

## DTAXXXCA\_R1\_R2

### Digital Transistor

#### Features

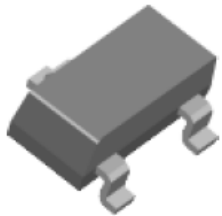
- Epitaxial planar die construction.
- Complementary NPN types available(DTC).
- Built-in biasing resistors,  $R_1 \neq R_2$
- Also available in lead free version.
- RoHS compliant package

#### Applications

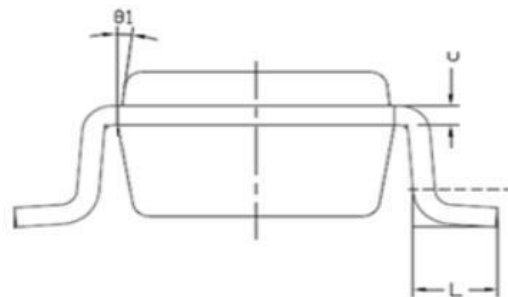
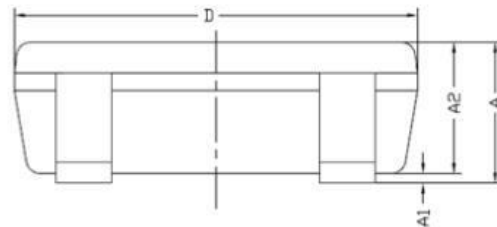
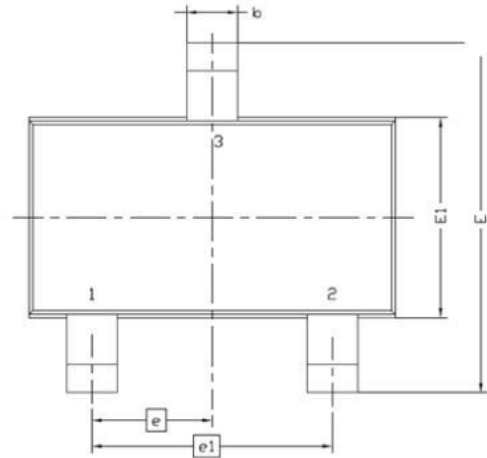
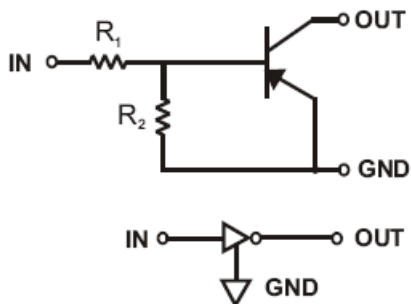
- The PNP style digital transistor.

#### Packing & Order Information

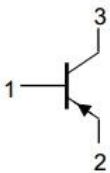
3,000/Reel



**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
$\theta_1$	7° NOM	

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### ORDERING INFORMATION

Type No.	Marking	Package Code
DTA113ZCA	E11	SOT-23
DTA114WCA	74	SOT-23
DTA114YCA	54	SOT-23
DTA123JCA	E32	SOT-23
DTA123YCA	52	SOT-23
DTA143XCA	33	SOT-23
DTA143ZCA	E13	SOT-23

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

#### MAXIMUM RATINGS (Ta=25°C, unless otherwise specified)

Symbol	Parameter	Ratings	Unit
V <sub>CC</sub>	Supply Voltage	-50	V
V <sub>IN</sub>	Input Voltage DTA113ZCA	+5 to -10	V
	DTA114WCA	+10 to -30	
	DTA114YCA	+6 to -40	
	DTA123JCA	+5 to -12	
	DTA123YCA	+5 to -12	
	DTA143XCA	+7 to -20	
	DTA143ZCA	+5 to 30	
I <sub>o</sub>	Output Current DTA113ZCA	-100	V
	DTA114WCA	-100	
	DTA114YCA	-70	
	DTA123JCA	-100	
	DTA123YCA	-100	
	DTA143XCA	-100	
	DTA143ZCA	-100	
I <sub>C(Max.)</sub>	Output current ALL	-100	mA
P <sub>D</sub>	Power Dissipation	200	mW

#### MAXIMUM RATINGS (Ta=25°C, unless otherwise specified)

Symbol	Parameter	Value	Unit
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient Air	625	°C/W
T <sub>j</sub> , T <sub>stg</sub>	Operating and Storage and Temperature Range	-55 to +150	°C

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### ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Conditions	Min	Tpy	Max.	Units
Input Voltage DTA113ZCA DTA114WCA DTA114YCA DTA123JCA DTA123YCA DTA143XCA DTA143ZCA	VI(off)	VCC=-5V, IO=-100μA	-0.3 -0.8 -0.3 -0.5 -0.3 -0.3 -0.5			
Input Voltage DTA113ZCA DTA114WCA DTA114YCA DTA123JCA DTA123YCA DTA143XCA DTA143ZCA	VI(on)	VO=-0.3V, IO=-20mA VO=-0.3V, IO=-2mA VO=-0.3V, IO=-1mA VO=-0.3V, IO=-5mA VO=-0.3V, IO=-20mA VO=-0.3V, IO=-20mA VO=-0.3V, IO=-5mA			-3.0 -3.0 -1.4 -1.1 -3.0 -2.5 -1.3	
Output Voltage DTA123JCA DTA143ZCA DTA114YCA ALL Others	VO(on)	Io/Ii=-5mA/-0.25mA Io/Ii=-10mA/-0.5mA		-0.1	-0.3	V
Input Current DTA113ZCA DTA114WCA DTA114YCA DTA123JCA DTA123YCA DTA143XCA DTA143ZCA	I <sub>i</sub>	VI=-5V			-7.2 -0.88 -0.88 -3.6 -3.8 -1.8 -1.8	
Output Current	IO(off)	VCC=-50V, VI=0V			-0.5	
DC Current Gain DTA113ZCA DTA114WCA DTA114YCA DTA123JCA DTA123YCA DTA143XCA DTA143ZCA	GI	VO=-5V, IO=-10mA	33 24 68 80 33 30 80			

