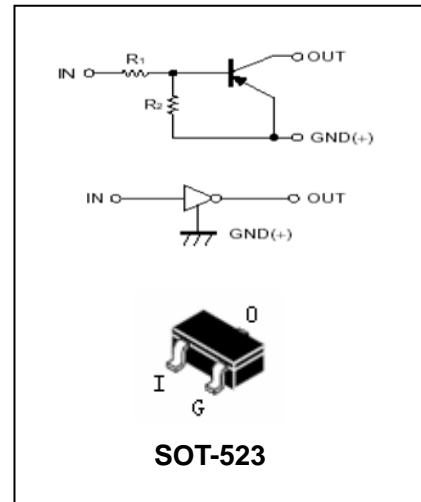


## Digital Transistor

## DTA(R<sub>1</sub>=R<sub>2</sub> SERIES)E

### FEATURES

- Epitaxial planar die construction.
- Complementary NPN types available(DTC).
- Built-in biasing resistors,R<sub>1</sub>=R<sub>2</sub>.
- Also available in lead free version.



### APPLICATIONS

- The PNP style digital transistor.

### ORDERING INFORMATION

Type No.	Marking	Package Code
DTA114EE	14	SOT-523
DTA124EE	15	SOT-523
DTA143EE	13	SOT-523
DTA144EE	16	SOT-523

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units	
V <sub>CC</sub>	Supply Voltage	-50	V	
V <sub>IN</sub>	Input Voltage	DTA114EE DTA124EE DTA143EE DTA144EE	+10 to -40 +10 to -40 +10 to -30 +10 to -40	V
I <sub>O</sub>	Output Current	DTA114EE DTA124EE DTA143EE DTA144EE	-50 -30 -100 -30	mA
I <sub>C</sub> (Max.)	Output current	ALL	-100	mA
P <sub>D</sub>	Power Dissipation		150	mW
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient Air		833	°C/W
T <sub>j</sub> , T <sub>stg</sub>	Operating and Storage and Temperature Range		-55 to +150	°C

Digital Transistor

DTA(R<sub>1</sub>=R<sub>2</sub> SERIES)E

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT	
Input Voltage	V <sub>I(off)</sub>	V <sub>CC</sub> =-5V, I <sub>O</sub> =-100μA	-0.5	-1.1	-	V	
Input Voltage	DTA114EE DTA124EE DTA143EE DTA144EE	V <sub>O</sub> =-0.3V, I <sub>O</sub> =-10mA V <sub>O</sub> =-0.2V, I <sub>O</sub> =-5mA V <sub>O</sub> =-0.3V, I <sub>O</sub> =-20mA V <sub>O</sub> =-0.3V, I <sub>O</sub> =-2mA	-	-1.9	-3		
Output Voltage	DTA114EE DTA124EE DTA143EE DTA144EE	I <sub>O</sub> /I <sub>I</sub> =-10mA/-0.5mA,	-	-0.1	-0.3		V
Output Voltage	V <sub>O(on)</sub>						
Input Current	DTA114EE DTA124EE DTA143EE DTA144EE	I <sub>I</sub>	V <sub>I</sub> =-5V	-	-	mA	
Output Current	I <sub>O(off)</sub>	V <sub>CC</sub> =-50V, V <sub>I</sub> =0V	-	-	-0.5		μA
DC Current Gain	DTA114EE DTA124EE DTA143EE DTA144EE	G <sub>I</sub>	V <sub>O</sub> =-5V, I <sub>O</sub> =-5mA V <sub>O</sub> =-5V, I <sub>O</sub> =-5mA V <sub>O</sub> =-5V, I <sub>O</sub> =-10mA V <sub>O</sub> =-5V, I <sub>O</sub> =-5mA	30 56 20 68	- - -		
Input Resistor	DTA114EE DTA124EE DTA143EE DTA144EE	R <sub>1</sub> (R <sub>2</sub> )	7 15.4 3.29 32.9	10 22 4.7 47	13 28.6 6.11 61.1		kΩ
Resistance Ratio	R <sub>2</sub> /R <sub>1</sub>	-	0.8	1	1.2		
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =-10V, I <sub>E</sub> =5mA, f=100MHz	-	250	-	MHz	

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

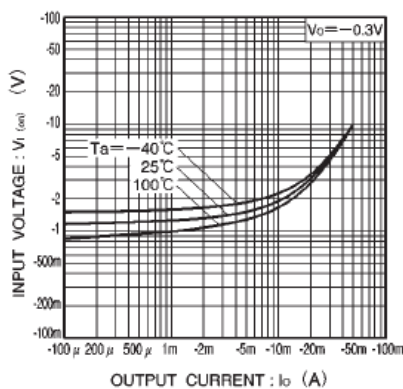


Fig.1 Input voltage vs. output current (ON characteristics)

