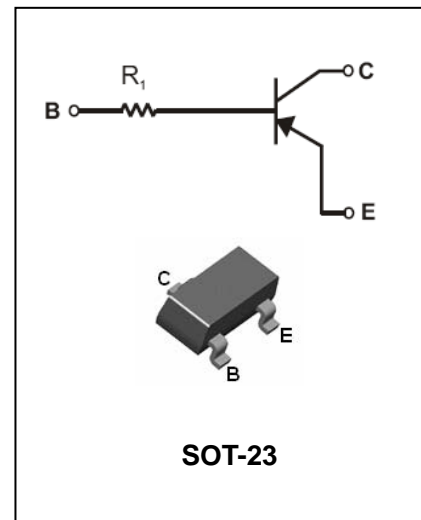


Digital Transistor

DTA(R₁-only SERIES)CA

FEATURES

- Epitaxial planar die construction.
- Complementary NPN types available(DTC).
- Built-in biasing resistor,R₁ only.
- Also available in lead free version.



APPLICATIONS

- The PNP style digital transistor.

ORDERING INFORMATION

Type No.	Marking	Package Code
DTA143TCA	93	SOT-23
DTA114TCA	94	SOT-23
DTA144TCA	96	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
V _{CBO}	Collector-Base Voltage	-50	V
V _{CEO}	Collector-Emitter Voltage	-50	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _{C(Max.)}	Collector Current	-100	mA
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

Digital Transistor

DTA(R₁-only SERIES)CA

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-Base breakdown Voltage	BV_{CBO}	$I_C = -50\mu A$	-50			V
Collector-Emitter breakdown Voltage	BV_{CEO}	$I_C = -1mA$	-50			V
Emitter-Base breakdown Voltage	BV_{EBO}	$I_E = -50\mu A$	-5			V
Collector cutoff Current	I_{CBO}	$V_{CB} = -50V$	-	-	-0.5	μA
Emitter cutoff Current	I_{EBO}	$V_{EB} = -4V$	-	-	-0.5	μA
Collector-Emitter saturation voltage DTA143TCA DTA114TCA DTA144TCA	$V_{CE(sat)}$	$I_C/I_B = -2.5mA/-0.25mA$ $I_C/I_B = -1mA/-0.1mA$ $I_C/I_B = -2.5mA/-0.25mA$			-0.3	V
DC Current Gain	h_{FE}	$I_C = -1mA, V_{CE} = -5V$	100	250	600	
Input Resistor(R ₁) DTA143TCA DTA114TCA DTA144TCA	R_1			4.7 10 47		K Ω
Input Resistor(R ₁)Tolerance	ΔR_1		-30		+30	%
Gain-Bandwidth Product	f_T	$V_{CE} = -10V, I_E = -5mA,$ $f = 100MHz$	-	250	-	MHz

