Digital Transistor

TA(R1=R2 SERIES)CA

FEATURES

Epitaxial planar die construction.

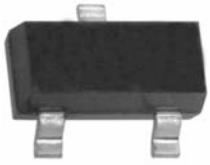
Complementary NPN types available (DTC).

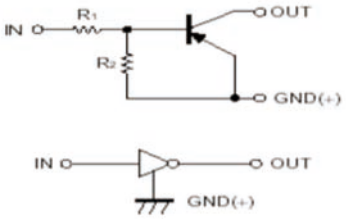
Built-in biasing resistors,R1=R2.

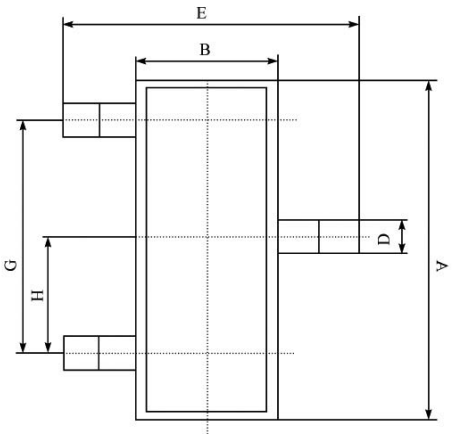
APPLICATIONS

The PNP style digital transistor.

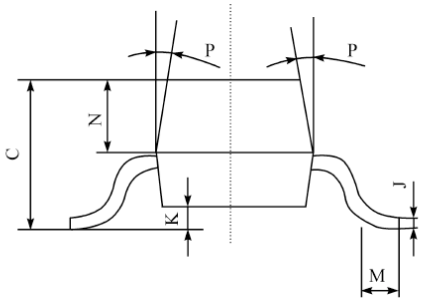
SOT-23







A	2.90±0.10
B	1.30±0.10
C	1.00±0.10
D	0.40±0.10
E	2.40±0.20
G	1.90±0.10
H	0.95±0.05
J	0.13±0.05
K	0.00-0.10
M	≥0.2
N	0.60±0.10
P	7±2°



Dimensions in millimeter

MAXIMUM RATING @ Ta=25℃ unless otherwise specified				
Parameter		**Symbol**	**Value**	**Units**
Supply Voltage		VCC	-50	V
Input Voltage	TA114ECA	VIN	+10 to -40	V
	TA124ECA		+10 to -40	
	TA143ECA		+10 to -30	
	TA144ECA		+10 to -40	
Output Current	TA114ECA	IO	-50	mA
	TA124ECA		-30	
	TA143ECA		-100	
	TA144ECA		-30	
Output current ALL		IC(Max.)	-100	mA
Power Dissipation		PD	200	mW
Thermal Resistance, Junction to Ambient Air		RθJA	625	℃/W
Operating and Storage and Temperature Range		Tj,Tstg	-55 to +150	℃

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified							
Parameter		**Symbol**	**Conditions**	**MIN**	**TYP**	**MAX**	**UNIT**
Input Voltage		VI(off)	IC=100μA,IE=0	-0.5	-1.1	-	V
Input Voltage	TA114ECA	VI(on)	IC=1mA,IB=0	-	-1.9	-3.0	V
	TA124ECA		IE=100μA,IC=0	-	-1.9	-3.0	
	TA143ECA		VCB=60V,IE=0	-	-1.9	-3.0	
	TA144ECA		VEB=5V,IC=0	-	-1.9	-3.0	
Output Voltage		VO(on)	Io/II=-10mA/-0.5mA,	-	-0.1	-0.3	V
Input Current	TA114ECA	II	VI=-5V	-	-	-0.88	mA
	TA124ECA			-	-	-0.36	
	TA143ECA			-	-	-1.8	
	TA144ECA			-	-	-0.18	
Output Current		IO(off)	VCC=-50V,VI=0V	-	-	-0.5	uA
DC Current Gain	TA114ECA	GI	VO=-5V,IO=-5mA	30	-	-	
	TA124ECA		VO=-5V,IO=-5mA	56	-	-	
	TA143ECA		VO=-5V,IO=-10mA	20	-	-	
	TA144ECA		VO=-5V,IO=-5mA	68	-	-	
Input Resistor	TA114ECA	R1(R2)		7	10	13	kΩ
	TA124ECA			15.4	22	28.6	
	TA143ECA			3.29	4.7	6.11	
	TA144ECA			32.9	47	61.1	
Resistance Ratio		R2/R1		0.8	1.0	1.2	
Gain-Bandwidth Product		fT	VCE=-10V,IE=5mA,f=100MHz		250		MHz

Marking	
TA114ECA	14
TA124ECA	15
TA143ECA	13
TA144ECA	16

RATINGS AND CHARACTERISTIC CURVES

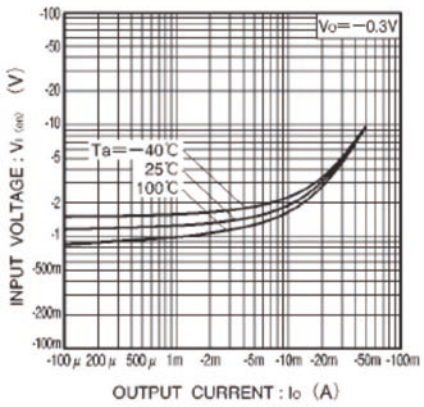


Fig.1 Input voltage vs. output current (ON characteristics)

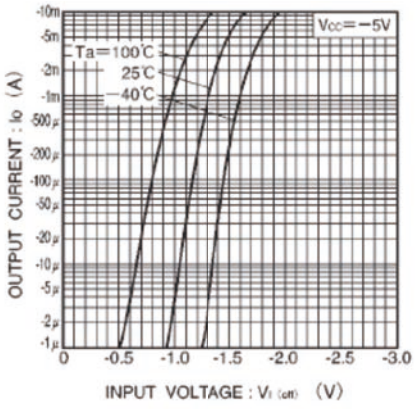


Fig.2 Output current vs. input voltage (OFF characteristics)

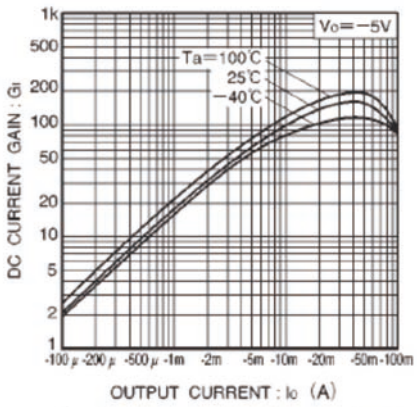


Fig.3 DC current gain vs. output current