

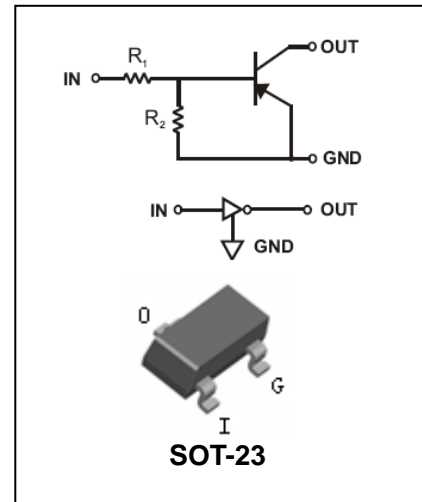
Digital Transistor

DTA(R₁≠R₂ SERIES)CA

FEATURES

- Epitaxial planar die construction
- Complementary NPN types available(DTC)
- Built-in biasing resistors, R₁≠R₂
- Also available in lead free version

HF



APPLICATIONS

- The PNP style digital transistor

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 RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
V _{CC}	Supply Voltage	-50	V
V _{IN}	Input Voltage	DTA113ZCA	+5 to -10
		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 _o	Output Current	DTA113ZCA	-100
		DTA114WCA	-100
		DTA114YCA	-70
		DTA123JCA	-100
		DTA123YCA	-100
		DTA143XCA	-100
		DTA143ZCA	-100
Symbol	Parameter	Value	Units
I _c (Max.)	Output current	ALL	-100
			mA

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P _D	Power Dissipation	200	mW
R _{θJA}	Thermal Resistance, Junction to Ambient Air	625	°C/W
T _j , T _{stg}	Operating and Storage and Temperature Range	-55 to +150	°C

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

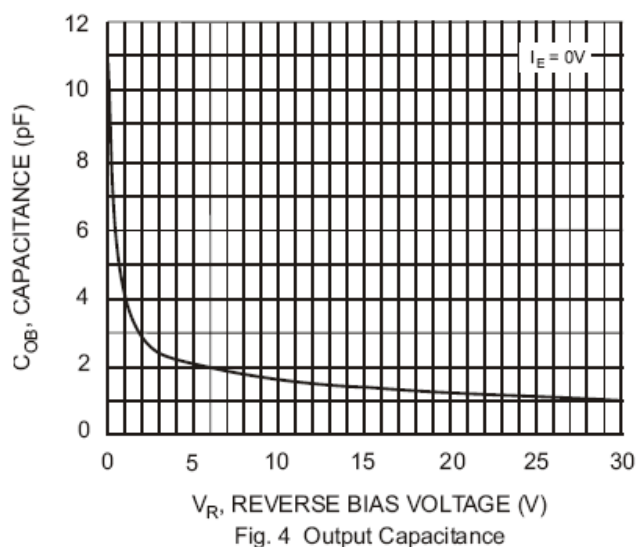
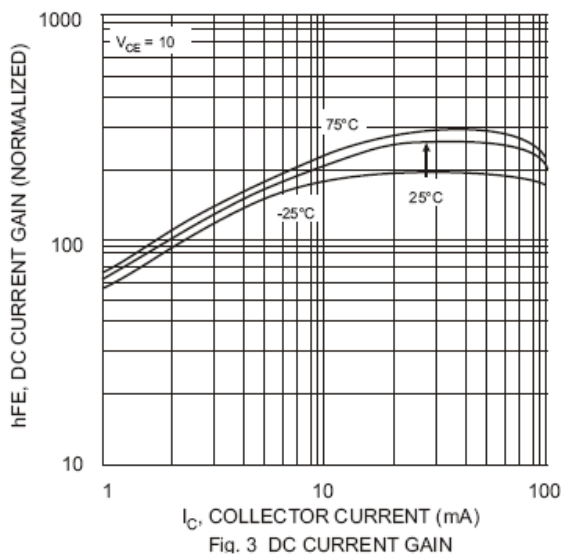
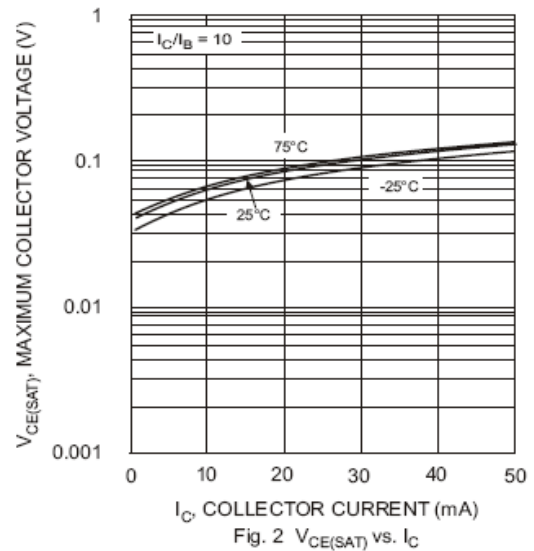
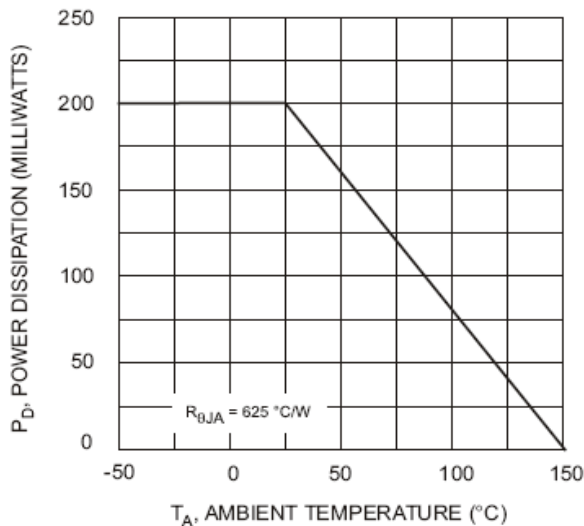
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Input Voltage	DTA113ZCA	V _{CC} =-5V, I _o =-100μA	-0.3			V
	DTA114WCA		-0.8			
	DTA114YCA		-0.3			
	DTA123JCA		-0.5	-	-	
	DTA123YCA		-0.3			
	DTA143XCA		-0.3			
	DTA143ZCA		-0.5			
Input Voltage	DTA113ZCA	V _O =-0.3V, I _o =-20mA			-3.0	V
	DTA114WCA	V _O =-0.3V, I _o =-2mA			-3.0	
	DTA114YCA	V _O =-0.3V, I _o =-1mA			-1.4	
	DTA123JCA	V _O =-0.3V, I _o =-5mA	-	-	-1.1	
	DTA123YCA	V _O =-0.3V, I _o =-20mA			-3.0	
	DTA143XCA	V _O =-0.3V, I _o =-20mA			-2.5	
	DTA143ZCA	V _O =-0.3V, I _o =-5mA			-1.3	
Output Voltage	DTA123JCA	I _o /I _i =-5mA/-0.25mA				V
	DTA143ZCA					
	DTA114YCA			-0.1	-0.3	
	ALL Others	I _o /I _i =-10mA/-0.5mA				
Input Current	DTA113ZCA	V _I =-5V			-7.2	mA
	DTA114WCA				-0.88	
	DTA114YCA				-0.88	
	DTA123JCA				-3.6	
	DTA123YCA				-3.8	
	DTA143XCA				-1.8	
	DTA143ZCA				-1.8	
Output Current	I _{o(off)}	V _{CC} =-50V, V _I =0V	-	-	-0.5	μA
DC Current Gain	DTA113ZCA	V _O =-5V, I _o =-10mA	33			
	DTA114WCA		24			
	DTA114YCA		68			
	DTA123JCA		80	-	-	
	DTA123YCA		33			
	DTA143XCA		30			
	DTA143ZCA		80			

