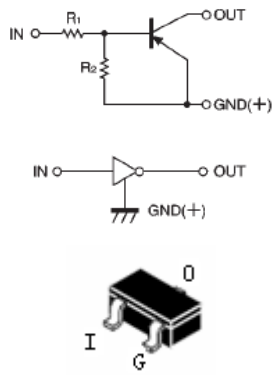
DTA(R1≠R2 SERIES)UA

Digital Transistor(PNP)

FEATURES

- Epitaxial planar die construction
- Complementary NPN types available(DTC)
- Built-in biasing resistors, $R_1 \neq R_2$
- Also available in lead free version
- Halogen free
- Qualified to AEC-Q101 standards for high reliability



SOT-323

APPLICATIONS

- The PNP style digital transistor

ORDERING INFORMATION

Type No.	Marking	Package Code
DTA113ZUA	111	SOT-323
DTA114YUA	54	SOT-323
DTA123JUA	132	SOT-323
DTA123YUA	52	SOT-323
DTA143XUA	33	SOT-323
DTA143ZUA	113	SOT-323

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter		Value	Units
V_{CC}	Supply Voltage		-50	V
V_{IN}	Input Voltage	DTA113ZUA	+5 to-10	V
		DTA114YUA	+6 to-40	
		DTA123JUA	+5 to-12	
		DTA123YUA	+5 to-12	
		DTA143XUA	+7 to-20	
		DTA143ZUA	+5 to-30	
I_O	Output Current	DTA113ZUA	-100	mA
		DTA114YUA	-70	
		DTA123JUA	-100	
		DTA123YUA	-100	
		DTA143XUA	-100	
		DTA143ZUA	-100	
I_C(Max.)	Output current	ALL	-100	mA
P_D	Power Dissipation		200	mW
T_j,T_{stg}	Operating and Storage and Temperature Range		-55 to +150	℃

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter		Symbol	Test conditions	MIN	TYP	MAX	UNIT
Input Voltage	DTA113ZUA	$V_{I(off)}$	V_{CC}=-5V,I_O=-100μA	-	-	-0.3	V
	DTA114YUA					-0.3	
	DTA123JUA					-0.5	
	DTA123YUA					-0.3	
	DTA143XUA					-0.3	
	DTA143ZUA					-0.5	
Input Voltage	DTA113ZUA	$V_{I(on)}$	V_O=-0.3V,I_O=-20mA	-3	-	-	
	DTA114YUA		V_O=-0.3V,I_O=-1mA	-1.4			
	DTA123JUA		V_O=-0.3V,I_O=-5mA	-1.1			
	DTA123YUA		V_O=-0.3V,I_O=-20mA	-3.0			
	DTA143XUA		V_O=-0.3V,I_O=-20mA	-2.5			
	DTA143ZUA		V_O=-0.3V,I_O=-5mA	-1.3			
Output Voltage	DTA114YUA	$V_{O(on)}$	I_o/I_I=-5mA/-0.25mA	-	-0.1	-0.3	V
	DTA123JUA						
	DTA143ZUA						
	ALL Others		I_o/I_I=-10mA/-0.5mA				
Input Current	DTA113ZUA	I_I	V_I=-5V	-	-	-7.2	mA
	DTA114YUA					-0.88	
	DTA123JUA					-3.6	
	DTA123YUA					-3.8	
	DTA143XUA					-1.8	
	DTA143ZUA					-1.8	
Output Current		$I_{O(off)}$	V_{CC}=-50V,V_I=0V	-	-	-0.5	μA
DC Current Gain	DTA113ZUA	G_I	V_O=-5V,I_O=-5mA	33	-	-	-
DC Current Gain	DTA114YUA	G_I	V_O=-5V,I_O=-10mA	68	-	-	-
	DTA123JUA			80			
	DTA123YUA			33			
	DTA143XUA			30			
	DTA143ZUA			80			
Input Resistance	DTA113ZUA	R_1		0.7	1	1.3	kΩ
	DTA114YUA			7	10	13	
	DTA123JUA			1.54	2.2	2.86	
	DTA123YUA			1.54	2.2	2.86	
	DTA143XUA			3.29	4.7	6.11	
	DTA143ZUA			3.29	4.7	6.11	
Resistance Ratio	DTA113ZUA	R_2/R_1	-	8	10	12	-
	DTA114YUA			3.7	4.7	5.7	
	DTA123JUA			17	21	26	

DTA123YUA DTA143XUA DTA143ZUA			3.6 1.7 8	4.5 2.1 10	5.5 2.6 12	
Gain-Bandwidth Product	f_T	V_{CE}=-10V,I_E=5mA, f=100MHz	-	250	-	MHz

