



# 2SC3356

## NPN SILICON TRANSISTOR

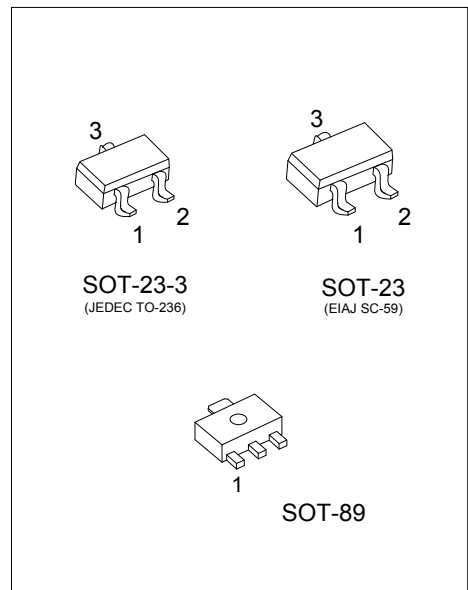
### HIGH FREQUENCY LOW NOISE AMPLIFIER

■ DESCRIPTION

The UTC **2SC3356** is an NPN silicon epitaxial transistor designed for low noise amplifier at VHF, UHF and CATV band. It has large dynamic range and good current characteristic..

■ FEATURES

- \* Low Noise and High Gain
- \* High Power Gain



■ ORDERING INFORMATION

Ordering Number		Package	Pin Description			Packing
Lead Free	Halogen Free		1	2	3	
2SC3356L-x-AE2-R	2SC3356G-x-AE2-R	SOT-23-3	B	E	C	Tape Reel
2SC3356L-x-AE3-R	2SC3356G-x-AE3-R	SOT-23	B	E	C	Tape Reel
2SC3356L-x-AB3-R	2SC3356G-x-AB3-R	SOT-89	B	C	E	Tape Reel

Note: Pin Assignment: B: Base E: Emitter C: Collector

<p>2SC3356G-x-AE2-R</p>	<p>(1) R: Tape Reel                  (2) AE2: SOT-23-3, AE3: SOT-23                  (3) x: refer to Classification of hFE                  (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING

SOT-23-3/SOT-23		SOT-89
2SC3356L	2SC3356G	

■ ABSOLUTE MAXIMUM RATING

PARAMETER		SYMBOL	RATINGS	UNIT
Collector to Base Voltage		$BV_{CBO}$	20	V
Collector to Emitter Voltage		$BV_{CEO}$	12	V
Emitter to Base Voltage		$BV_{EBO}$	3	V
Collector Current		$I_C$	100	mA
Power Dissipation	SOT-23-3	$P_D$	200	mW
	SOT-23			
	SOT-89		500	mW
Junction Temperature		$T_J$	+150	°C
Storage Temperature		$T_{STG}$	-65 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

