

Silicon Epitaxial Planar Transistor

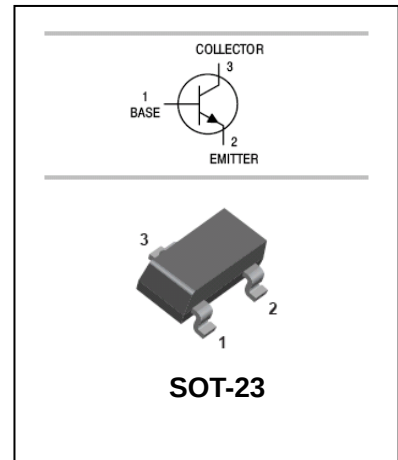
2SC3356

FEATURES

- Low noise and high gain.
NF=1.1dB TYP., $G_a=11\text{dB}$ TYP.
@ $V_{CE}=10\text{V}$, $I_C=7\text{mA}$, $f=1.0\text{GHz}$
- High power gain. MAG=13dB TYP.
@ $V_{CE}=10\text{V}$, $I_C=20\text{mA}$, $f=1.0\text{GHz}$



Lead-free



APPLICATIONS

- Designed for low noise amplifier at VHF,UHF and CATV band.

ORDERING INFORMATION

Type No.	Marking	Package Code
2SC3356	R23/R24/R25	SOT-23

MAXIMUM RATING @ $T_a=25^\circ\text{C}$ unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	20	V
V_{CEO}	Collector-Emitter Voltage	12	V
V_{EBO}	Emitter-Base Voltage	3	V
I_C	Collector Current -Continuous	100	mA
P_C	Collector Dissipation	200	mW
T_j, T_{stg}	Junction and Storage Temperature	-65~150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

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Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	20			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	12			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	3			V
Collector cut-off current	I_{CBO}	$V_{CB}=10V, I_E=0$			1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=1V, I_C=0$			1	μA
DC current gain	h_{FE}	$V_{CE}=10V, I_C=20mA$	50	120	300	
Transition frequency	f_T	$V_{CE}=10V, I_C=20mA$		7		GHz
Insertion power gain	$ S_{21e} ^2$	$V_{CE}=10V, I_C=20mA, f=1GHz$		11.5		dB
Feed-back capacitance	C_{re}	$V_{CB}=10V, I_E=0, f=1MHz$		0.55	1.0	pF
Noise Figure	NF	$V_{CE}=10V, I_C=7mA, f=1GHz$		1.1	2.0	dB