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Input Resistor	DTA113ZCA DTA114WCA DTA114YCA DTA123JCA DTA123YCA DTA143XCA DTA143ZCA	R ₁ (R ₂)		0.7 7 7 1.54 1.54 3.29 3.29	1(10) 10(4.7) 10(47) 2.2(47) 2.2(10) 4.7(10) 4.7(47)	1.3 13 13 2.86 2.86 6.11 6.11	kΩ
Input Resistor (R ₁) Tolerance		ΔR ₁	-	-30		+30	%
Resistance Ratio Tolerance		ΔR ₂ /R ₁	-	-20		+20	%
Gain-Bandwidth Product		f _T	V _{CE} =-10V, I _E =5mA, f=100MHz	-	250	-	MHz

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



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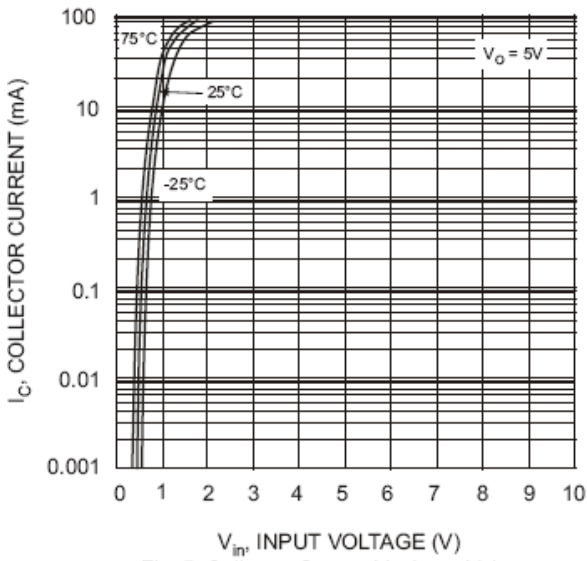