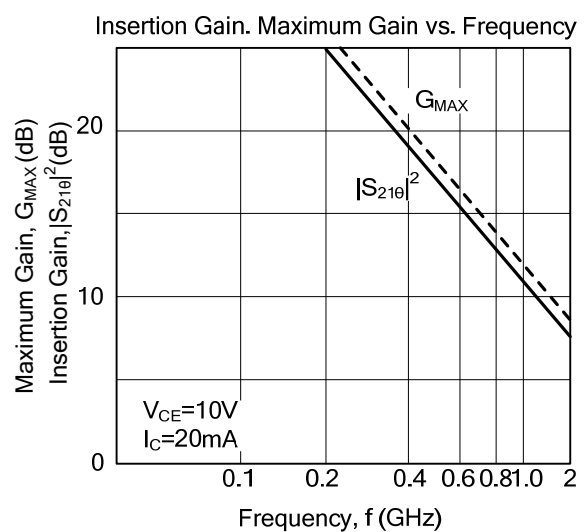
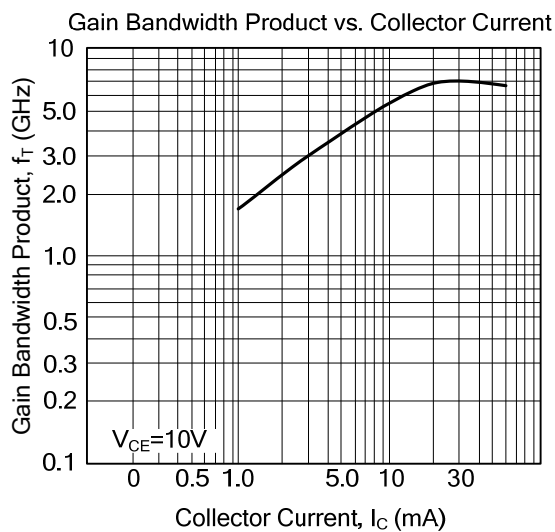
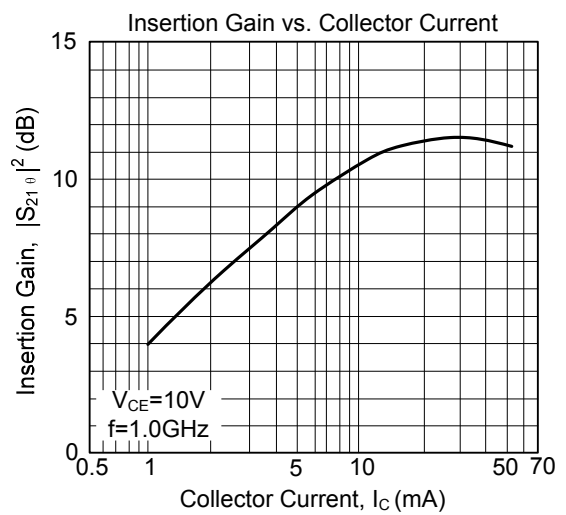
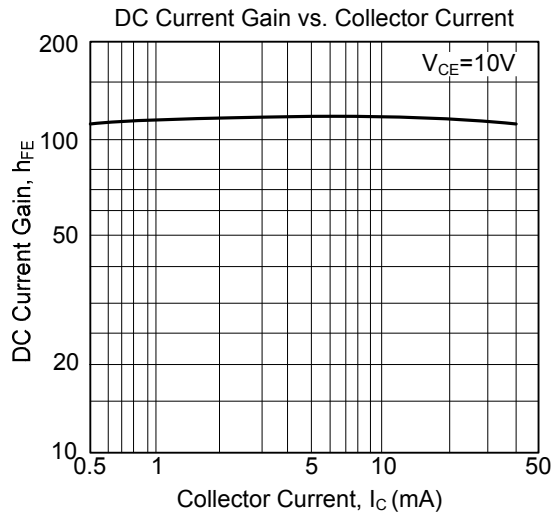
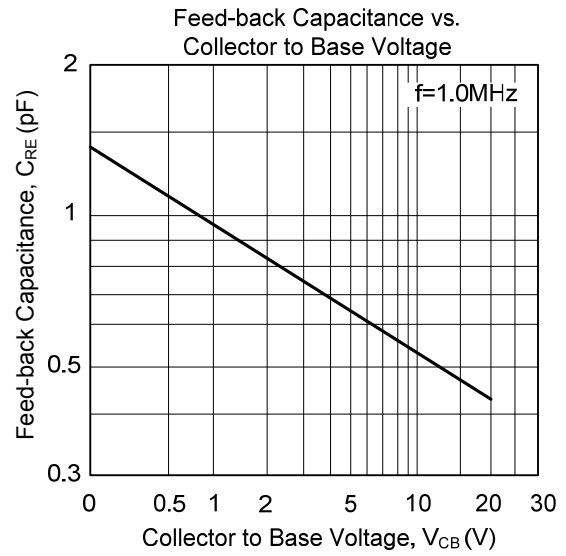
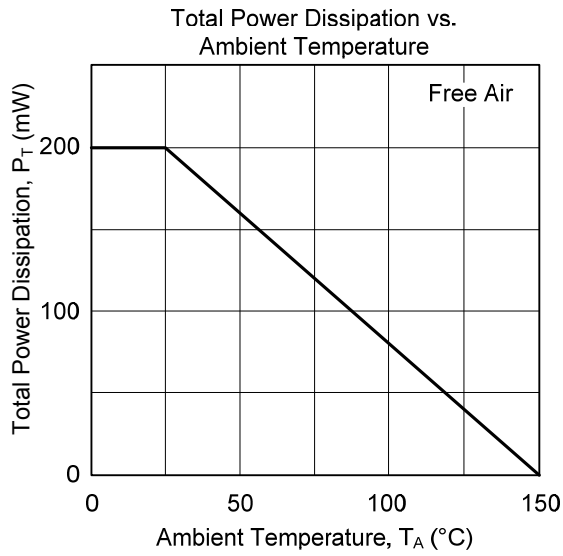
■ ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector to Base Breakdown Voltage	$BV_{CBO}$	$I_C=10\mu\text{A}$ , $I_E=0$	20			V
Collector to Emitter Breakdown Voltage	$BV_{CEO}$	$I_C=1\text{mA}$ , $R_{BE}=\infty$	12			V
Emitter to Base Breakdown Voltage	$BV_{EBO}$	$I_E=10\mu\text{A}$ , $I_C=0$	3			V
Collector-Base Cut-Off Current	$I_{CBO}$	$V_{CB}=10\text{V}$ , $I_E=0$			1.0	$\mu\text{A}$
Emitter-Base Cut-Off Current	$I_{EBO}$	$V_{EB}=1\text{V}$ , $I_C=0$			1.0	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE}=10\text{V}$ , $I_C=20\text{mA}$	50		300	
Gain Bandwidth Product	$f_T$	$V_{CE}=10\text{V}$ , $I_C=20\text{mA}$		7		GHz
Feed-Back Capacitance	$C_{RE}$	$V_{CB}=10\text{V}$ , $I_E=0$ , $f=1.0\text{MHz}$			1.0	pF
Noise Figure	NF	$V_{CE}=10\text{V}$ , $I_C=7\text{mA}$ , $f=1.0\text{GHz}$			2.0	dB

