



DTC123Y

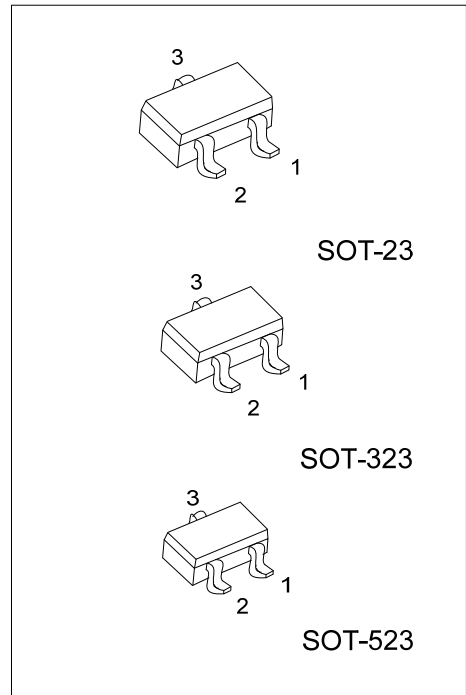
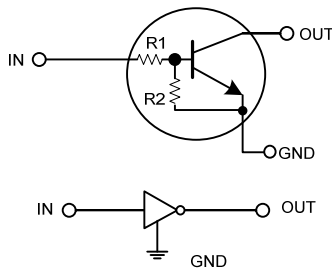
NPN SILICON TRANSISTOR

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

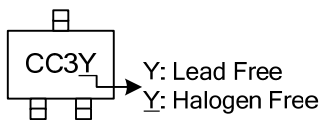


ORDERING INFORMATION

Ordering Number			Package	Pin Assignment			Packing
Normal	Lead Free	Halogen Free		1	2	3	
DTC123Y-AE3-R	DTC123YL-AE3-R	DTC123YG-AE3-R	SOT-23	G	I	O	Tape Reel
DTC123Y-AL3-R	DTC123YL-AL3-R	DTC123YG-AL3-R	SOT-323	G	I	O	Tape Reel
DTC123Y-AN3-R	DTC123YL-AN3-R	DTC123YG-AN3-R	SOT-523	G	I	O	Tape Reel

<p>DTC123YL-AE3-R</p> <p>(1)Packing Type (2)Package Type (3)Lead Plating</p>	<p>(1) R: Tape Reel (2) AE3: SOT-23, AL3: SOT-323, AN3: SOT-523 (3) G: Halogen Free, L: Lead Free, Blank: Pb/Sn</p>
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MARKING



■ ABSOLUTE MAXIMUM RATING (Ta=25°C)

PARAMETER		SYMBOL	RATINGS	UNIT
Supply Voltage		V _{CC}	50	V
Input Voltage		V _{IN}	-5 ~ +12	V
Output Current		I _{OUT}	100	mA
		I _{C(MAX)}	100	mA
Power Dissipation	SOT-23/SOT-323	P _D	200	mW
	SOT-523		150	mW
Storage Temperature		T _J	+150	°C
Junction Temperature		T _{STG}	-55~+150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