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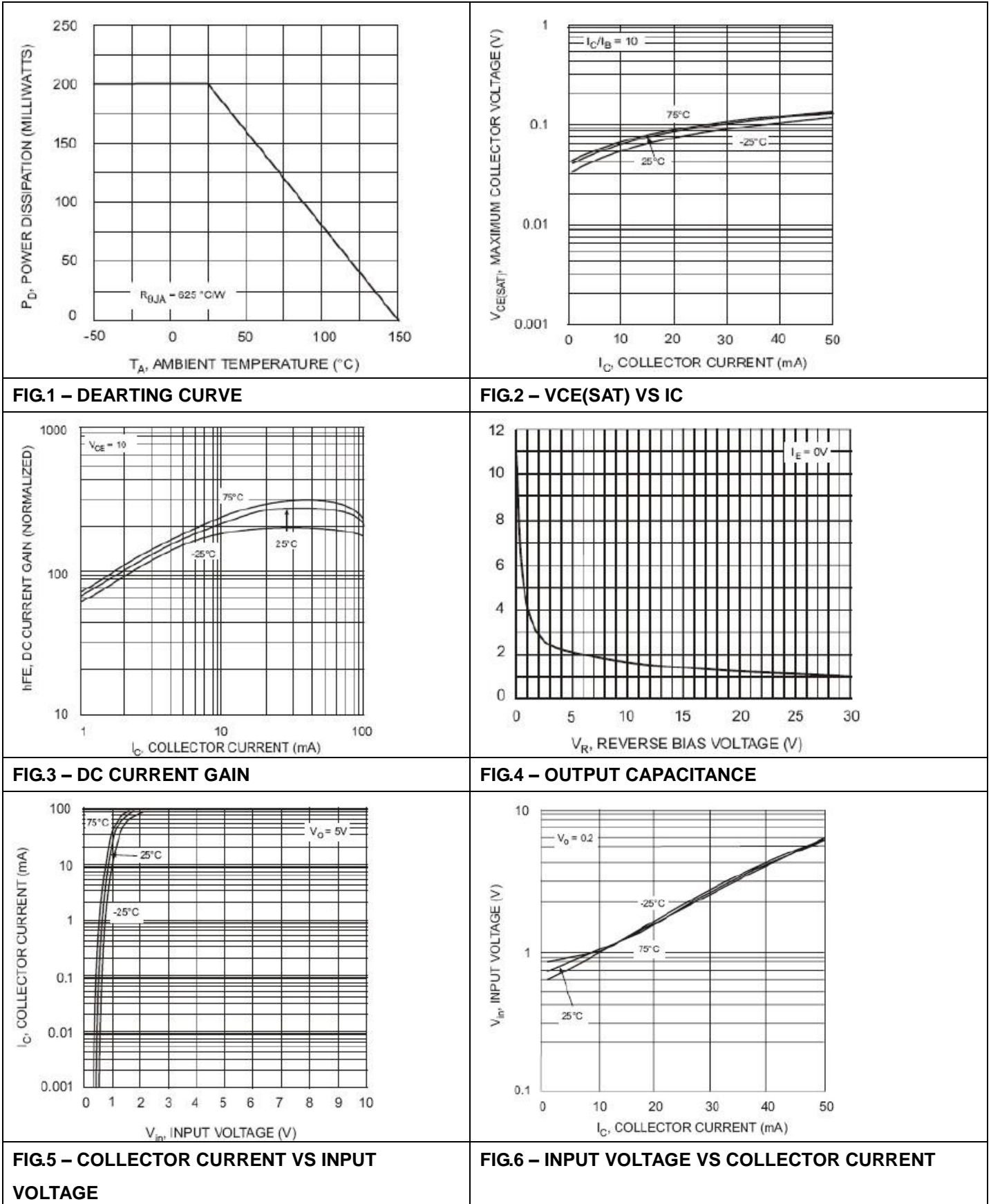
### ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Conditions	Min	Tpy	Max.	Units
Input Resistor DTA113ZCA	R1(R2)		0.7	1(10)	1.3	kΩ
DTA114WCA			7	10(4.7)	13	
DTA114YCA			7	10(47)	13	
DTA123JCA			1.54	2.2(47)	2.86	
DTA123YCA			1.54	2.2(10)	2.86	
DTA143XCA			3.29	4.7(10)	6.11	
DTA143ZCA			3.29	4.7(47)	6.11	
Input Resistor (R1) Tolerance	ΔR1		-30		30	%
Resistance Ratio Tolerance	ΔR2/R1		-20		20	%
Gain-Bandwidth Product	fT	VCE=-10V,IE=5mA, f=100MHz		250		MHz

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■ TYPICAL CHARACTERISTICS @  $T_a=25^\circ\text{C}$  unless otherwise specified



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#### **Disclaimer**

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE

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