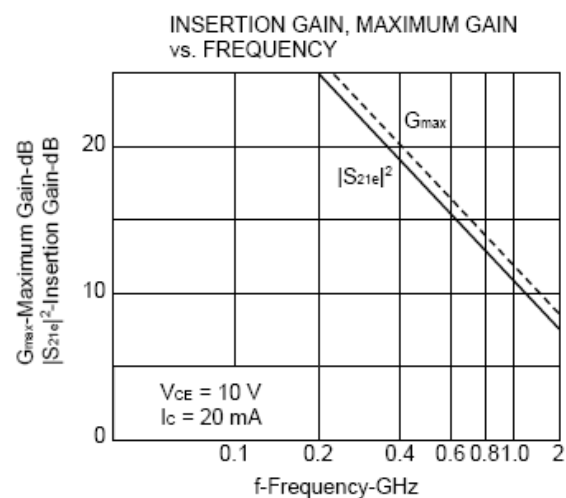
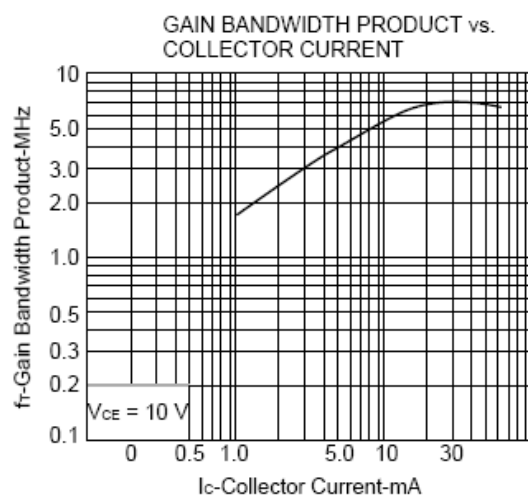
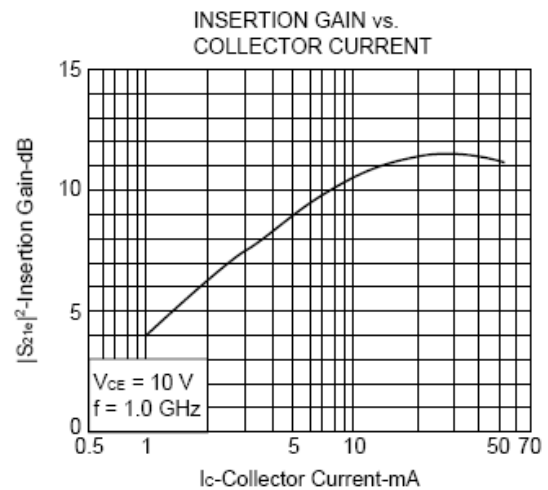
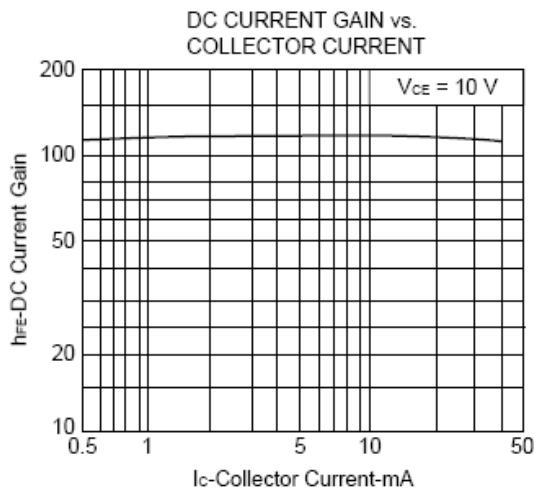
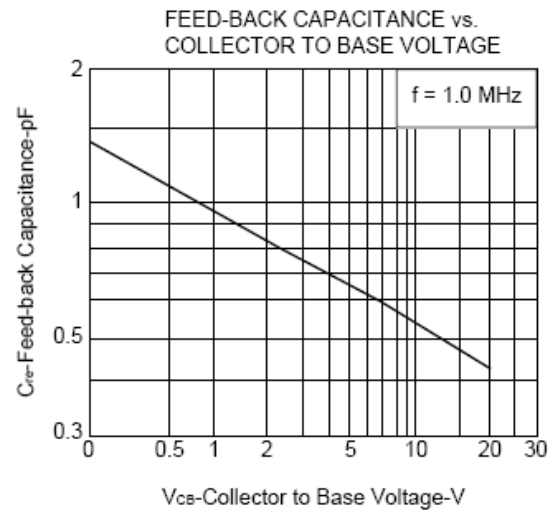
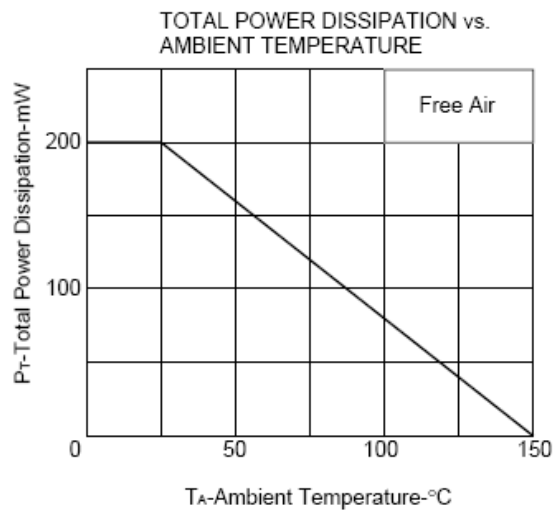
CLASSIFICATION OF h_{FE}

