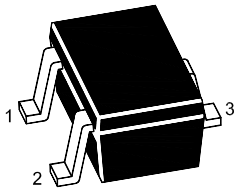
DTC114YSI
NPN Digtal Transistor

Features

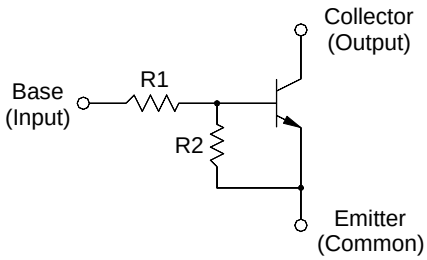
- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process

SOT-323



1.Base 2.Emitter 3.Collector

Equivalent Circuit



Resistor Values/Marking Code

Type	R1 (KΩ)	R2 (KΩ)	Marking Code
DTC114YSI	10	47	64

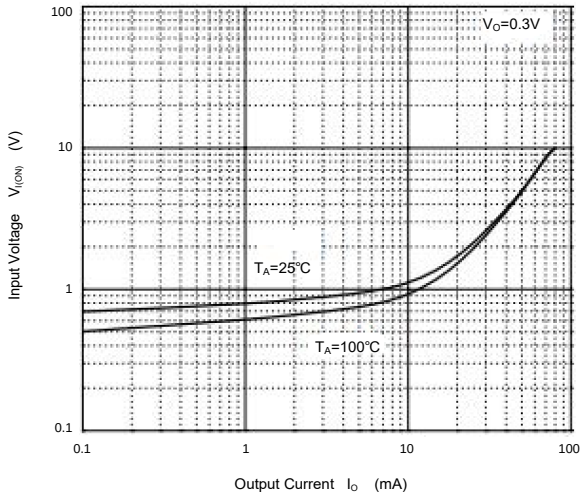
Absolute Maximum Ratings (T_A=25℃)

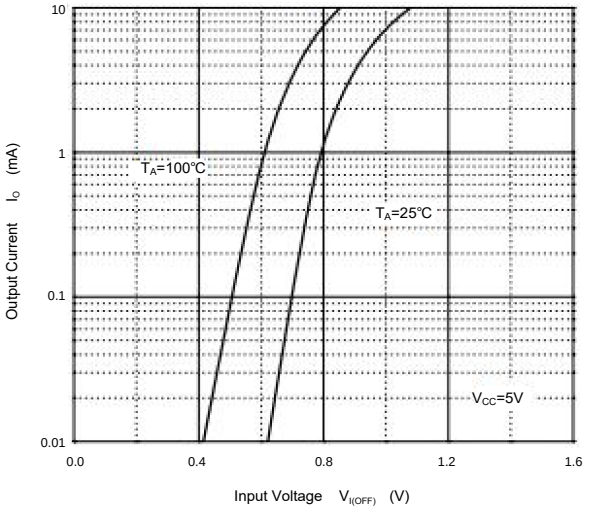
Parameter	Symbol	Value	Unit
Output Voltage	V_O	50	V
Input Voltage	V_I	40,-6	V
Output Current	I_O	70	mA
Peak Collector Current	I_{CM}	100	mA
Maximum Power Dissipation	P_D	200	mW
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

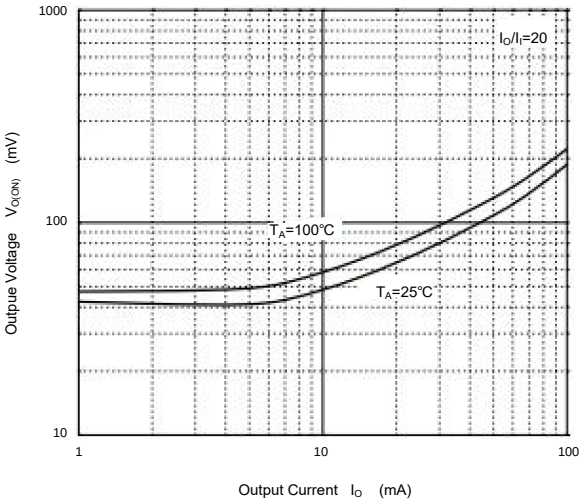
Electrical Characteristics (T_A=25℃)

