TA114ECA-TA144ECA

Digital Transistor

Features

- Epitaxial planar die construction.
- Complementary NPN types available (DTC).
- Built-in biasing resistors,R1=R2.
- RoHS compliant package

Applications

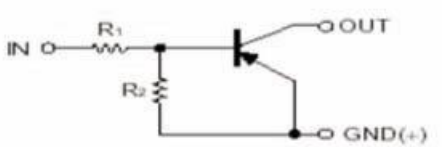
- Case: SOT-23 Molded plastic
- Epoxy: UL94V-O rate flame retardant

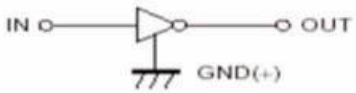
Packing & Order Information

3,000/Reel

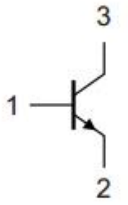


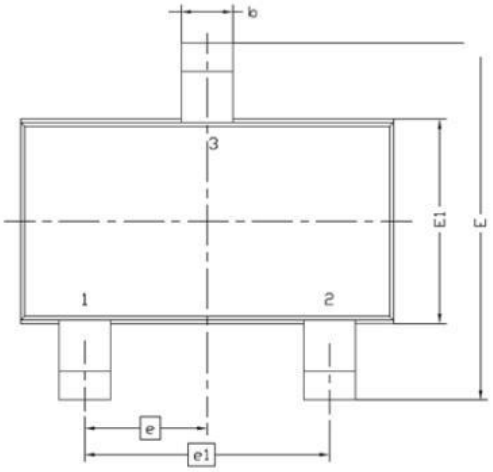
RoHS
COMPLIANT

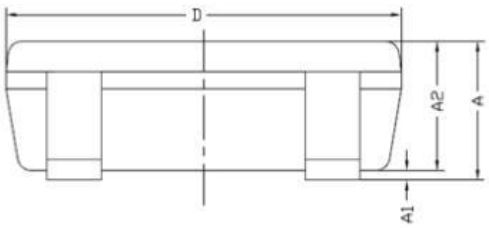


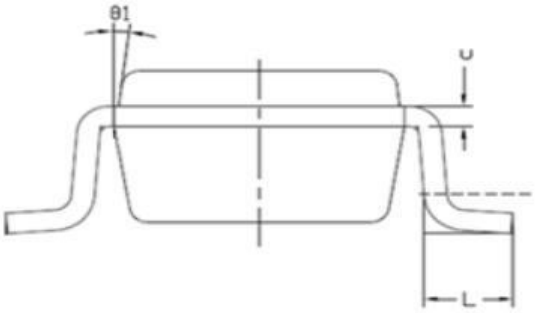


Graphic symbol









Symbol	MILLIMETERS	
	MIN	MAX
A	0.8	1.2
A1	0	0.1
A2	0.7	1.1
b	0.3	0.5
c	0.1	0.2
D	2.7	3.1
E	2.6	3
E1	1.4	1.8
e	0.95 BSC	
e1	1.9 BSC	
L	0.3	0.6
θ1	7° NOM	

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TA114ECA-TA144ECA

Digital Transistor

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum Ratings (Tc=25°C unless otherwise noted)

Symbol	Parameter		Value	Unit
VCC	Supply Voltage		-50	V
VIN	TA114ECA	TA114ECA	+10 to -40	V
	TA124ECA	TA124ECA	+10 to -40	
	TA143ECA	TA143ECA	+10 to -30	
	TA144ECA	TA144ECA	+10 to -40	
IO	TA114ECA	TA114ECA	-50	mA
	TA124ECA	TA124ECA	-30	
	TA143ECA	TA143ECA	-100	
	TA144ECA	TA144ECA	-30	
IC(Max.)	Output current ALL		-100	mA
PD	Power Dissipation		200	mW
RθJA	Thermal Resistance, Junction to Ambient Air		625	°C/W
Tj,Tstg	Operating and Storage and Temperature Range		-55 to +150	°C

Electrical characteristics (Tc=25°C unless otherwise noted)

Symbol	Parameter		Conditions	MIN	TYP	MAX	UNIT
VI(off)	Input Voltage		IC=100μA,IE=0	-0.5	-1.1		V
VI(on)	Input Voltage	TA114ECA	IC=1mA,IB=0		-1.9	-3.0	V
		TA124ECA	IE=100μA,IC=0		-1.9	-3.0	V
		TA143ECA	VCB=60V,IE=0		-1.9	-3.0	V
		TA144ECA	VEB=5V,IC=0		-1.9	-3.0	V
VO(on)	Output Voltage		Io/II=-10mA/-0.5mA		-0.1	-0.3	V
II	Input Current	TA114ECA	VI=-5V			-0.88	mA
		TA124ECA				-0.36	mA
		TA143ECA				-1.8	mA
		TA144ECA				-0.18	mA
IO(off)	Output Current		VCC=-50V,VI=0V			-0.5	uA
GI	DC Current Gain	TA114ECA	VO=-5V,IO=-5mA	30			
		TA124ECA	VO=-5V,IO=-5mA	56			
		TA143ECA	VO=-5V,IO=-10mA	20			
		TA144ECA	VO=-5V,IO=-5mA	68			