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

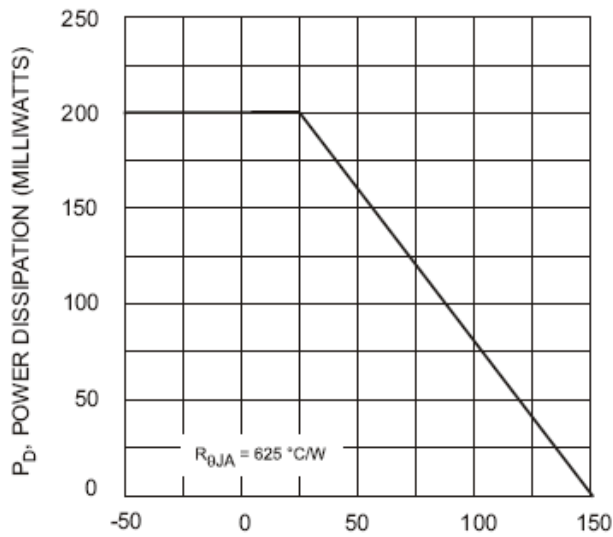


Fig. 1 Derating Curve

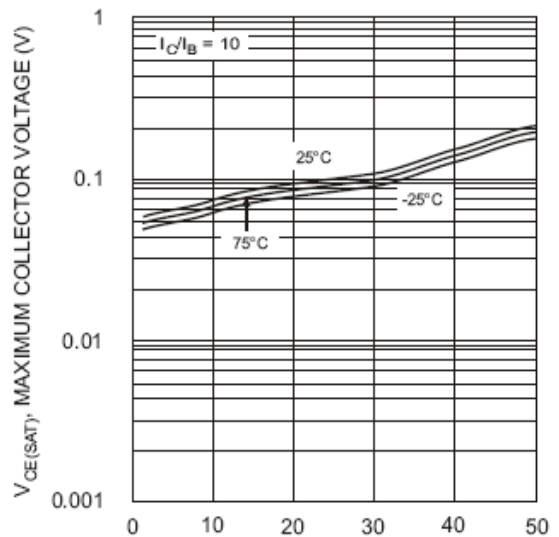
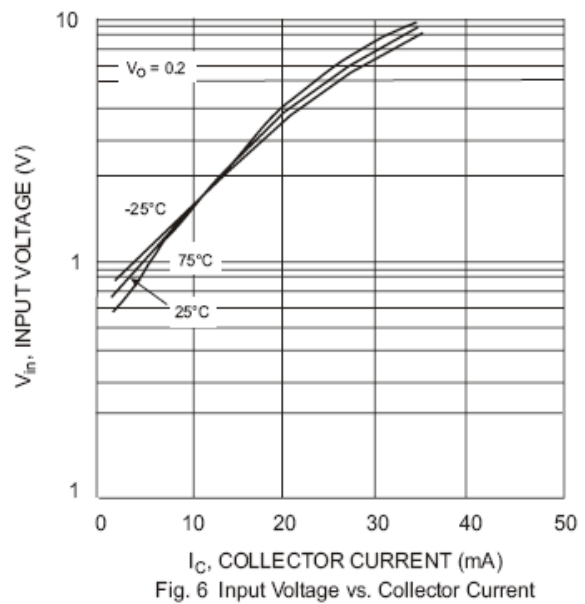
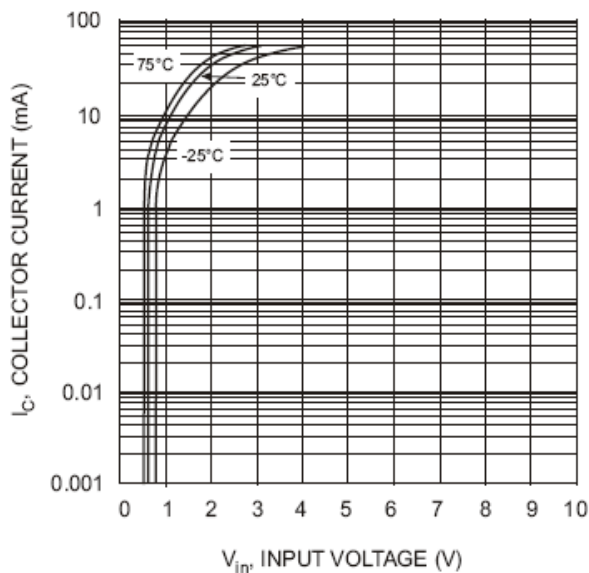
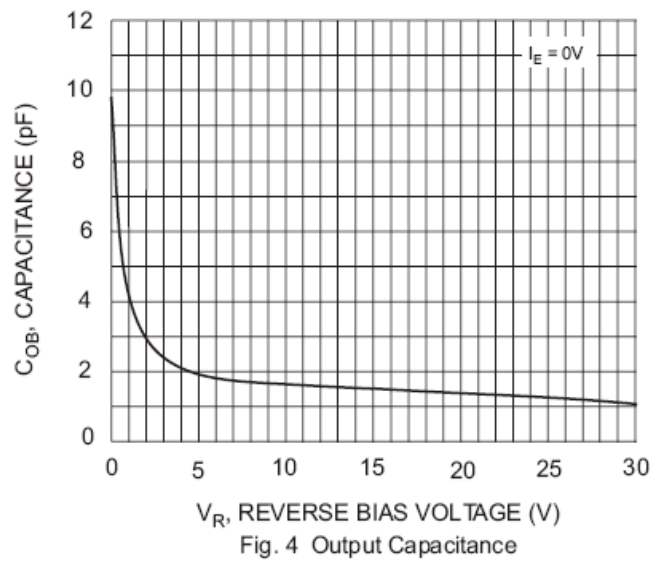
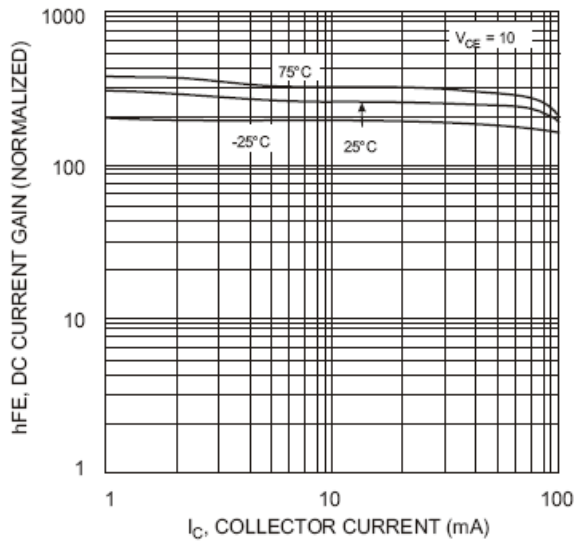


