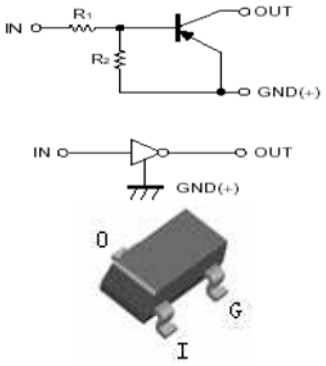
Digital Transistor DTA(R_1=R_2 SERIES)CA

FEATURES

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



SOT-23

APPLICATIONS

- The PNP style digital transistor.

ORDERING INFORMATION

Type No.	Marking	Package Code
DTA114ECA	14	SOT-23
DTA124ECA	15	SOT-23
DTA143ECA	13	SOT-23
DTA144ECA	16	SOT-23

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter		Value	Units
V_{CC}	Supply Voltage		-50	V
V_{IN}	Input Voltage	DTA114ECA DTA124ECA DTA143ECA DTA144ECA	+10 to -40 +10 to -40 +10 to -30 +10 to -40	V
I_O	Output Current	DTA114ECA DTA124ECA DTA143ECA DTA144ECA	-50 -30 -100 -30	mA
I_C(Max.)	Output current	ALL	-100	mA
P_D	Power Dissipation		200	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient Air		625	℃/W
T_j	Junction Temperature		150	℃
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		$V_{I(off)}$	V_{CC}=-5V,I_O=-100μA	-0.5	-1.1	-	V
Input Voltage	DTA114ECA	$V_{I(on)}$	V_O=-0.3V,I_O=-10mA	-	-1.9	-3	
	DTA124ECA		V_O=-0.2V,I_O=-5mA				
	DTA143ECA		V_O=-0.3V,I_O=-20mA				
	DTA144ECA		V_O=-0.3V,I_O=-2mA				
Output Voltage		$V_{O(on)}$	I_o/I_I=-10mA/-0.5mA,	-	-0.1	-0.3	V
Input Current	DTA114ECA	I_I	V_I=-5V	-	-	-0.88	mA
	DTA124ECA					-0.36	
	DTA143ECA					-1.8	
	DTA144ECA					-0.18	
Output Current		$I_{O(off)}$	V_{CC}=-50V,V_I=0V	-	-	-0.5	μA
DC Current Gain	DTA114ECA	G_I	V_O=-5V,I_O=-5mA	30	-	-	
	DTA124ECA		V_O=-5V,I_O=-5mA	56			
	DTA143ECA		V_O=-5V,I_O=-10mA	20			
	DTA144ECA		V_O=-5V,I_O=-5mA	68			
Input Resistor	DTA114ECA	R_1(R_2)		7	10	13	kΩ
	DTA124ECA			15.4	22	28.6	
	DTA143ECA			3.29	4.7	6.11	
	DTA144ECA			32.9	47	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℃ unless otherwise specified

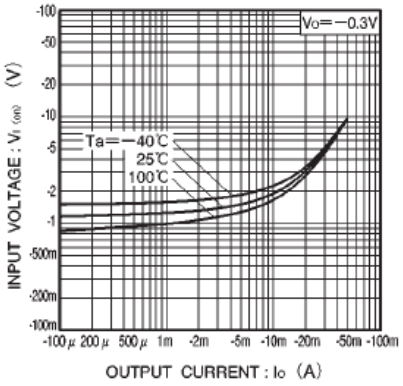


Fig.1 Input voltage vs. output current (ON characteristics)

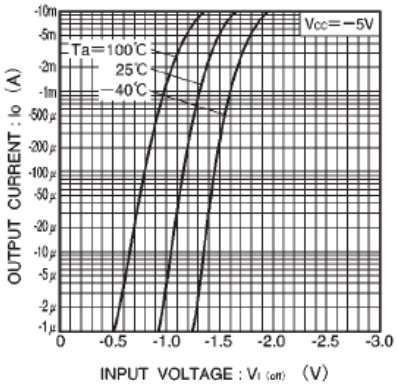


Fig.2 Output current vs. input voltage (OFF characteristics)