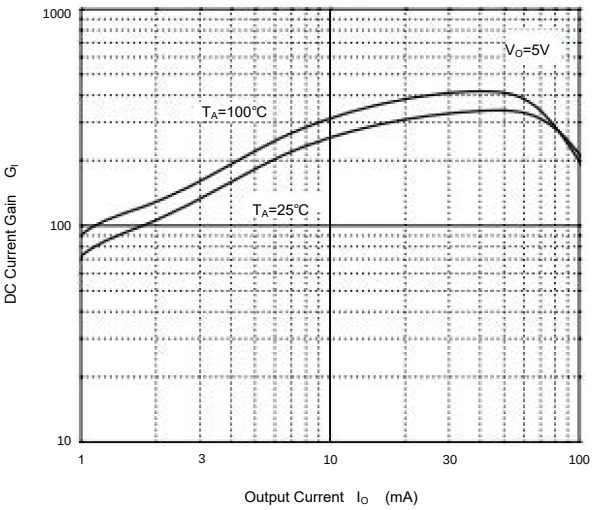
Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_O = 5 V, I_O = 5 mA	G_I	68	--	--	--
Output Cutoff Current at V_O = 50 V	$I_{O(OFF)}$	--	--	500	nA
Input Current at V_I = 5 V	I_I	--	--	0.88	mA
Output Voltage (ON) at I_O = 5 mA, I_I = 0.25 mA	$V_{O(ON)}$	--	--	0.3	V
Input Voltage (ON) at V_O = 0.3 V, I_O = 1 mA	$V_{I(ON)}$	1.4	--	--	V
Input Voltage (OFF) at V_O = 5 V, I_O = 0.1 mA	$V_{I(OFF)}$	--	--	0.3	V
Transition Frequency at V_O = 10 V, I_O = 5 mA , f=100MHz	f_T	--	250	--	MHz

