

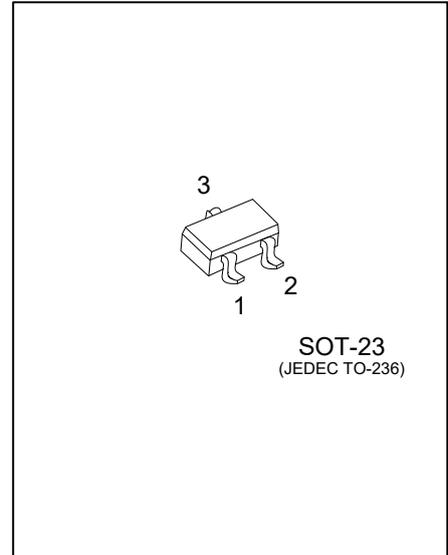


## 2SC6105

Preliminary

**NPN EPITAXIAL SILICON TRANSISTOR**

### TRANSISTORS SILICON NPN TRIPLE DIFFUSED TYPE (PCT PROCESS)



#### DESCRIPTION

The UTC **2SC6105** is an NPN silicon power transistors, it uses UTC's advanced technology to provide customers with high collector base voltage, etc.

The UTC **2SC6105** is suitable for general purpose Power amplifier, vertical output application.

#### FEATURES

\* High voltage:  $V_{CEO}=600V$  (Max.)

\* Low saturation voltage:  $V_{CE(SAT)}=600mV$  (Max.) @  $I_C=20mA$ ,  $I_B=0.5mA$

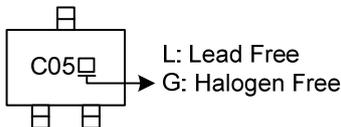
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SC6105L-AE3-R	2SC6105G-AE3-R	SOT-23	B	E	C	Tape Reel

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

<p>2SC6105G-AE3-R</p> <ul style="list-style-type: none"> <li>(1) Packing Type</li> <li>(2) Package Type</li> <li>(3) Green Package</li> </ul>	<ul style="list-style-type: none"> <li>(1) R: Tape Reel</li> <li>(2) AE3: SOT-23</li> <li>(3) G: Halogen Free and Lead Free, L: Lead Free</li> </ul>
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#### MARKING



■ ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V <sub>CB0</sub>	600	V
Collector-Emitter Voltage	V <sub>CEO</sub>	600	V
Emitter-Base Voltage	V <sub>EBO</sub>	7	V
Collector Current	Continuous	I <sub>C</sub>	50
	Peak	I <sub>CM</sub>	100
Base Current	I <sub>B</sub>	25	mA
Collector Power Dissipation	P <sub>C</sub>	200	mW
Junction Temperature	T <sub>J</sub>	+150	°C
Storage Temperature	T <sub>STG</sub>	-55 ~ +150	°C

Notes: 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.

■ THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Case	θ <sub>JC</sub>	625	°C/W

■ ELECTRICAL CHARACTERISTICS (T<sub>C</sub>=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV <sub>CB0</sub>	I <sub>C</sub> =10μA, I <sub>B</sub> =0	600			V
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	I <sub>C</sub> =1mA, I <sub>B</sub> =0	600			V
Emitter-Base Breakdown Voltage	BV <sub>EBO</sub>	I <sub>C</sub> =0, I <sub>B</sub> =50μA	7			V
Collector Cut-Off Current	I <sub>CB0</sub>	V <sub>CB</sub> =600V, I <sub>E</sub> =0			0.1	μA
Emitter Cut-Off Current	I <sub>EBO</sub>	V <sub>EB</sub> =7V, I <sub>C</sub> =0			0.1	μA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =1mA	80			
		V <sub>CE</sub> =5V, I <sub>C</sub> =20mA	100		300	
Collector-Emitter Saturation Voltage	V <sub>CE(SAT)</sub>	I <sub>C</sub> =20mA, I <sub>B</sub> =0.5mA			1	V
Base-Emitter Voltage	V <sub>BE</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =20mA		0.66	0.85	V

Notes: Pulse Test: Pulse Width = 300μs, Duty Cycle ≤ 2.0%.

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