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

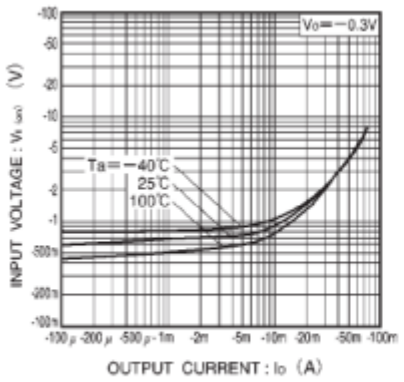


Fig.1 Input voltage vs. output current (ON characteristics)

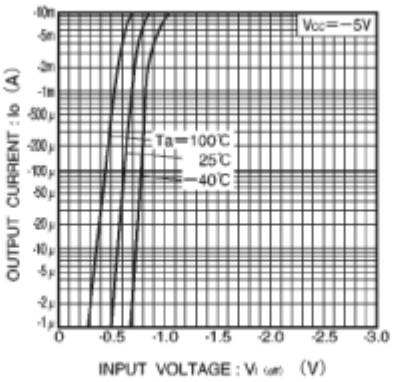


Fig.2 Output current vs. input voltage (OFF characteristics)

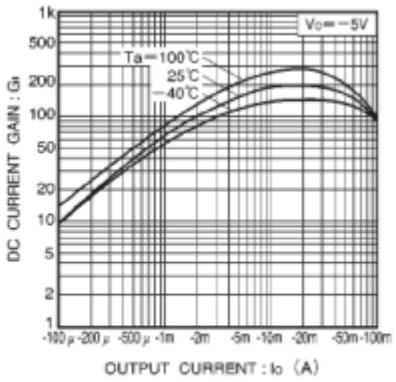


Fig.3 DC current gain vs. output current

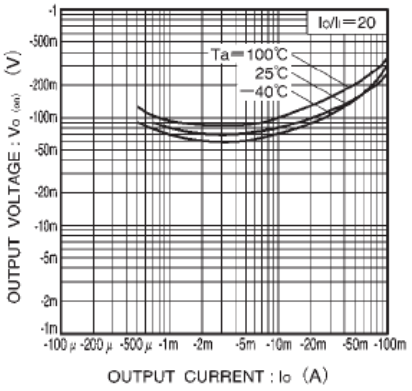


Fig.4 Output voltage vs. output current

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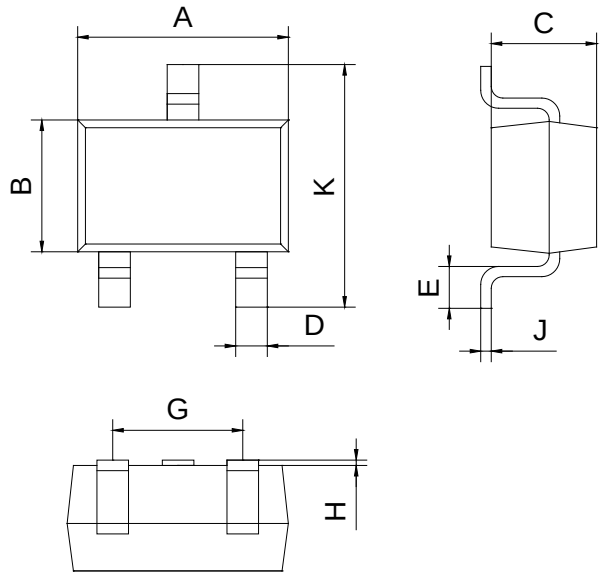
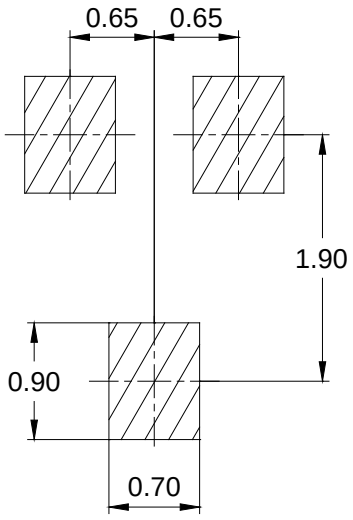
PACKAGE OUTLINE

Plastic surface mounted package SOT-323



SOT-323		
Dim	Min	Max
A	2.00	2.20
B	1.15	1.35
C	0.90	1.10
D	0.15	0.35
E	0.25	0.40
G	1.20	1.40
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit: mm

PACKAGE INFORMATION

Device	Package	Shipping
DTAXXXXUA	SOT-323	3000/Tape&Reel