Fig. 5 Collector Current Vs. Input Voltage

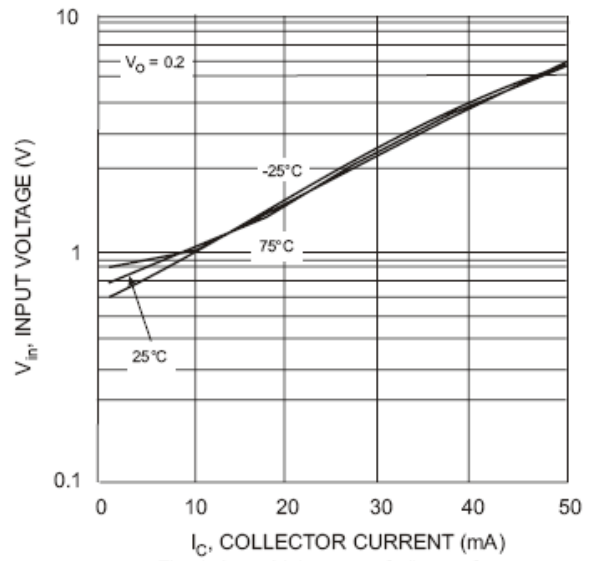


Fig. 6 Input Voltage vs. Collector Current

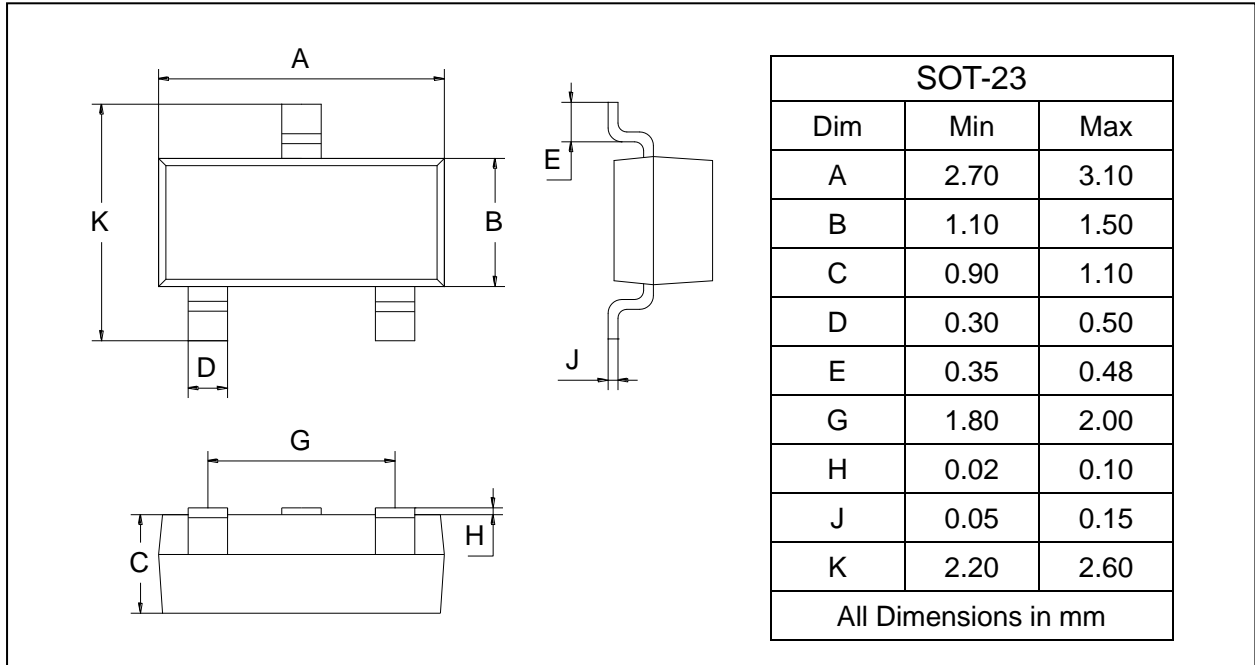
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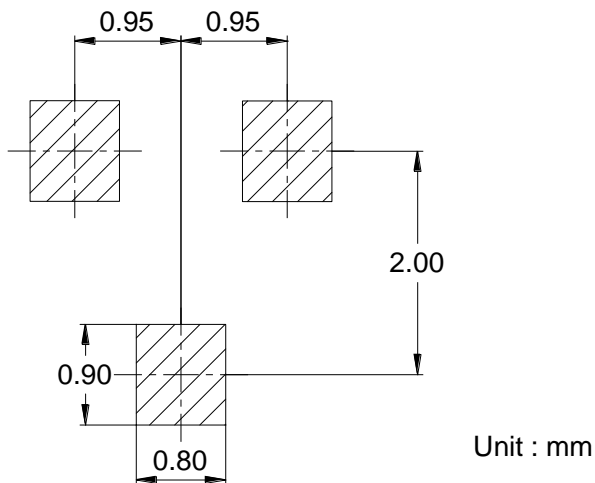
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
DTAXXXCA	SOT-23	3000 pcs / Tape & Reel