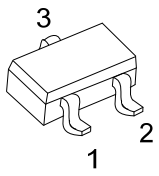
DTC115T

NPN SILICON TRANSISTOR

NPN DIGITAL TRANSISTOR (BUILT- IN BIAS RESISTORS)

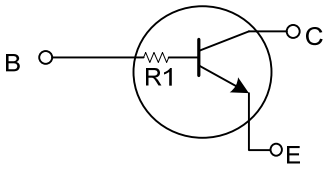


SOT-23
(JEDEC TO-236)

■ 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



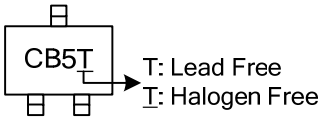
■ ORDERING INFORMATION

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

DTC115TG-AE3-R (1)Packing Type (2)Package Type (3)Green Package	(1) R: Tape Reel (2) AE3: SOT-23 (3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°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	°C
Storage temperature	T_{STG}	-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_A=25°C, unless others specified)

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

Note: Transition frequency of the device.