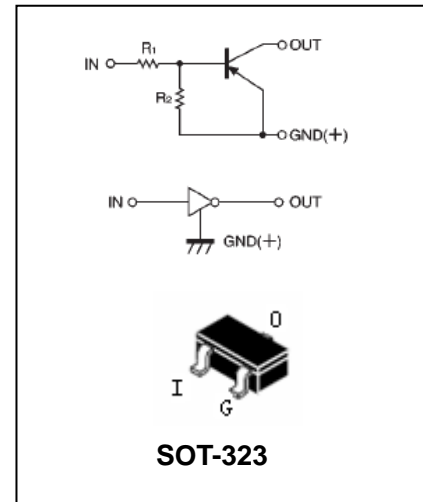


Digital Transistor

DTA(R₁=R₂ SERIES)UA

FEATURES

- Epitaxial planar die construction.
- Complementary NPN types available(DTA).
- Built-in biasing resistors,R₁=R₂
- Also available in lead free version.



APPLICATIONS

- The NPN style digital transistor.

ORDERING INFORMATION

Type No.	Marking	Package Code
DTA114EUA	14	SOT-323
DTA143EUA	13	SOT-323
DTA124EUA	15	SOT-323
DTA144EUA	16	SOT-323

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units	
V _{CC}	Supply Voltage	-50	V	
V _{IN}	Input Voltage	DTA114EUA DTA124EUA DTA143EUA DTA144EUA	-40 to+10 -40 to+10 -30 to+10 -40 to+10	V
I _o	Output Current	DTA114EUA DTA124EUA DTA143EUA DTA144EUA	-50 -30 -100 -30	mA
I _C (Max.)	Output current	ALL	-100	mA
P _D	Power Dissipation		200	mW
R _{θJA}	Thermal Resistance, Junction to Ambient Air		625	°C/W
T _j , T _{stg}	Operating and Storage and Temperature Range		-55 to +150	°C

Digital Transistor

DTA(R₁=R₂ SERIES)UA

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	V _{I(on)}	DTA114EUA DTA124EUA DTA143EUA DTA144EUA	-	-1.9	-3		
		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						
Output Voltage	V _{O(on)}	DTA114EUA DTA124EUA DTA143EUA DTA144EUA		-0.1	-0.3	V	
		I _O /I _I =-10mA/-0.5mA,					
Input Current	I _I	DTA114EUA DTA124EUA DTA143EUA DTA144EUA			-0.88 -0.36 -1.8 -0.18	mA	
		V _I =-5V					
Output Current	I _{O(off)}	V _{CC} =-50V, V _I =0V			-0.5	μA	
DC Current Gain	G _I	DTA114EUA DTA124EUA DTA143EUA DTA144EUA			30 56 20 68		
		V _O =-5V, I _O =-5mA					
		V _O =-5V, I _O =-5mA					
		V _O =-5V, I _O =-10mA					
	V _O =-5V, I _O =-5mA						
Input Resistor	R ₁ (R ₂)	DTA114EUA DTA124EUA DTA143EUA DTA144EUA		7 15.4 3.29 32.9	10 22 4.7 47	13 28.6 6.11 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	

Digital Transistor

DTA(R₁=R₂ SERIES)UA

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

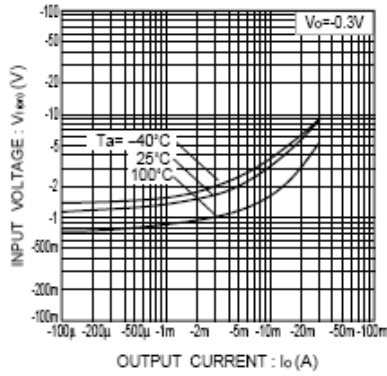


Fig.1 Input voltage vs. output current (ON characteristics)

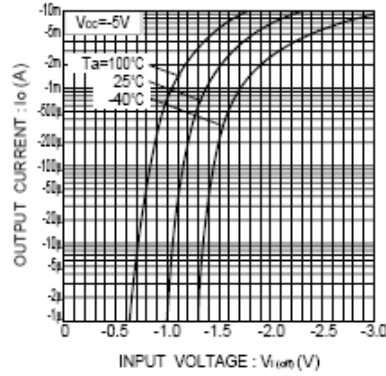


Fig.2 Output current vs. input voltage (OFF characteristics)

