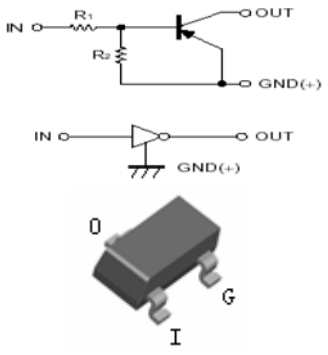
Digital Transistor **DTA114ECA**

FEATURES

Lead-free

- 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.



SOT-23

APPLICATIONS

- The PNP style digital transistor.

ORDERING INFORMATION

Type No.	Marking	Package Code
DTA114ECA	14	SOT-23

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter	Value	Units
V_{CC}	Supply Voltage	-50	V
V_{IN}	Input Voltage	-40 to10	V
I_O	Output Current	-50	mA
P_D	Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient Air	833	℃/W
T_j,T_{stg}	Operating and Storage and Temperature Range	-55 to +150	℃

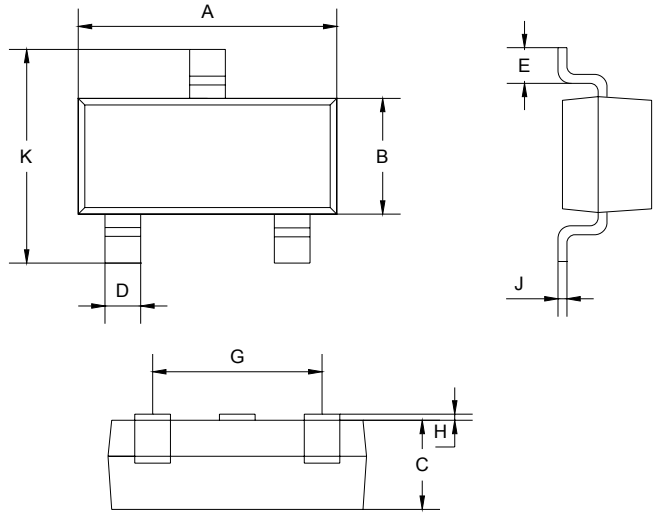
ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Digital Transistor **DTA114ECA**

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Input Voltage	$V_{I(off)}$ $V_{I(on)}$	V_{CC}=-5V,I_O=-100μA V_O=-0.3V,I_O=-10mA	- -3	- -	-0.5 -	V
Output Voltage	$V_{O(on)}$	I_o/I_I=-10mA/-0.5mA,	-	-	-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	KΩ
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

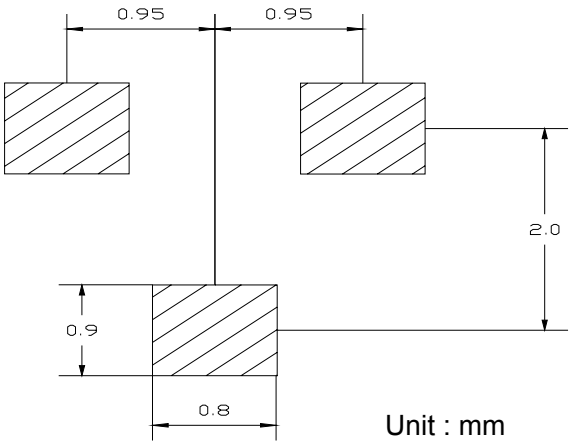
Plastic surface mounted package SOT-23



SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1.0Typical	
D	0.37	0.43
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1Typical	
K	2.35	2.45
All Dimensions in mm		

SOLDERING FOOTPRINT

Digital Transistor **DTA114ECA**



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
DTA114ECA	SOT-23	3000/Tape&Reel