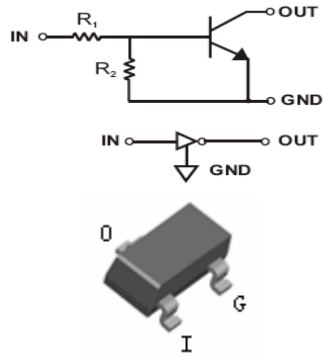
Digital Transistor **DTC144ECA**

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 NPN style digital transistor.

ORDERING INFORMATION

Type No.	Marking	Package Code
DTC144ECA	26	SOT-23

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	100	mA
P_C	Collector Dissipation	200	mW
T_j,T_{stg}	Junction and Storage Temperature	-55~150	℃

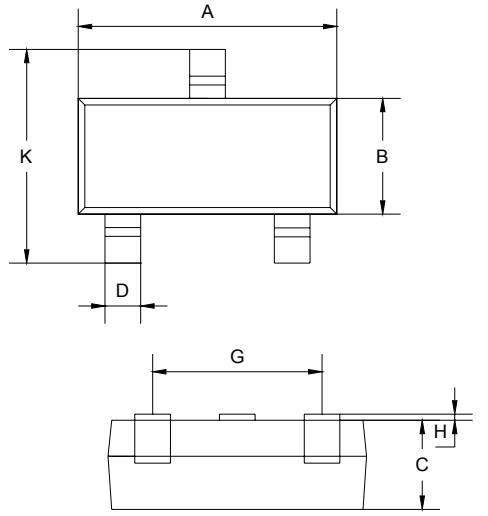
ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Digital Transistor **DTC144ECA**

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=2mA	- 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	-	-	0.18	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	68	-	-	
Input Resistor (R_1) Tolerance	R_1	-	32.9	47	61.1	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

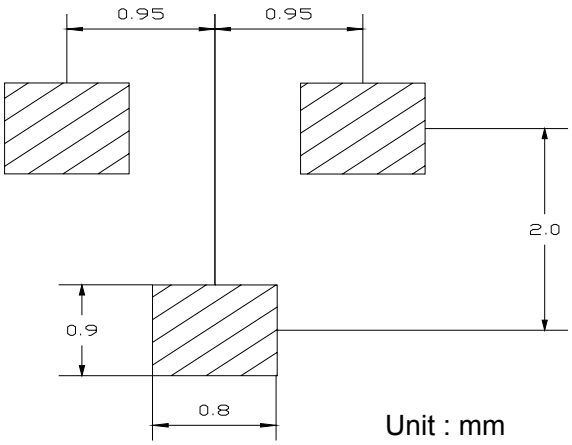
PACKAGE OUTLINE

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



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
DTC144ECA	SOT-23	3000/Tape&Reel