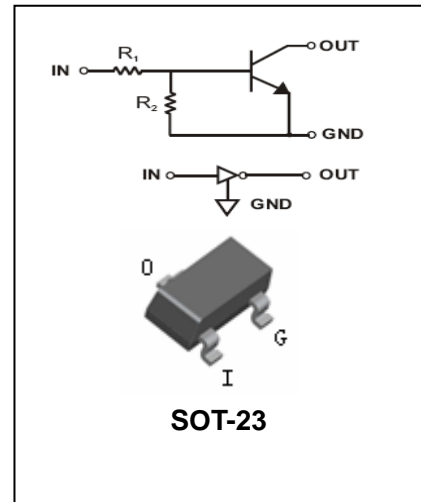


Digital Transistor

DTC114ECA

FEATURES

- Built-in bias resistor enable the configuration of an inverter circuit without connecting external input resistors.
- The bias resistors consist of thin-film resistors with complete isolation to allow negative biasing of the input. They also have the advantage of almost completely eliminating parasitic effects.
- Only the on/off conditions need to be set for operation, making device design easy.



APPLICATIONS

- The NPN style digital transistor.

ORDERING INFORMATION

Type No.	Marking	Package Code
DTC114ECA	24	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
V _{CC}	Supply Voltage	50	V
V _{IN}	Input Voltage	-10 to 40	V
I _O	Output Current	50	mA
P _D	Power Dissipation	200	mW
T _j , T _{stg}	Operating and Storage and Temperature Range	-55 to +150	°C

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Digital Transistor

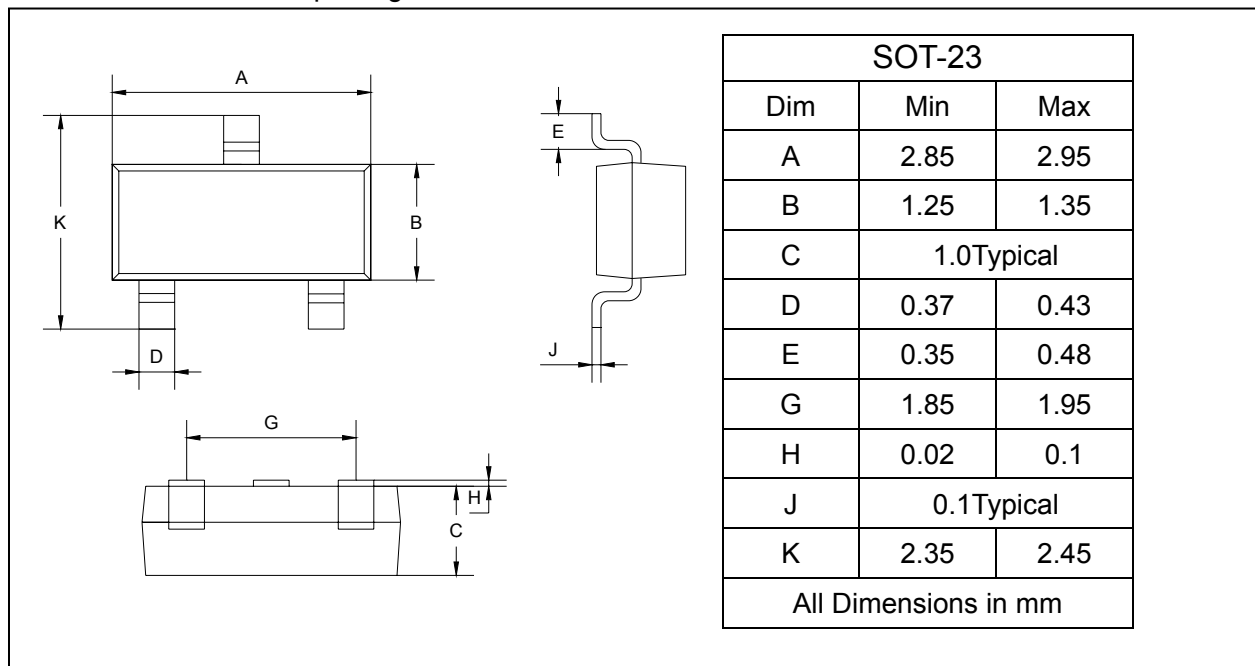
DTC114ECA

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Input Voltage	$V_{I(off)}$	$V_{CC}=5V, I_O=100\mu A$	-	-	0.5	V
	$V_{I(on)}$	$V_O=0.3V, I_O=10mA$	3	-	-	
Output Voltage	$V_{O(on)}$	$I_O/I_I=10mA/0.5mA,$	-	0.1	0.3	V
Input Current	I_I	$V_I=5V$	-	-	0.88	mA
Output Current	$I_{O(off)}$	$V_{CC}=50V, V_I=0V$	-	-	0.5	μA
DC Current Gain	G_I	$V_O=5V, I_O=5mA$	30	-	-	
Input Resistor (R_1) Tolerance	R_1	-	7	10	13	K Ω
Resistance Ratio	R_2/R_1	-	0.8	1	1.2	%
Gain-Bandwidth Product	f_T	$V_{CE}=10V, I_E=-5mA,$ $f=100MHz$	-	250	-	MHz

PACKAGE OUTLINE

Plastic surface mounted package

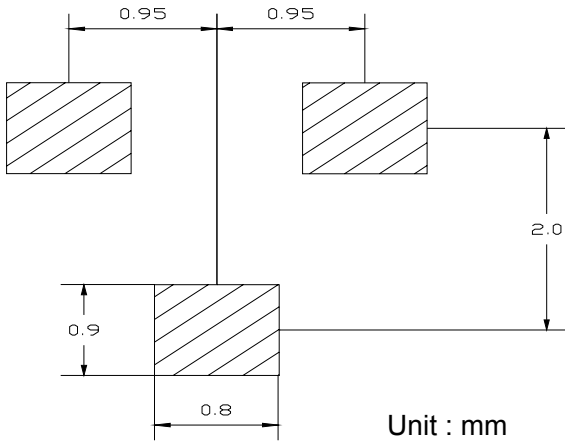
SOT-23



Digital Transistor

DTC114ECA

SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
DTC114ECA	SOT-23	3000/Tape&Reel