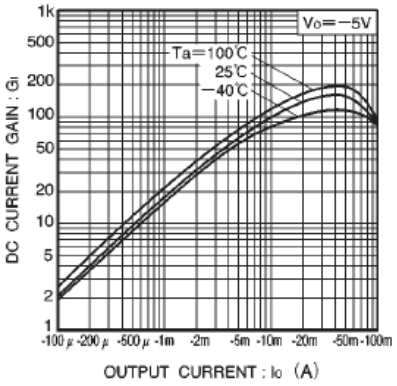
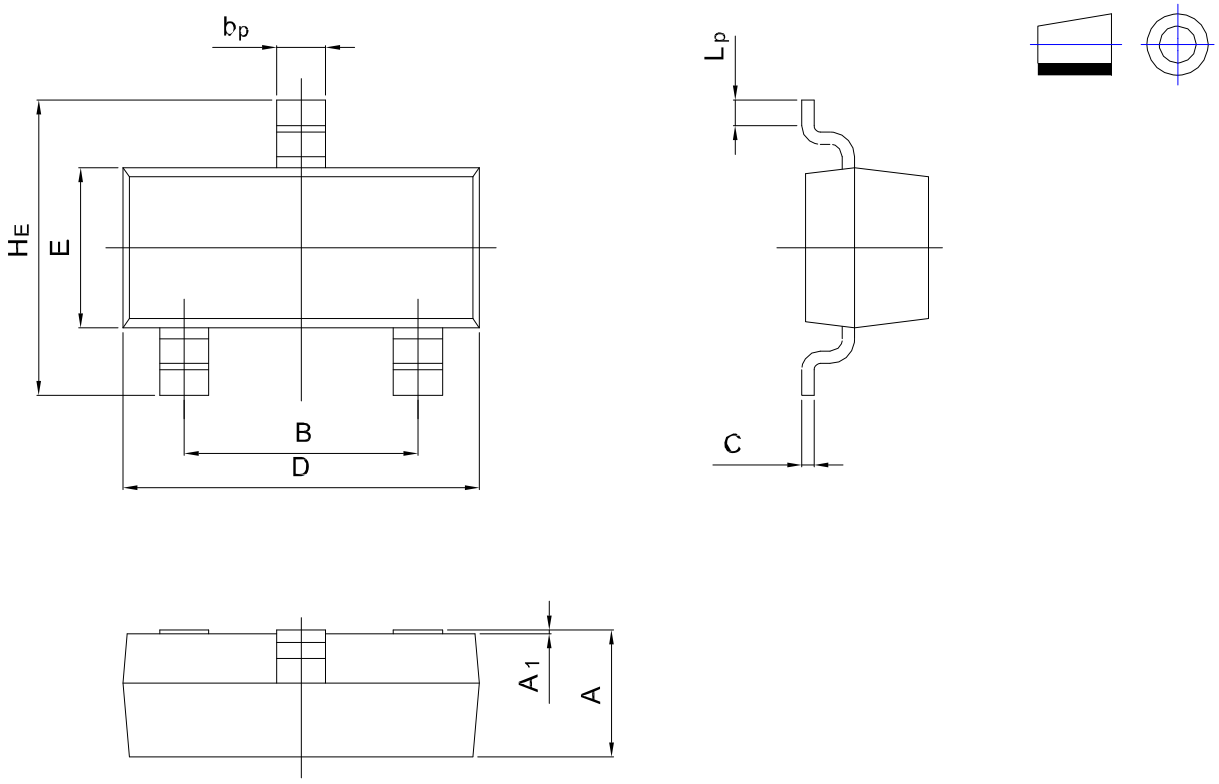


Fig.3 DC current gain vs. output current

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads **SOT-23**



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20

Recommened Mounting Pad Layout Unit:mm

