K	0.890	1.00	0.975
K1	0.903	1.10	1.025
L	0.45	0.61	0.55
L1	0.25	0.55	0.40
M	0.085	0.150	0.110
a	0°	8°	--
All Dimensions in mm			

Land Pattern - SOT23



Dimensions	Value (in mm)
C	2.0
X	0.8
X1	1.35
Y	0.9
Y1	2.9