



## 2SC1384

## NPN SILICON TRANSISTOR

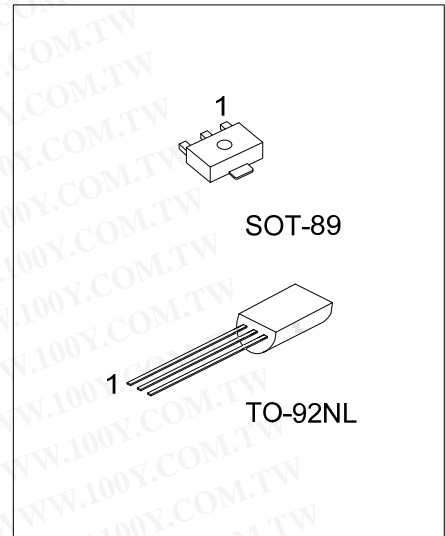
### NPN SILICON TRANSISTOR

#### DESCRIPTION

The UTC **2SC1384** is power amplifier and driver.

#### FEATURES

- \* Low  $V_{CE(SAT)}$
- \* 2~3W output in complementary pair with 2SA684



Lead-free: 2SC1384L  
 Halogen-free: 2SC1384G

#### ORDERING INFORMATION

Ordering Number			Package	Pin Assignment			Packing
Normal	Lead Free Plating	Halogen-Free		1	2	3	
2SC1384-x-AB3-R	2SC1384L-x-AB3-R	2SC1384G-x-AB3-R	SOT-89	B	C	E	Tape Reel
2SC1384-x-T9N-B	2SC1384L-x-T9N-B	2SC1384G-x-T9N-B	TO-92NL	E	C	B	Tape Box
2SC1384-x-T9N-K	2SC1384L-x-T9N-K	2SC1384G-x-T9N-K	TO-92NL	E	C	B	Bulk
2SC1384-x-T9N-R	2SC1384L-x-T9N-R	2SC1384G-x-T9N-R	TO-92NL	E	C	B	Tape Reel

<p>2SC1384L-x-AB3-B</p> <p>(1)Packing Type          (2)Package Type          (3)Rank          (4)Lead Plating</p>	<p>(1) K: Bulk, T: Tube, R: Tape Reel          (2) AB3: SOT-89, T9N: TO-92NL          (3) x: refer to Classification of <math>h_{FE}</math>          (4)G: Halogen Free, L: Lead Free Plating,          Blank: Pb/Sn</p>
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### ■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V <sub>CBO</sub>	60	V
Collector-Emitter Voltage	V <sub>CEO</sub>	50	V
Emitter-Base Voltage	V <sub>EBO</sub>	5	V
Peak Collector Current	I <sub>CP</sub>	1.5	A
Collector Current (DC)	I <sub>C</sub>	1	A
Collector Dissipation (Ta=25°C)	P <sub>C</sub>	1000	mW
Junction Temperature	T <sub>J</sub>	125	°C
Operating Temperature	T <sub>OPR</sub>	-20 ~ +85	°C
Storage Temperature	T <sub>STG</sub>	-40 ~ +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 (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV <sub>CBO</sub>	I <sub>C</sub> =10μA, I <sub>E</sub> =0	60			V
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	I <sub>C</sub> =2mA, I <sub>B</sub> =0	50			V
Emitter-Base Breakdown Voltage	BV <sub>EBO</sub>	I <sub>E</sub> =10μA, I <sub>C</sub> =0	5			V
Collector Cut-Off Current	I <sub>CBO</sub>	V <sub>CB</sub> =20V, I <sub>E</sub> =0			0.1	μA
DC Current Gain	h <sub>FE1</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =500mA	85	160	340	
	h <sub>FE2</sub>	V <sub>CE</sub> =5V, I <sub>B</sub> =1A	50	100		
Collector-Emitter Saturation Voltage	V <sub>CE(SAT)</sub>	I <sub>C</sub> =0.5A, I <sub>B</sub> =50mA		0.2	0.4	V
Base-Emitter Saturation Voltage	V <sub>BE(SAT)</sub>	I <sub>C</sub> =0.5A, I <sub>B</sub> =50mA		0.85	1.2	V
Current Gain Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>B</sub> =50mA		200		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz		11	20	pF

