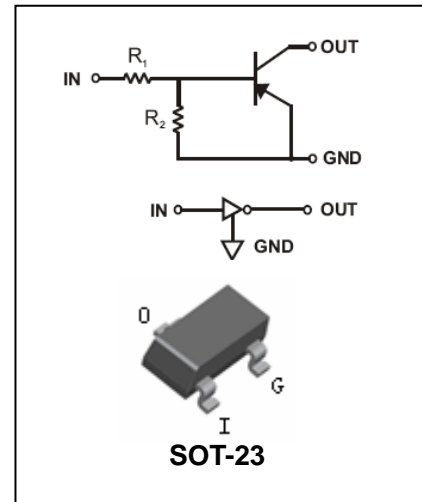


Digital Transistor

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.



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	V
I _O	Output Current	DTA113ZCA: -100 DTA114WCA: -100 DTA114YCA: -70 DTA123JCA: -100 DTA123YCA: -100 DTA143XCA: -100 DTA143ZCA: -100	mA
I _C (Max.)	Output current	ALL: -100	mA
P _D	Power Dissipation	200	mW

Digital Transistor

DTA(R₁≠R₂ SERIES)CA

Symbol	Parameter	Value	Units
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

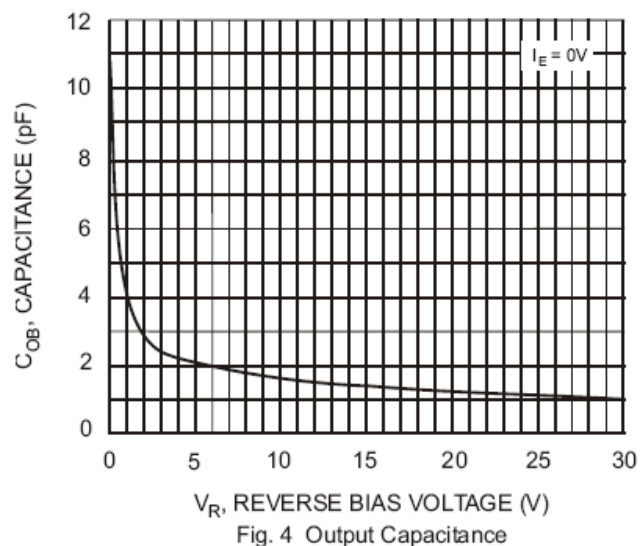
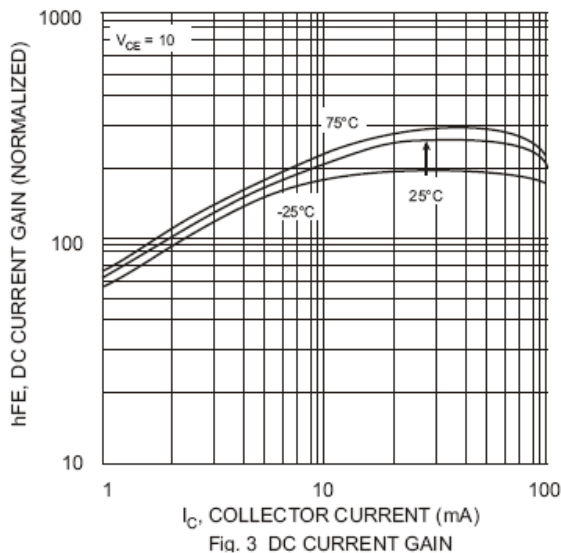
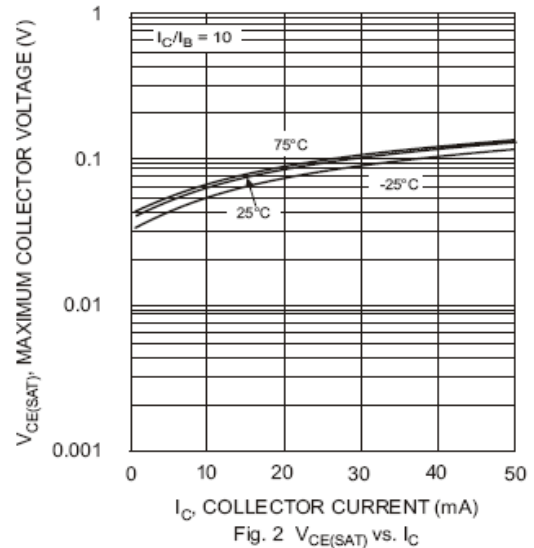
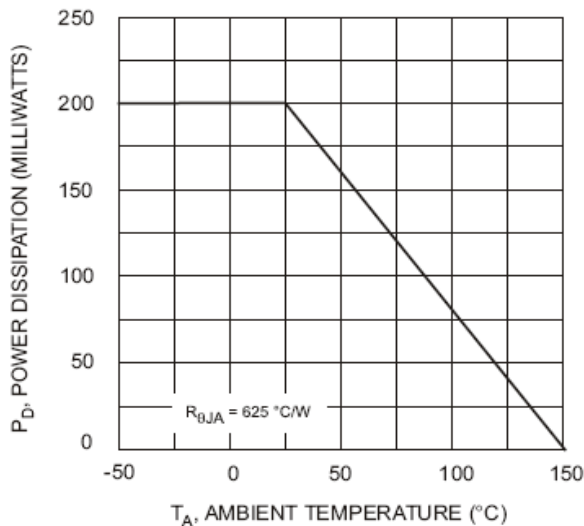
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Input Voltage	DTA113ZCA DTA114WCA DTA114YCA DTA123JCA DTA123YCA DTA143XCA DTA143ZCA	V _{I(off)} V _{CC} =-5V, I _O =-100μA	-0.3 -0.8 -0.3 -0.5 -0.3 -0.3 -0.5	-	-	V
Input Voltage	DTA113ZCA DTA114WCA DTA114YCA DTA123JCA DTA123YCA DTA143XCA DTA143ZCA	V _{I(on)}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