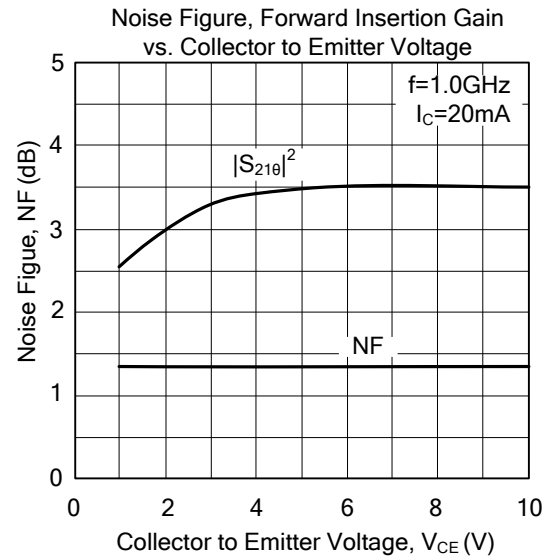
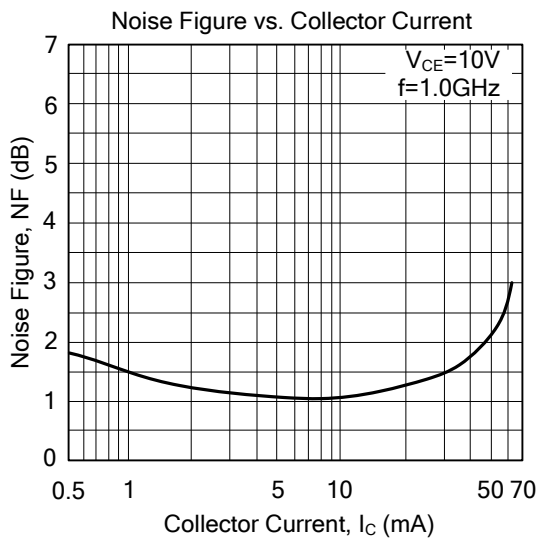
■ CLASSIFICATION OF  $h_{FE}$

RANK	A	B
RANGE	50-170	160-300

## TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



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