



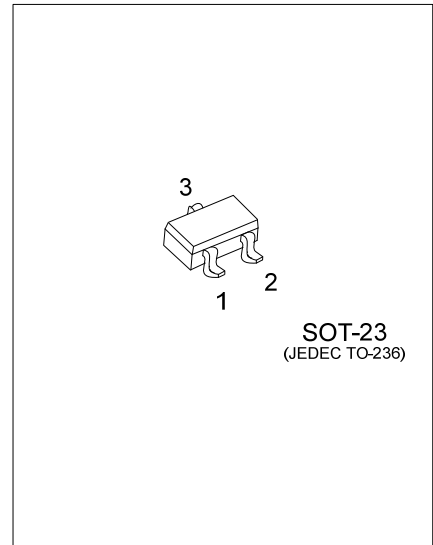
UNISONIC TECHNOLOGIES CO., LTD

2SA1977

Preliminary

PNP EPITAXIAL SILICON TRANSISTOR

POWER AMPLIFIER
APPLICATIONS DRIVER
STAGE AMPLIFIER
APPLICATIONS



FEATURES

* Complementary to UTC 2SC3356

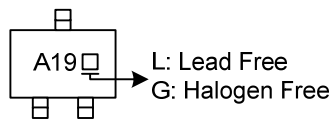
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen-Free		1	2	3	
2SA1977L-AE3-R	2SA1977G-AE3-R	SOT-23	B	E	C	Tape Reel

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

<p>2SA1977G-AE3-R</p> <p>(1)Packing Type (2)Package Type (3)Green Package</p>	<p>(1) R: Tape Reel (2) AE3: SOT-23 (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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MARKING



■ ABSOLUTE MAXIMUM RATING ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	-20	V
Collector-Emitter Voltage	V_{CEO}	-12	V
Emitter-Base Voltage	V_{EBO}	-3	V
Collector Current	I_C	-50	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_J	+150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^\circ\text{C}$

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 Cut-off Current	I_{CBO}	$V_{CB}=-10\text{V}$, $I_E=0$			-0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=-1\text{V}$, $I_C=0$			-0.1	μA
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=-25\text{mA}$, $I_B=-2.5\text{mA}$			0.2	V
DC Current Gain	h_{FE}	$V_{CE}=-8\text{V}$, $I_C=-20\text{mA}$	20		100	
Collector Capacitance	C_{re}	$V_{CE}=-8\text{V}$, $I_C=-20\text{mA}$, $f=1\text{MHz}$		0.5	1.0	pF

Note: Measured by a 3-terminal bridge. Emitter and Case should be connected to the guard terminal.

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