Digital Transistor

DTA(R₁≠R₂ SERIES)CA

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Input Resistor DTA113ZCA DTA114WCA DTA114YCA DTA123JCA DTA123YCA DTA143XCA DTA143ZCA	R ₁ (R ₂)			1(10) 10(4.7) 10(47) 2.2(47) 2.2(10) 4.7(10) 4.7(47)		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



Digital Transistor

DTA(R₁≠R₂ SERIES)CA

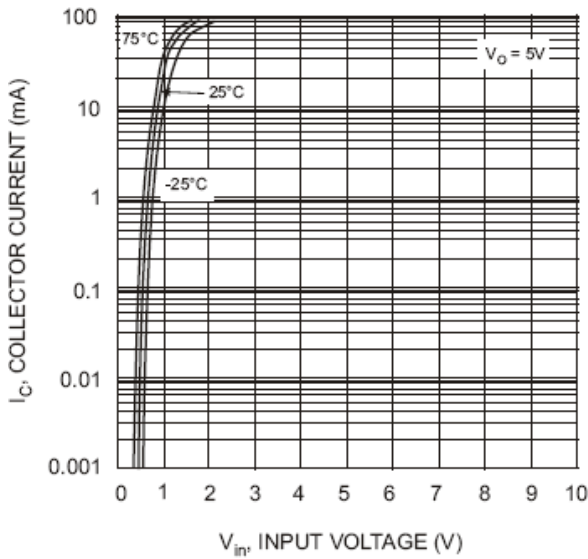