Fig. 2 $V_{CE(sat)}$ vs. I_C

Digital Transistor

DTA(R₁-only SERIES)CA



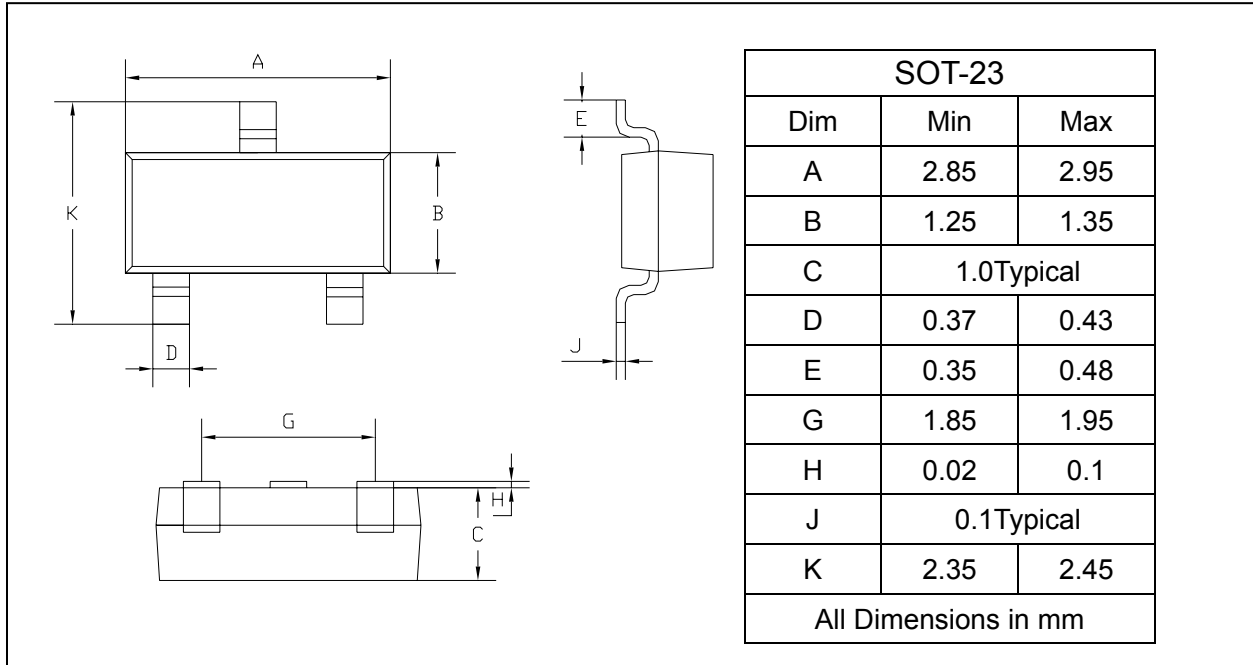
Digital Transistor

DTA(R₁-only SERIES)CA

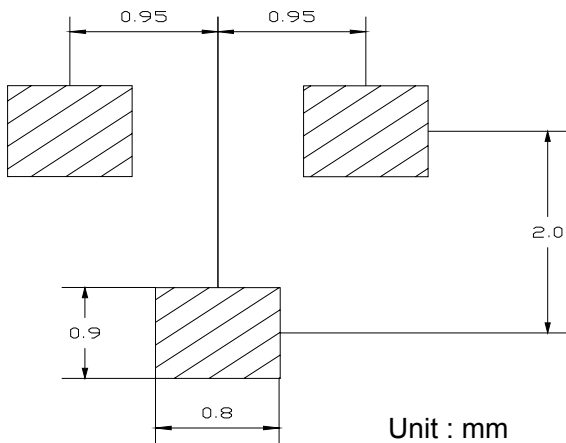
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
DTA143TCA/114TCA/144TCA	SOT-23	3000/Tape&Reel