



# DTC124T

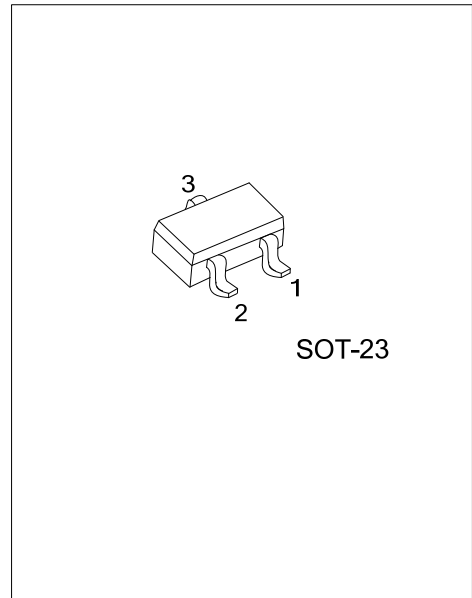
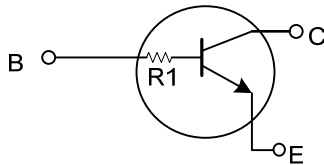
## NPN SILICON TRANSISTOR

### NPN DIGITAL TRANSISTOR (BUILT-IN BIAS RESISTORS)

#### ■ FEATURES

- \* Built-in bias resistors that implies easy ON/OFF applications.
- \* The bias resistors are thin-film resistors with complete isolation to allow negative input.

#### ■ EQUIVALENT CIRCUIT



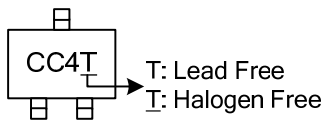
#### ■ ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
DTC124TL-AE3-6-R	DTC124TL-AE3-6-R	SOT-23	E	B	C	Tape Reel

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

<p>DTC124TL-AE3-R</p> <p>(1)Packing Type (2)Package Type (3)Lead Free</p>	<p>(1) R: Tape Reel (2) AE3: SOT-23 (3) G: Halogen Free, L: Lead Free</p>
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#### ■ MARKING



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

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-base voltage	V <sub>CB0</sub>	50	V
Collector-emitter voltage	V <sub>CEO</sub>	50	V
Emitter-base voltage	V <sub>EBO</sub>	5	V
Collector current	I <sub>C</sub>	100	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

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 SPECIFICATIONS (T<sub>A</sub>=25°C, unless others specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV <sub>CB0</sub>	I <sub>C</sub> =50μA	50			V
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	I <sub>C</sub> =1mA	50			V
Emitter-Base Breakdown Voltage	BV <sub>EBO</sub>	I <sub>E</sub> =50μA	5			V
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> =50V			0.5	μA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =4V			0.5	μA
Collector-Emitter Saturation Voltage	V <sub>CE(SAT)</sub>	I <sub>C</sub> =5mA, I <sub>B</sub> =0.5mA			0.3	V
DC Current transfer Ratio	h <sub>FE</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =1mA	100	250	600	
Input Resistance	R <sub>1</sub>		15.4	22	28.6	KΩ
Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>E</sub> =-5mA, f=100MHz(Note)		250		MHz

Note: Transition frequency of the device

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