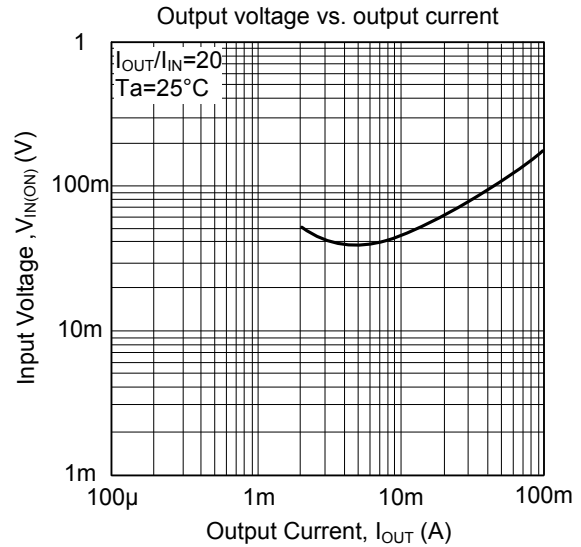
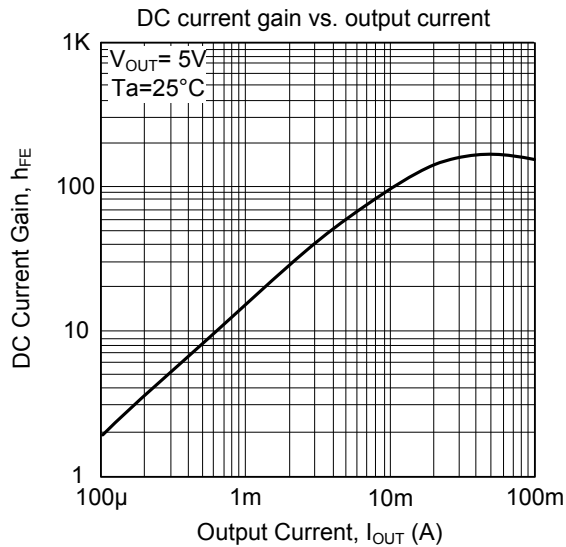
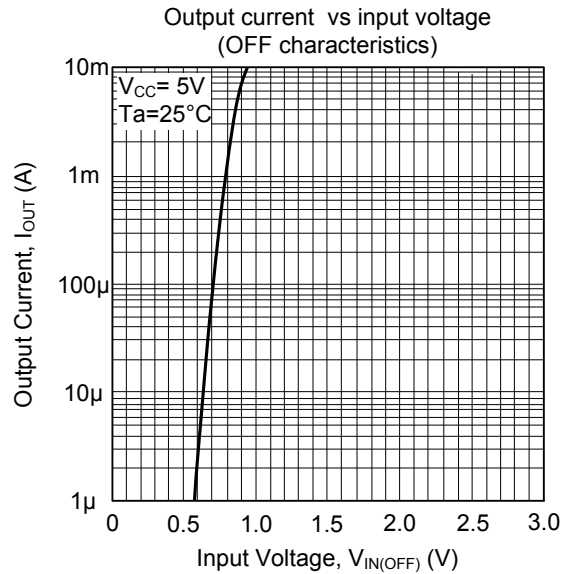
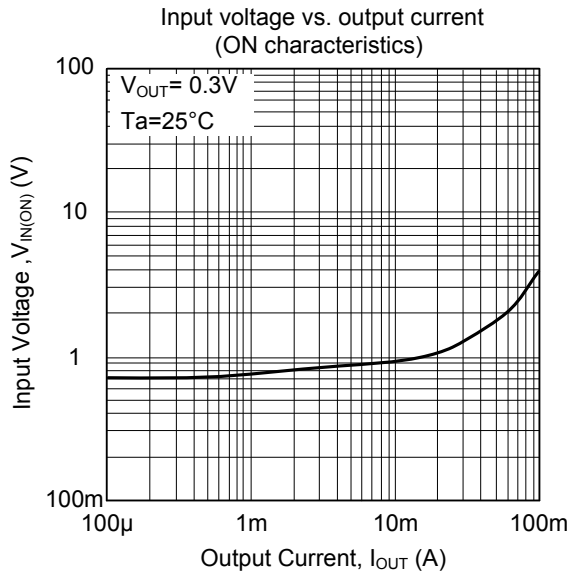
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (T_a=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	V _{IN(OFF)}	V _{CC} =5V, I _{OUT} =100μA			0.3	V
	V _{IN(ON)}	V _{OUT} =0.3V, I _{OUT} =20mA	3			V
Output Voltage	V _{OUT(ON)}	I _{OUT} /I _{IN} =10mA/0.5mA		0.1	0.3	V
Input Current	I _{IN}	V _{IN} =5V			3.8	mA
Output Current	I _{OUT(OFF)}	V _{CC} =50V, V _{IN} =0V			0.5	μA
DC Current Gain	h _{FE}	V _{OUT} =5V, I _{OUT} =10mA	33			
Input Resistance	R ₁		1.54	2.2	2.86	KΩ
Resistance Ratio	R ₂ /R ₁		3.6	4.5	5.5	
Transition Frequency	f _T	V _{CE} =10V, I _E =-5mA, f=100MHz(Note)		250		MHz

Note: Transition frequency of the device

TYPICAL CHARACTERISTICS



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