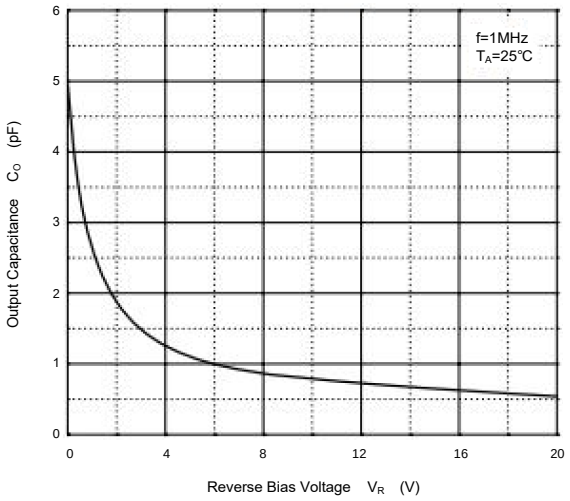
Typical Characteristic Curves

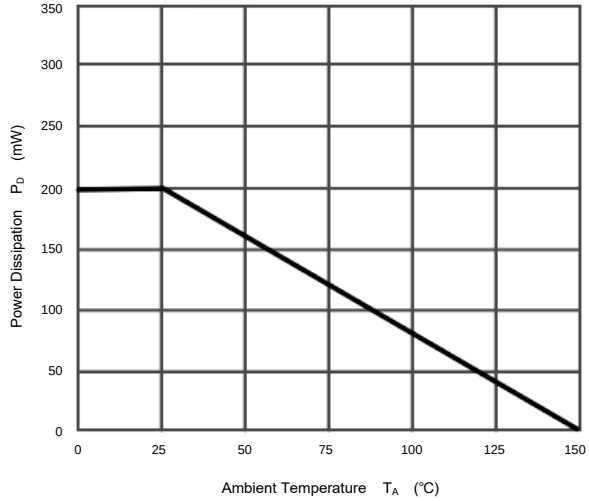








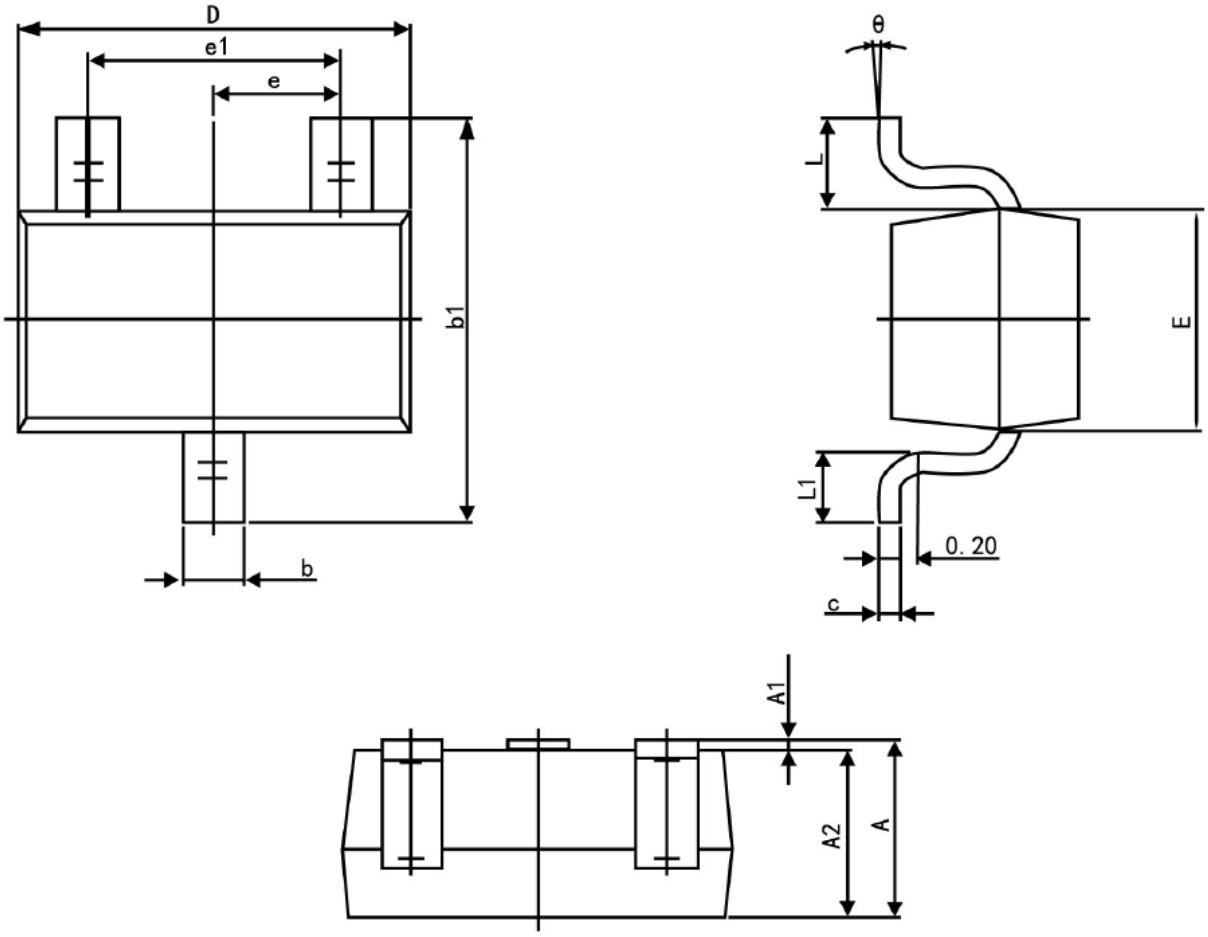




Package Outline

SOT-323

Dimensions in mm



Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.90	1.10
A1	0.00	0.10
A2	0.90	1.00
b	0.20	0.40
c	0.08	0.15
D	2.00	2.20
E	1.15	1.35
E1	2.15	2.45
e	0.65 TYP.	
e1	1.20	1.40
L	0.525 REF.	
L1	0.26	0.46
θ	0°	8°