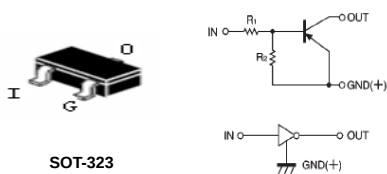


FEATURES

- Epitaxial planar die construction.
- Complementary NPN types available(DTA).
- Built-in biasing resistors, $R_1=R_2$
- Also available in lead free version.

APPLICATIONS

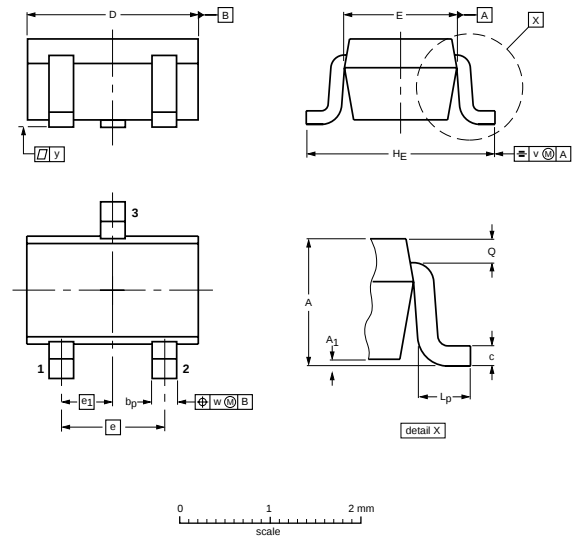
The NPN style digital transistor.



ORDERING INFORMATION

Type No.	Marking
DTA114EUA	14
DTA143EUA	13
DTA124EUA	15
DTA144EUA	16

SOT-323



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.8	0.1	0.4 0.3	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.23 0.13	0.2	0.2

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

DTA114EUA DTA143EUA DTA124EUA DTA144EUA

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Input Voltage	$V_{I(off)}$	$V_{CC}=-5V, I_O=-100\mu A$	-0.5	-1.1	-	V
Input Voltage DTA114EUA DTA124EUA DTA143EUA DTA144EUA	$V_{I(on)}$	$V_O=-0.3V, I_O=-10mA$ $V_O=-0.2V, I_O=-5mA$ $V_O=-0.3V, I_O=-20mA$ $V_O=-0.3V, I_O=-2mA$	-	-1.9	-3	
Output Voltage DTA114EUA DTA124EUA DTA143EUA DTA144EUA	$V_{O(on)}$	$I_O/I_I=-10mA/-0.5mA,$		-0.1	-0.3	V
Input Current DTA114EUA DTA124EUA DTA143EUA DTA144EUA	I_I	$V_I=-5V$			-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 DTA114EUA DTA124EUA DTA143EUA DTA144EUA	G_I	$V_O=-5V, I_O=-5mA$ $V_O=-5V, I_O=-5mA$ $V_O=-5V, I_O=-10mA$ $V_O=-5V, I_O=-5mA$	30 56 20 68			
Input Resistor DTA114EUA DTA124EUA DTA143EUA DTA144EUA	$R_1(R_2)$		7 15.4 3.29 32.9	10 22 4.7 47	13 28.6 6.11 61.1	k Ω
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

RATING AND CHARACTERISTIC CURVES (DTA114EUA DTA143EUA DTA124EUA DTA144EUA)

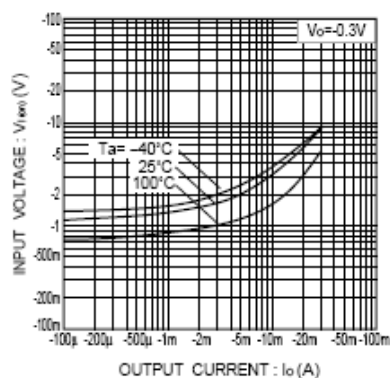


Fig.1 Input voltage vs. output current (ON characteristics)

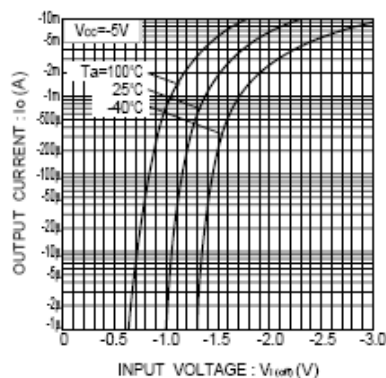


Fig.2 Output current vs. input voltage (OFF characteristics)

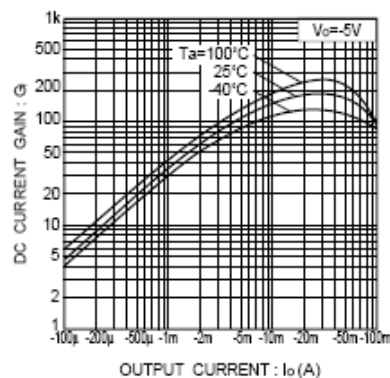


Fig.3 DC current gain vs. output current

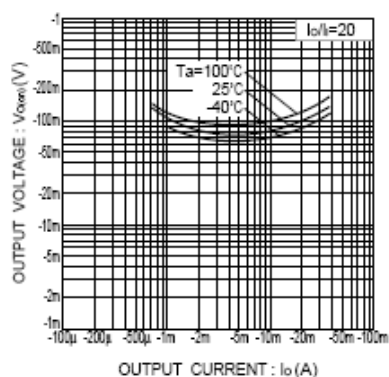


Fig.4 Output voltage vs. output current