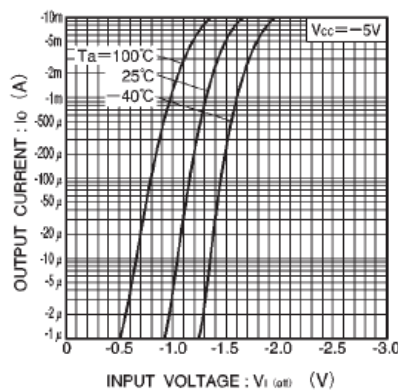


Fig.2 Output current vs. input voltage (OFF characteristics)

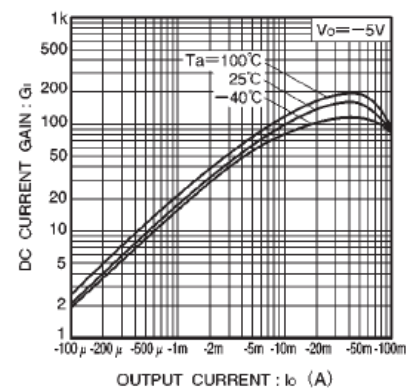


Fig.3 DC current gain vs. output current

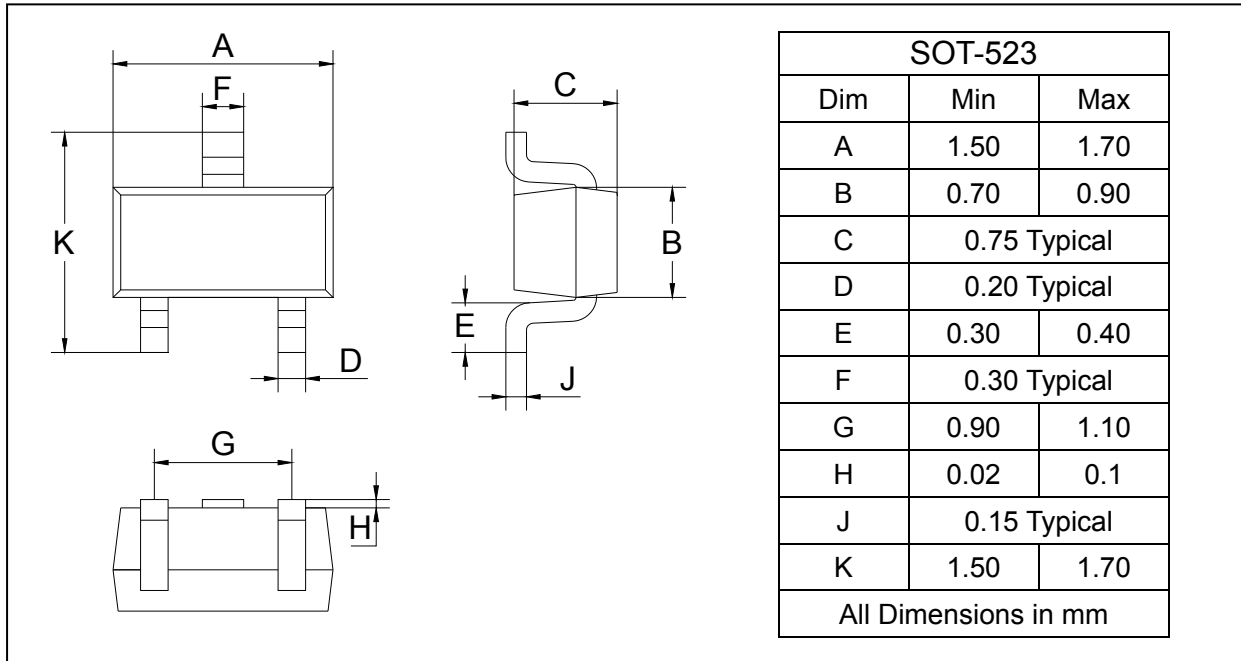
## Digital Transistor

## DTA(R<sub>1</sub>=R<sub>2</sub> SERIES)E

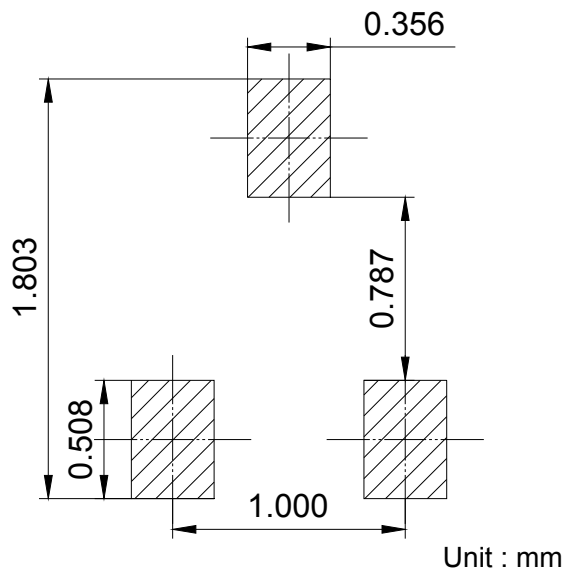
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-523



### SOLDERING FOOTPRINT



### PACKAGE INFORMATION

Device	Package	Shipping
DTA114EE/124EE/143EE/144EE	SOT-523	3000/Tape&Reel