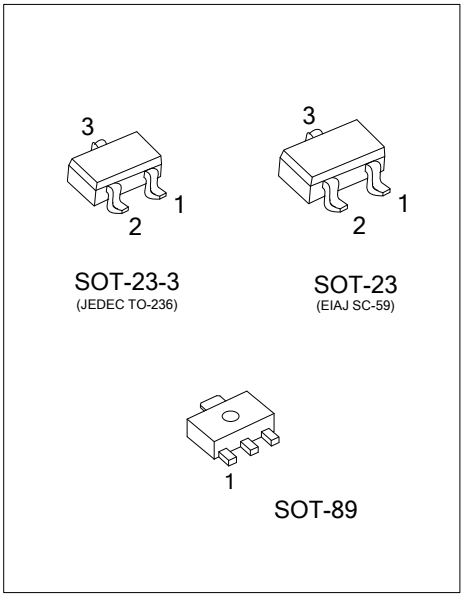
2SC3356

NPN SILICON TRANSISTOR

HIGH FREQUENCY LOW NOISE AMPLIFIER



■ DESCRIPTION

The UTC **2SC3356** is designed for such applications as: DC/DC converters, supply line switching, battery charger, LCD backlighting, peripheral drivers, Driver in low supply voltage applications (e.g. lamps and LEDs) and inductive load driver (e.g. relays, buzzers and motors).

■ FEATURES

* Low Noise and High Gain
* High Power Gain

■ ORDERING INFORMATION

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

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

2SC3356L-x-AE2-R
(1)Packing Type
(2)Package Type
(3)Rank
(4)Green Package

(1) R: Tape Reel
(2) AE2: SOT-23-3, AE3: SOT-23
(3) x: refer to Classification of h_{FE}
(4) L: Lead Free, G: Halogen Free and Lead Free

■ MARKING

SOT-23-3/SOT-23		SOT-89
2SC3356L	2SC3356G	
R25	R25G	□□□□ 2SC3356G → Data Code, 1

■ 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 SOT-23	P_D	200	mW
	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°C, unless otherwise specified)

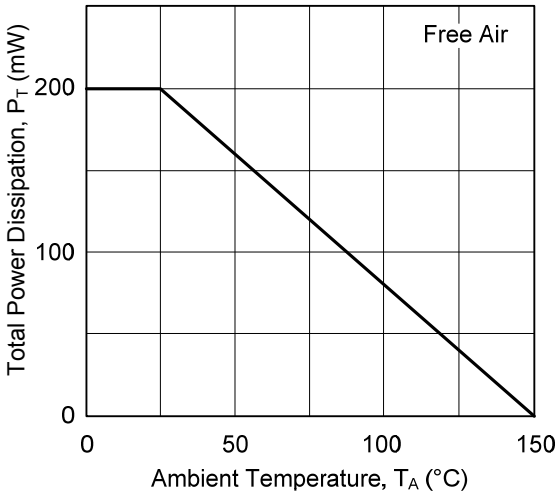
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector to Base Breakdown Voltage	BV_{CBO}	I_C=10μA, I_E=0	20			V
Collector to Emitter Breakdown Voltage	BV_{CEO}	I_C=1mA, R_{BE}=∞	12			V
Emitter to Base Breakdown Voltage	BV_{EBO}	I_E=10μA, I_C=0	3			V
Collector-Base Cut-Off Current	I_{CBO}	V_{CB}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

■ CLASSIFICATION OF h_{FE}

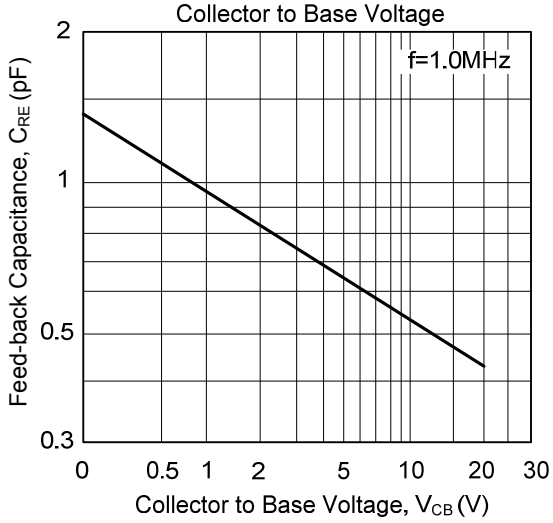
RANK	A	B	C
RANGE	50-170	160-240	230-300

■ TYPICAL CHARACTERISTICS

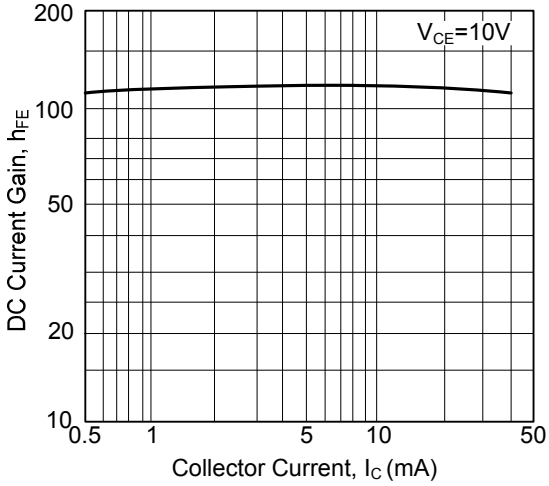
Total Power Dissipation vs. Ambient Temperature



