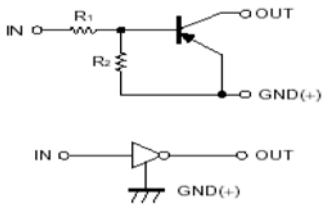
Brückewell

Digital Transistor

DTA(R_1=R_2 SERIES)E

FEATURES

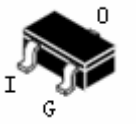


- Epitaxial planar die construction.
- Complementary NPN types available(DTC).
- Built-in biasing resistors,R_1=R_2.
- Also available in lead free version.

APPLICATIONS

- The PNP style digital transistor.

Lead-free



SOT-523

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℃ unless otherwise specified

Symbol	Parameter		Value	Units
V_{CC}	Supply Voltage		-50	V
V_{IN}	Input Voltage	DTA114EE	+10 to -40	V
		DTA124EE	+10 to -40	
		DTA143EE	+10 to -30	
		DTA144EE	+10 to -40	
I_O	Output Current	DTA114EE	-50	mA
		DTA124EE	-30	
		DTA143EE	-100	
		DTA144EE	-30	
I_C(Max.)	Output current	ALL	-100	mA
P_D	Power Dissipation		150	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient Air		833	℃/W
T_j,T_{stg}	Operating and Storage and Temperature Range		-55 to +150	℃

Digital Transistor **DTA(R_1=R_2 SERIES)E**

ELECTRICAL CHARACTERISTICS @ Ta=25℃ 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	$V_{I(on)}$	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	DTA114EE DTA124EE DTA143EE DTA144EE	$V_{O(on)}$	I_o/I_I=-10mA/-0.5mA,	-	-0.1	-0.3	V
Input Current	DTA114EE DTA124EE DTA143EE DTA144EE	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	DTA114ECA DTA124ECA DTA143ECA DTA144ECA	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	DTA114ECA DTA124ECA DTA143ECA DTA144ECA	$R_1(R_2)$		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

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

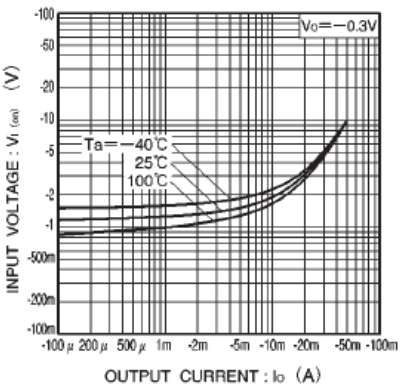


Fig.1 Input voltage vs. output current (ON characteristics)

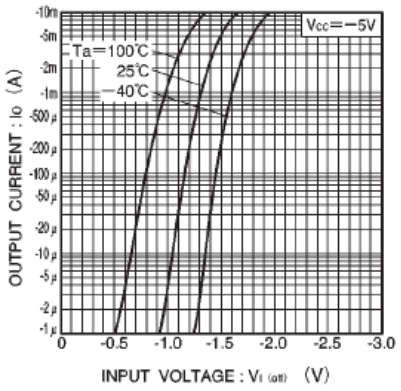


Fig.2 Output current vs. input voltage (OFF characteristics)

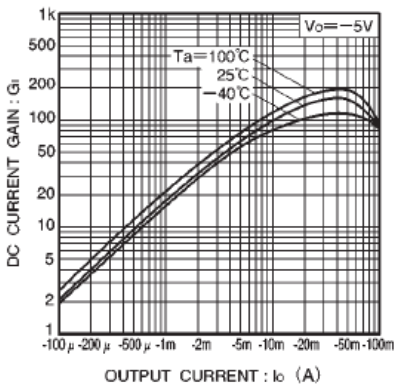
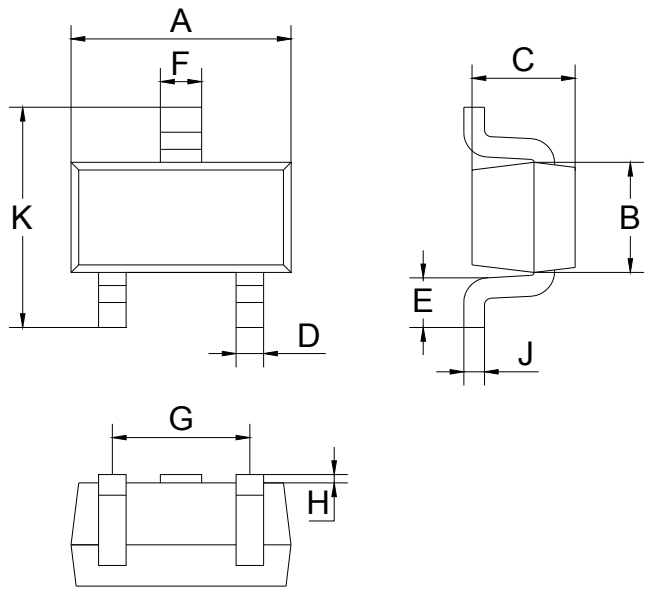


Fig.3 DC current gain vs. output current

Digital Transistor **DTA(R_1=R_2 SERIES)E**

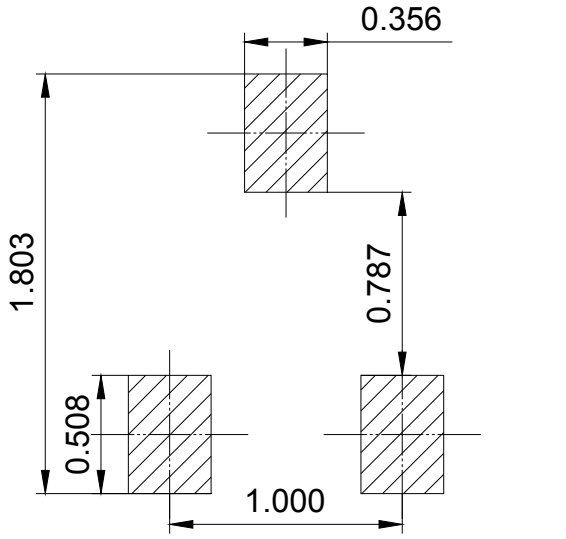
PACKAGE OUTLINE

Plastic surface mounted package SOT-523



SOT-523		
Dim	Min	Max
A	1.50	1.70
B	0.70	0.90
C	0.75 Typical	
D	0.20 Typical	
E	0.30	0.40
F	0.30 Typical	
G	0.90	1.10
H	0.02	0.1
J	0.15 Typical	
K	1.50	1.70
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

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