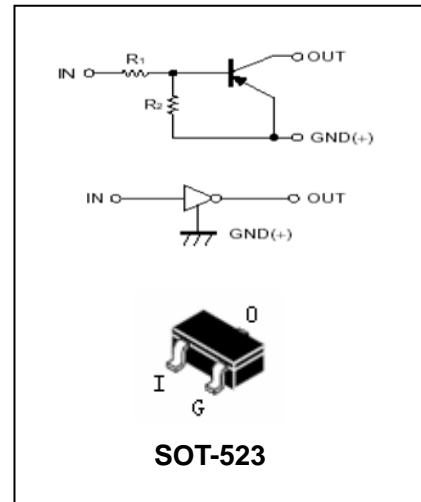


Digital Transistor

DTA(R₁=R₂ SERIES)E

FEATURES

- Epitaxial planar die construction.
- Complementary NPN types available(DTC).
- Built-in biasing resistors,R₁=R₂.
- 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 _{CC}	Supply Voltage	-50	V	
V _{IN}	Input Voltage	DTA114EE DTA124EE DTA143EE DTA144EE	+10 to -40 +10 to -40 +10 to -30 +10 to -40	V
I _O	Output Current	DTA114EE DTA124EE DTA143EE DTA144EE	-50 -30 -100 -30	mA
I _C (Max.)	Output current	ALL	-100	mA
P _D	Power Dissipation		150	mW
R _{θJA}	Thermal Resistance, Junction to Ambient Air		833	°C/W
T _J , T _{stg}	Operating and Storage and Temperature Range		-55 to +150	°C

Digital Transistor

DTA(R₁=R₂ SERIES)E

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT	
Input Voltage	V _{I(off)}	V _{CC} =-5V, I _O =-100μA	-0.5	-1.1	-	V	
Input Voltage	DTA114EE DTA124EE DTA143EE DTA144EE	V _O =-0.3V, I _O =-10mA V _O =-0.2V, I _O =-5mA V _O =-0.3V, I _O =-20mA V _O =-0.3V, I _O =-2mA	-	-1.9	-3		
Output Voltage	DTA114EE DTA124EE DTA143EE DTA144EE	I _O /I _I =-10mA/-0.5mA,	-	-0.1	-0.3		V
Output Voltage	V _{O(on)}						
Input Current	DTA114EE DTA124EE DTA143EE DTA144EE	V _I =-5V	-	-	-0.88 -0.36 -1.8 -0.18	mA	
Output Current	I _{O(off)}	V _{CC} =-50V, V _I =0V	-	-	-0.5	μA	
DC Current Gain	DTA114EE DTA124EE DTA143EE DTA144EE	V _O =-5V, I _O =-5mA V _O =-5V, I _O =-5mA V _O =-5V, I _O =-10mA V _O =-5V, I _O =-5mA	30 56 20 68	-	-	kΩ	
Input Resistor	DTA114EE DTA124EE DTA143EE DTA144EE	R ₁ (R ₂)	7 15.4 3.29 32.9	10 22 4.7 47	13 28.6 6.11 61.1		
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

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

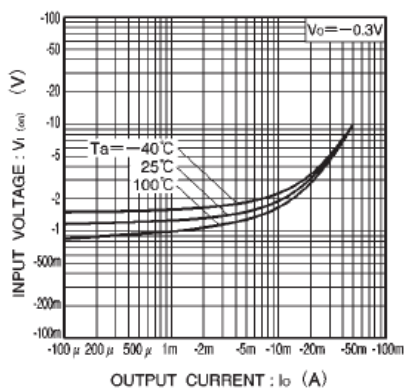


Fig.1 Input voltage vs. output current (ON characteristics)

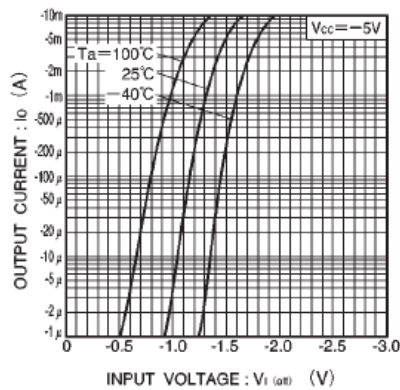


Fig.2 Output current vs. input voltage (OFF characteristics)