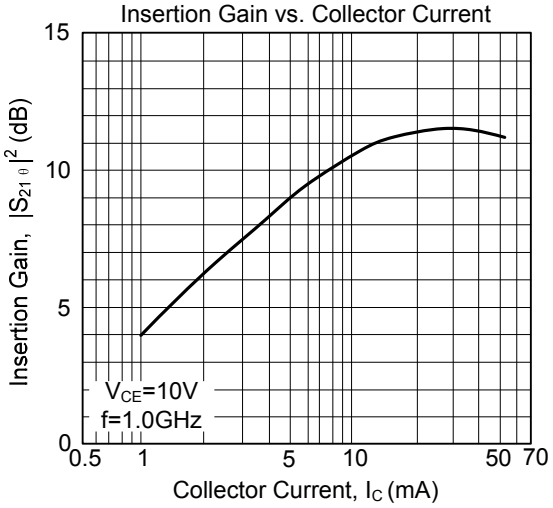
Feed-back Capacitance vs. Collector to Base Voltage



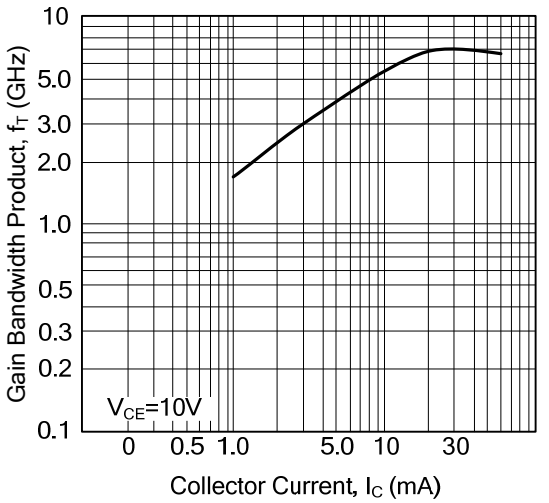
DC Current Gain vs. Collector Current



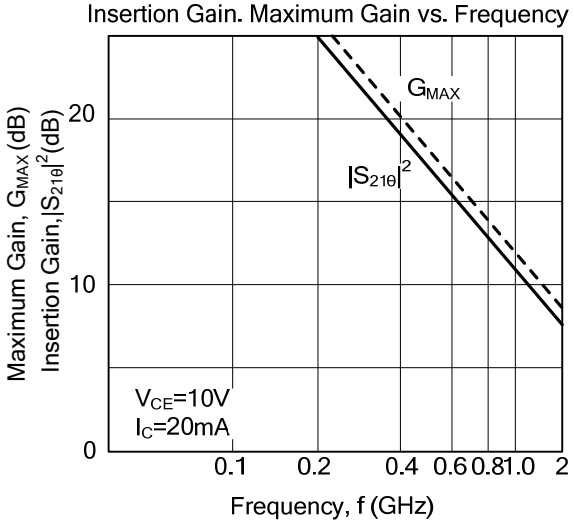
Insertion Gain vs. Collector Current



Gain Bandwidth Product vs. Collector Current

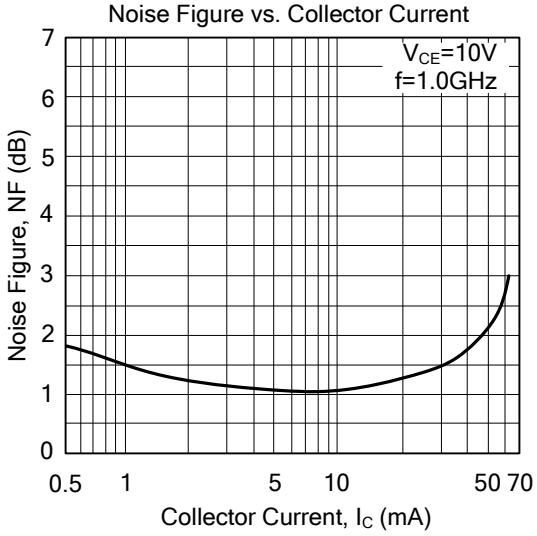


Insertion Gain. Maximum Gain vs. Frequency



■ TYPICAL CHARACTERISTICS(Cont.)

Noise Figure vs. Collector Current



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