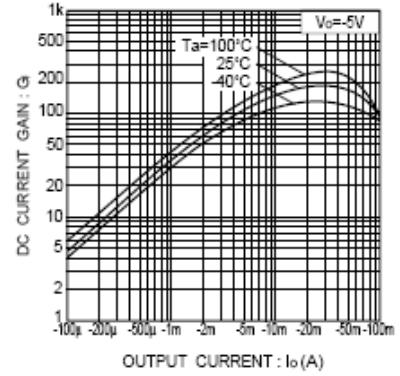


Fig.3 DC current gain vs. output current

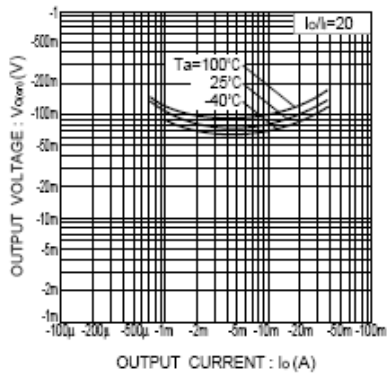


Fig.4 Output voltage vs. output current

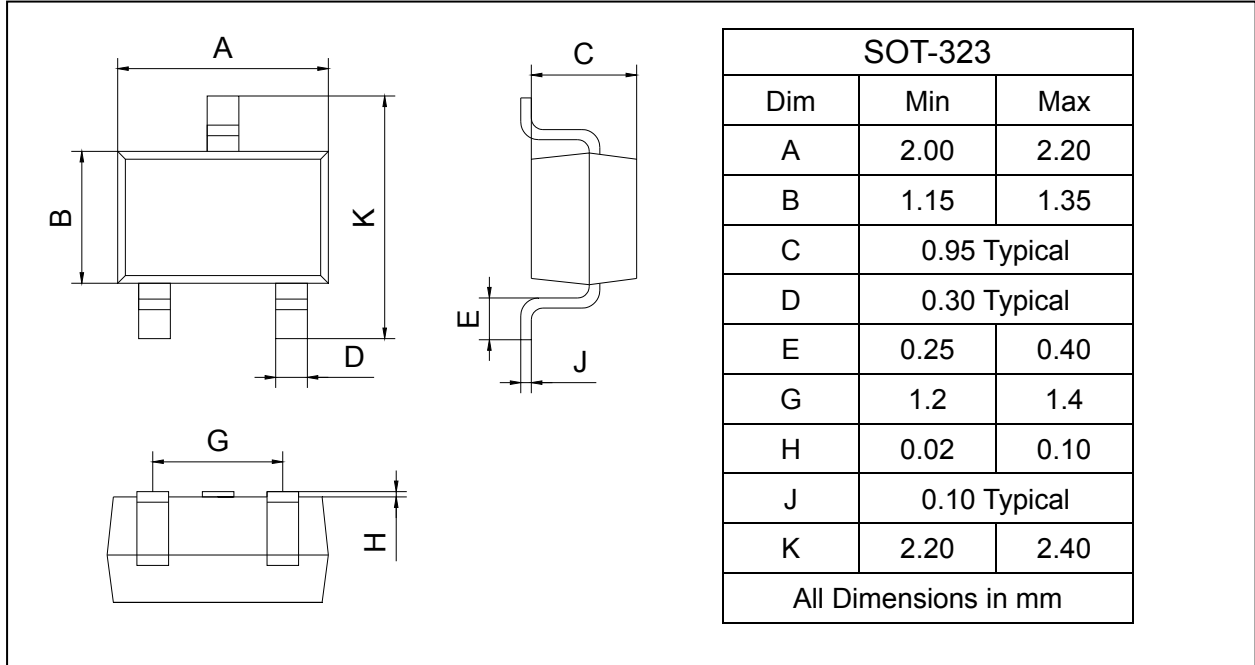
Digital Transistor

DTA(R₁=R₂ SERIES)UA

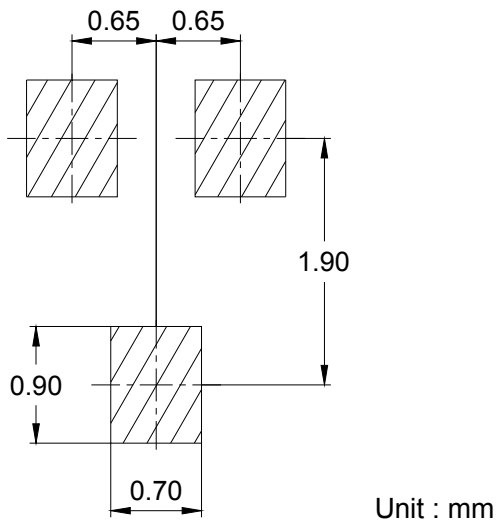
PACKAGE OUTLINE

Plastic surface mounted package

SOT-323



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
DTC114EUA/124EUA/143EUA/144EUA	SOT-323	3000/Tape&Reel