### ■ CLASSIFICATION OF h<sub>FE</sub>

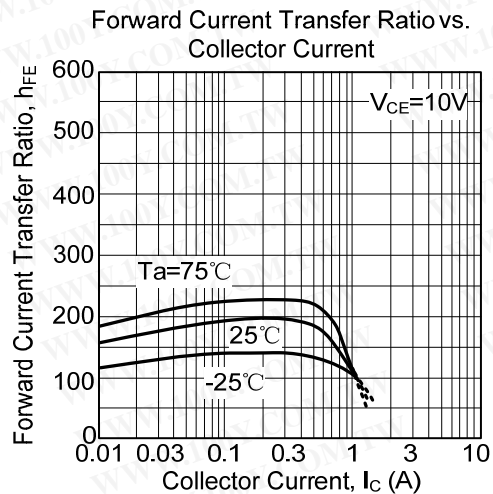
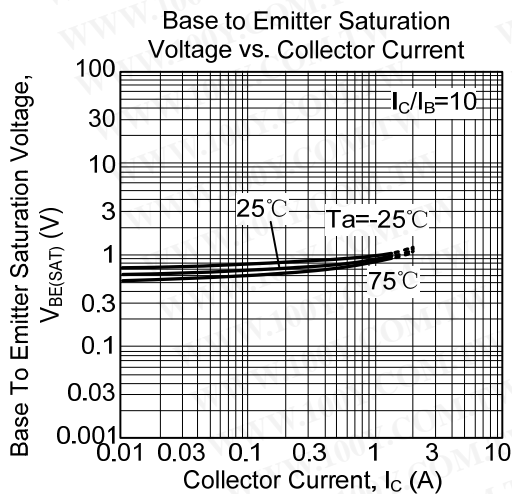
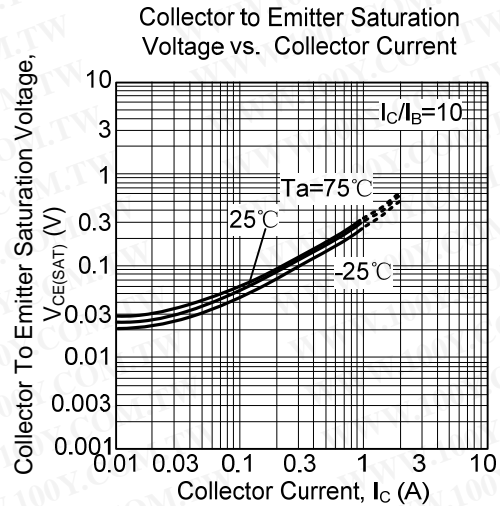
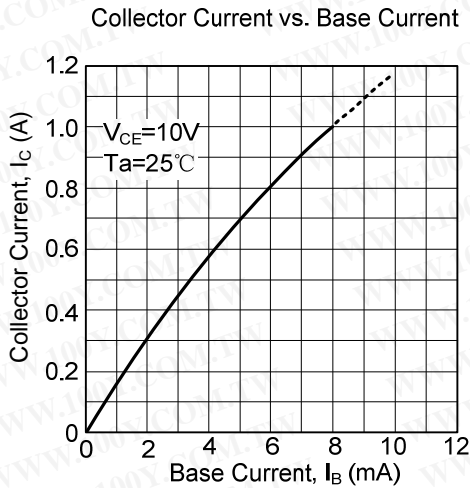
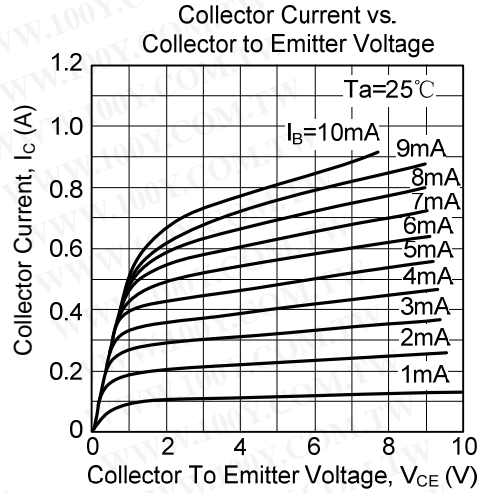
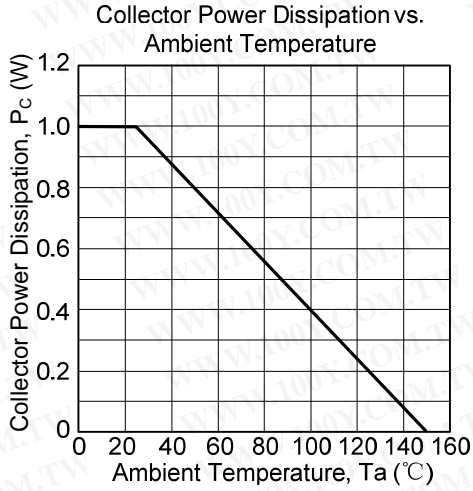
RANK	Q	R	S
RANGE	85-170	120-240	170-340