Rank	Q	R	S
Range	50-100	80-160	125-300
Marking	R23	R24	R25

TYPICAL CHARACTERISTICS @ $T_a=25^\circ C$ unless otherwise specified

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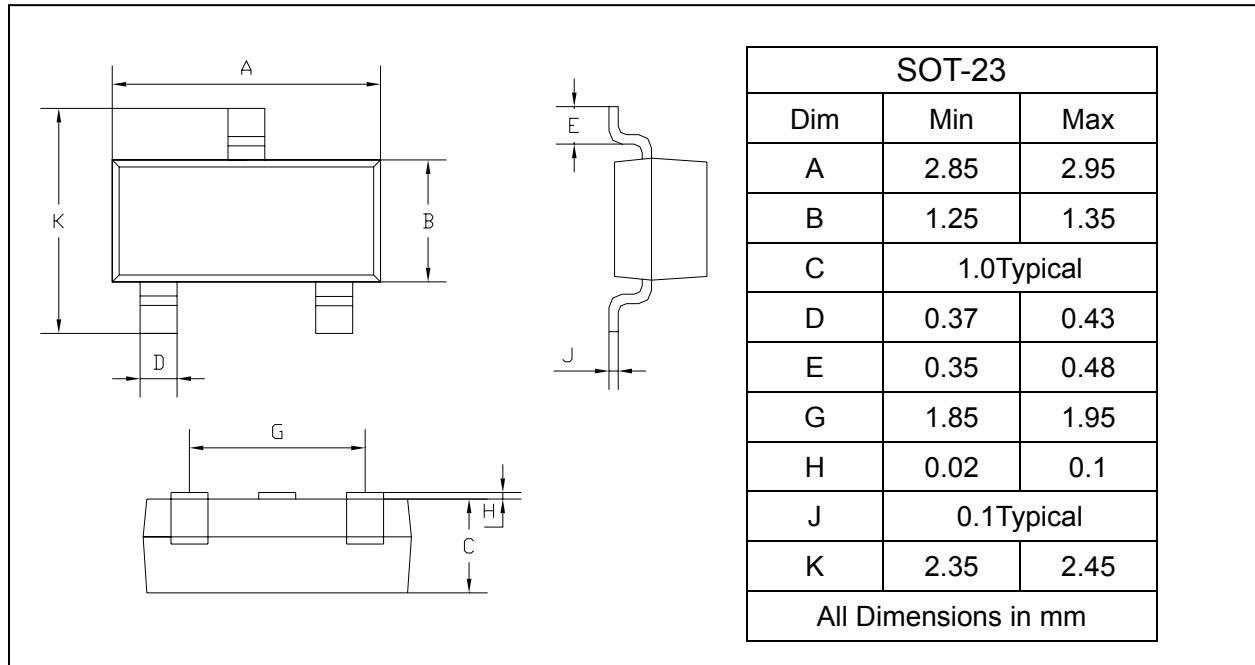
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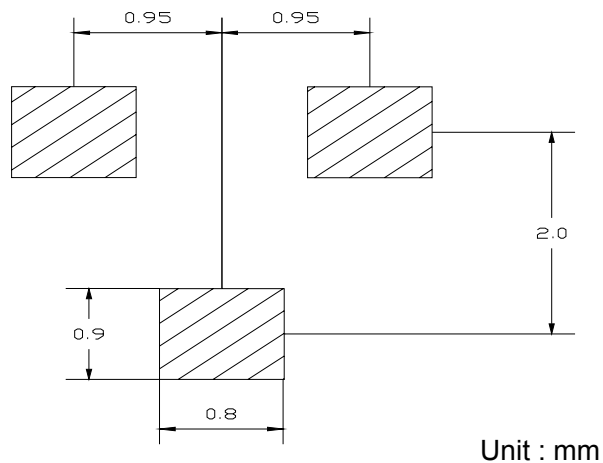
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
2SC3356	SOT-23	3000/Tape&Reel