Fig. 5 Collector Current Vs. Input Voltage

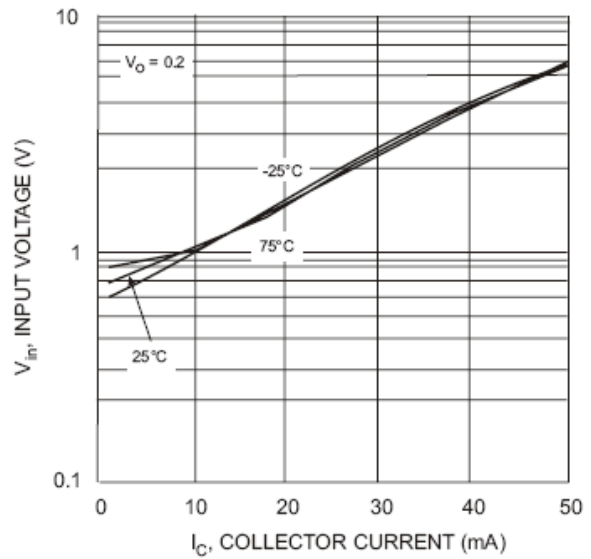
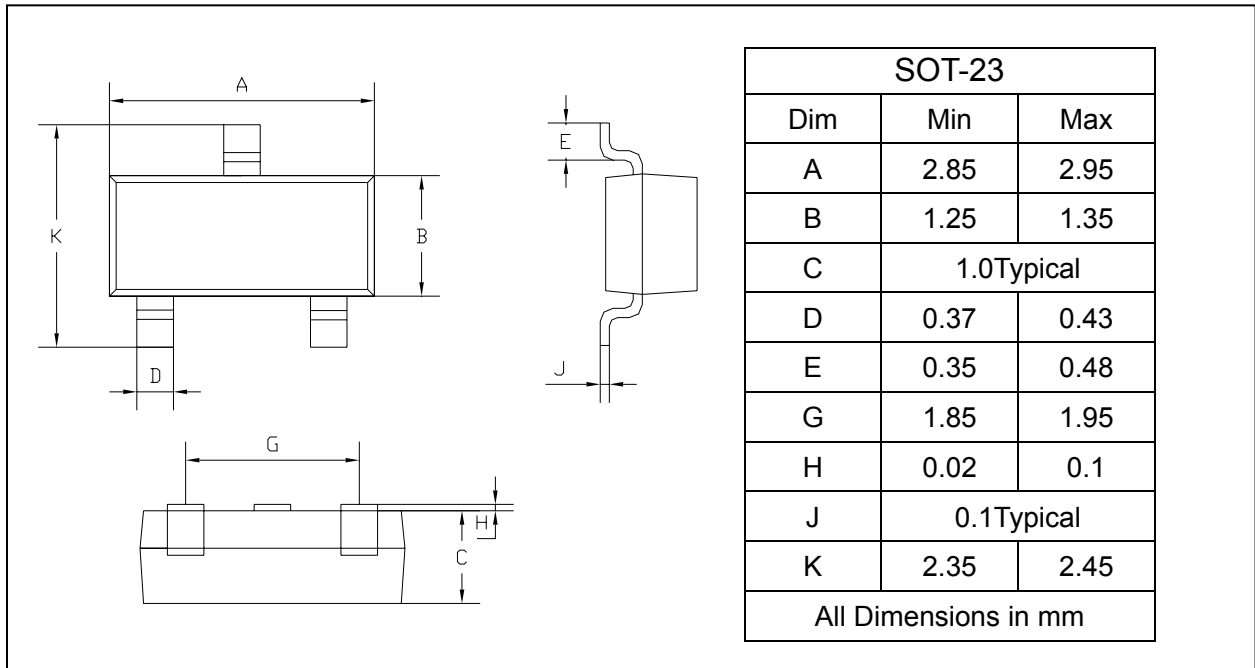


Fig. 6 Input Voltage vs. Collector Current

PACKAGE OUTLINE

Plastic surface mounted package

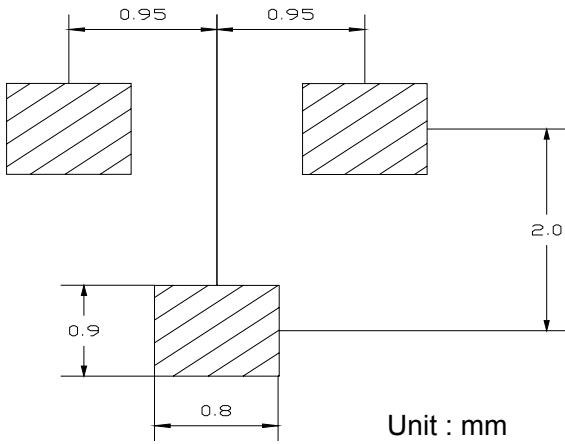
SOT-23



Digital Transistor

DTA(R₁≠R₂ SERIES)CA

SOLDERING FOOTPRINT



PACKAGE INFORMATION

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