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TA114ECA-TA144ECA

Digital Transistor

Electrical characteristics (Tc=25°C unless otherwise noted)							
Symbol	**Parameter**		**Conditions**	**MIN**	**TYP**	**MAX**	**UNIT**
RI(R2)	Input Resistor	TA114ECA		7	10	13	kΩ
		TA124ECA		15.4	22	28.6	
		TA143ECA		3.29	4.7	6.11	
		TA144ECA		32.9	47	61.1	
R2/R1	Resistance Ratio			0.8	1.0	1.2	
fT	Gain-Bandwidth Product		VCE=-10V,IE=5mA,f=100MHz		250		MHz

DEVICE MARK	
TA114ECA	14
TA124ECA	15
TA143ECA	13
TA144ECA	16

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■RATINGS AND CHARACTERISTIC CURVES

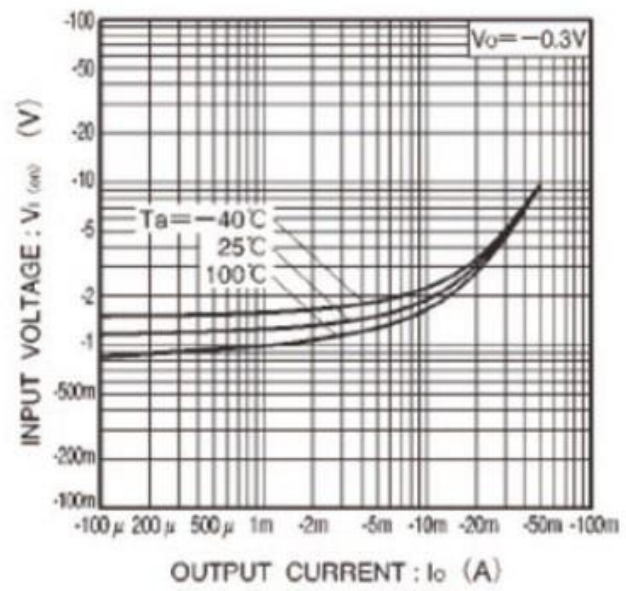


Fig.1 Input voltage vs. output current (ON characteristics)

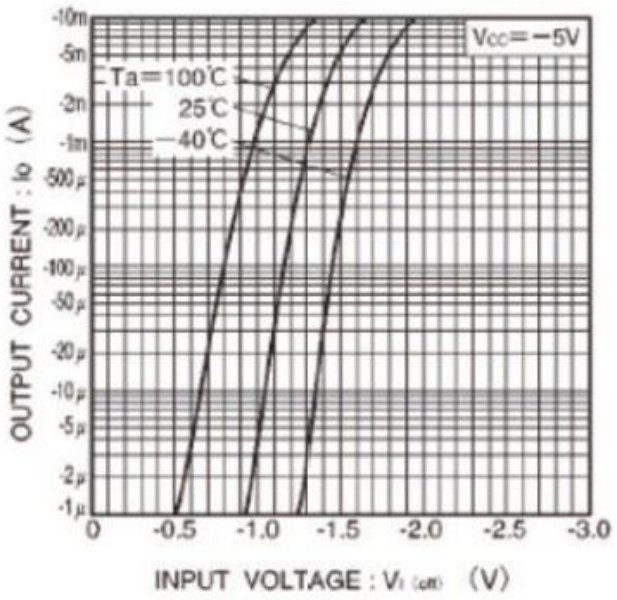


Fig.2 Output current vs. input voltage (OFF characteristics)

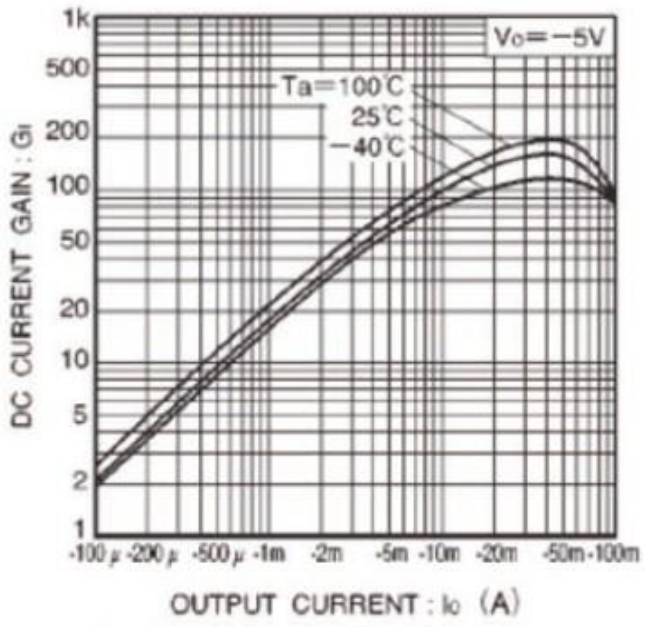


Fig.3 DC current gain vs. output current

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TA114ECA-TA144ECA

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