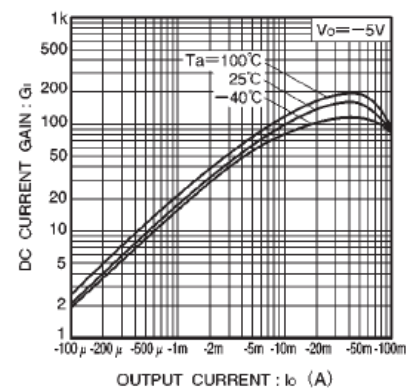


Fig.3 DC current gain vs. output current

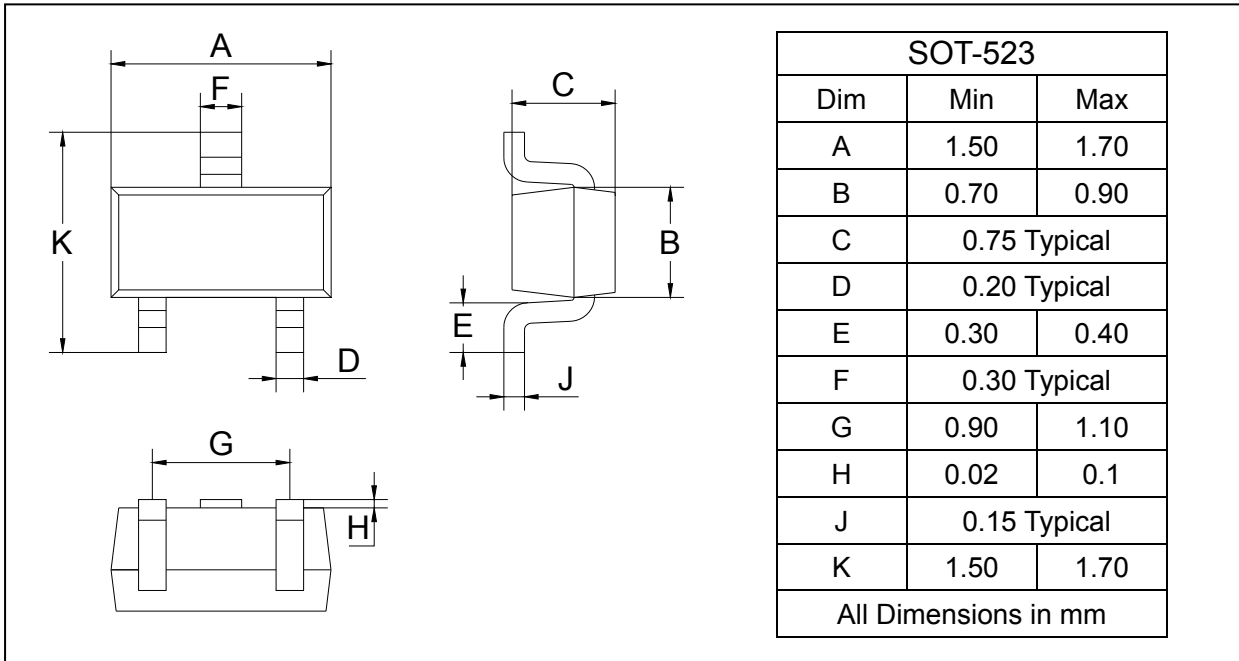
Digital Transistor

DTA(R₁=R₂ SERIES)E

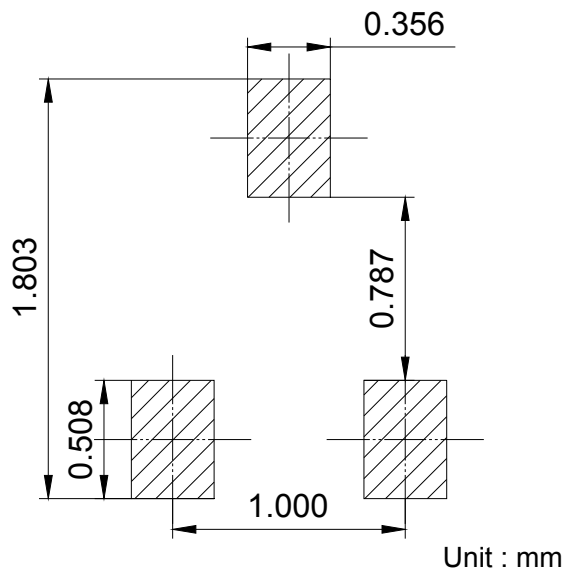
PACKAGE OUTLINE

Plastic surface mounted package

SOT-523



SOLDERING FOOTPRINT



PACKAGE INFORMATION

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