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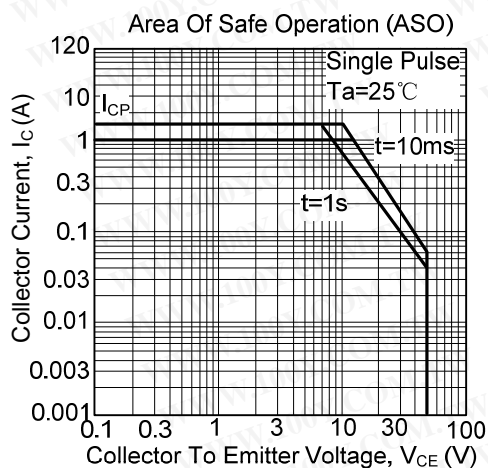
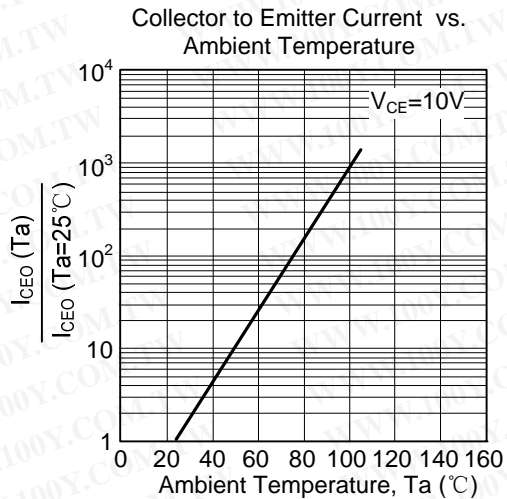
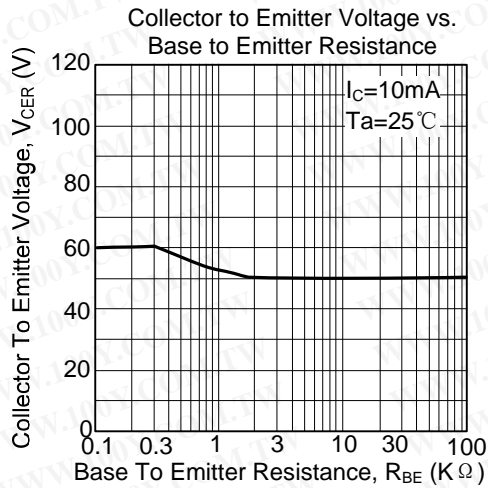
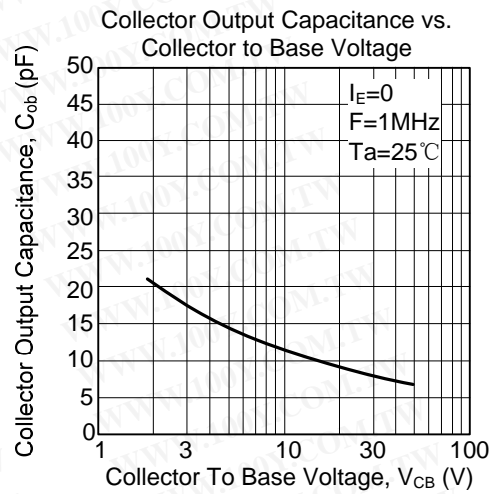
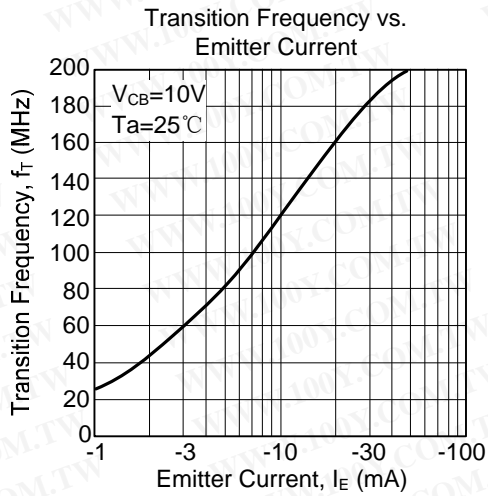
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### TYPICAL CHARACTERISTICS



## ■ TYPICAL CHARACTERISTICS(Cont.)



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