



DTC115T

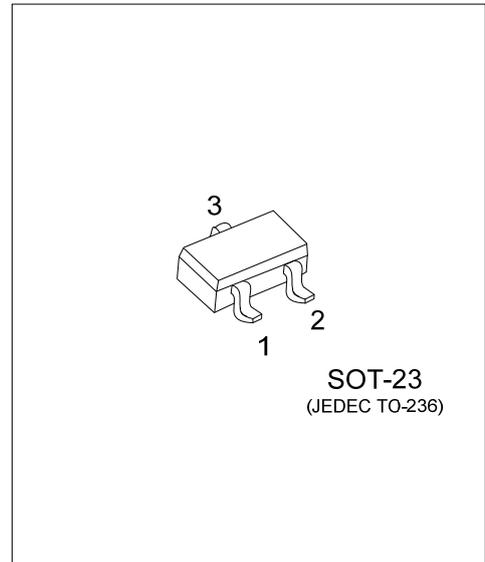
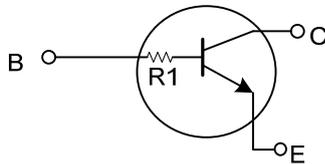
NPN SILICON TRANSISTOR

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



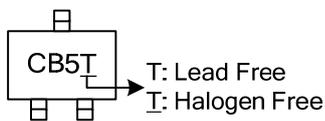
■ ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
DTC115TL-AE3-R	DTC115TG-AE3-R	SOT-23	B	E	C	Tape Reel

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

<p>DTC115TG-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 RATINGS ($T_A=25^{\circ}\text{C}$, unless others specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-base voltage	V_{CBO}	50	V
Collector-emitter voltage	V_{CEO}	50	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	100	mA
Collector Power dissipation	P_C	200	mW
Junction temperature	T_J	+150	$^{\circ}\text{C}$
Storage temperature	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 SPECIFICATIONS ($T_A=25^{\circ}\text{C}$, unless others specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=50\mu\text{A}$	50			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=1\text{mA}$	50			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=50\mu\text{A}$	5			V
Collector Cutoff Current	I_{CBO}	$V_{CB}=50\text{V}$			0.5	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4\text{V}$			0.5	μA
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=1\text{mA}, I_B=0.1\text{mA}$			0.3	V
DC Current transfer Ratio	h_{FE}	$V_{CE}=5\text{V}, I_C=1\text{mA}$	100	250	600	
Input Resistance	R1		70	100	130	K Ω
Transition Frequency	f_T	$V_{CE}=10\text{V}, I_E=-5\text{mA}, f=100\text{MHz}$		250		MHz

Note: Transition frequency of the device.

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