

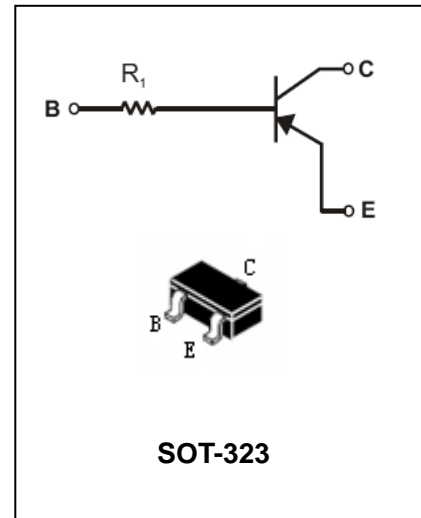


FEATURES

- Epitaxial planar die construction
- Complementary NPN types available(DTC)
- Built-in biasing resistor, R₁ only

APPLICATIONS

- The PNP style digital transistor



ORDERING INFORMATION

Type No.	Marking	Package Code
DTA114TUA	94	SOT-323
DTA143TUA	93	SOT-323
DTA144TUA	96	SOT-323

MAXIMUM RATING @ T_A = 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 @ T_A = 25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-Base breakdown Voltage	BV _{CBO}	I _C =-50μA	-50			V
Collector-Emitter breakdown Voltage	BV _{CEO}	I _C =-1mA	-50			V
Emitter-Base breakdown Voltage	BV _{EBO}	I _E =-50μA	-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 DTA114TUA DTA143TUA DTA144TUA	V _{CE(sat)}	I _C /I _B =-1mA/-0.1mA I _C /I _B =-2.5mA/-0.25mA 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) DTA114TUA DTA143TUA DTA144TUA	R ₁		7 3.19 31.9	10 4.7 47	13 6.11 61.1	KΩ
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

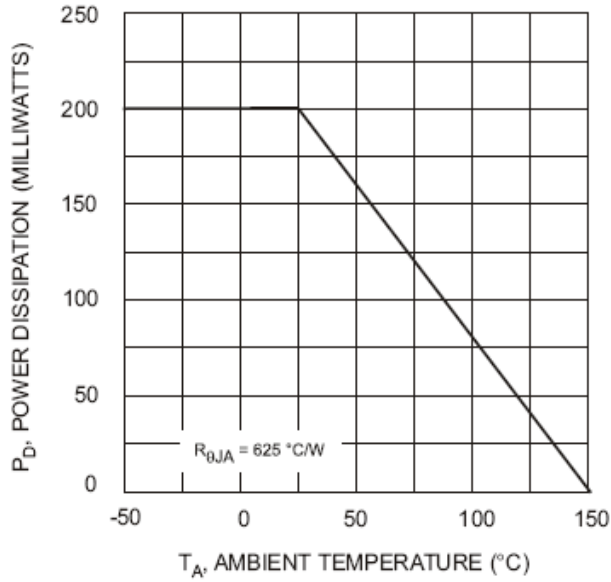


Fig. 1 Derating Curve

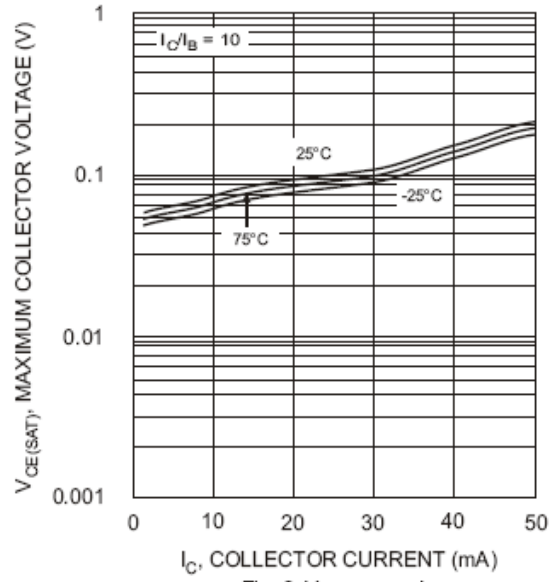


Fig. 2 V_{CE(SAT)} vs. I_C

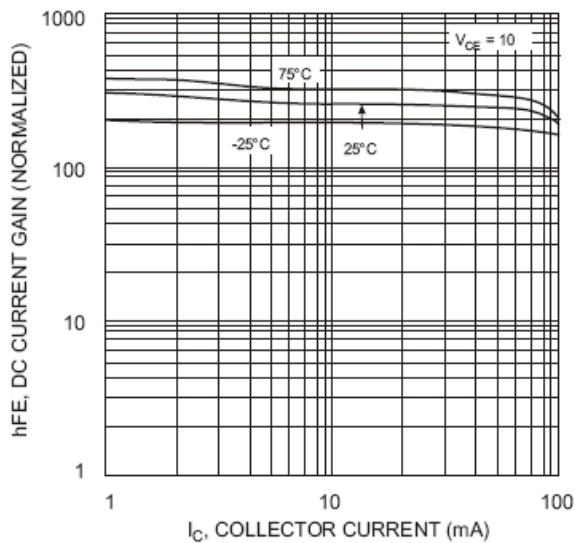


Fig. 3 DC Current Gain

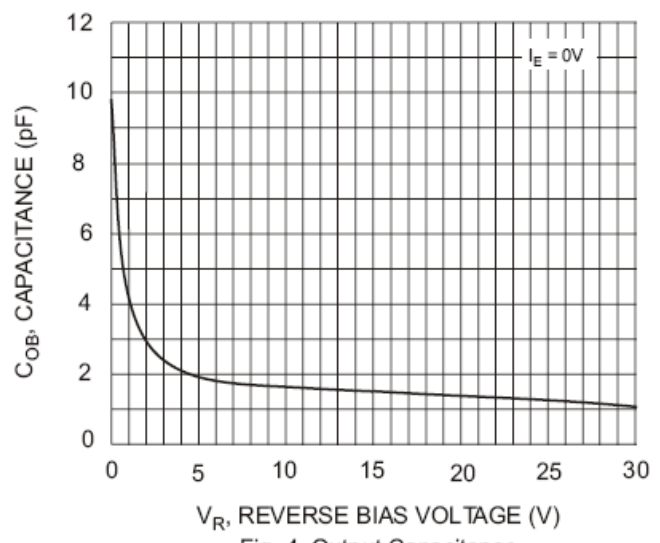


Fig. 4 Output Capacitance

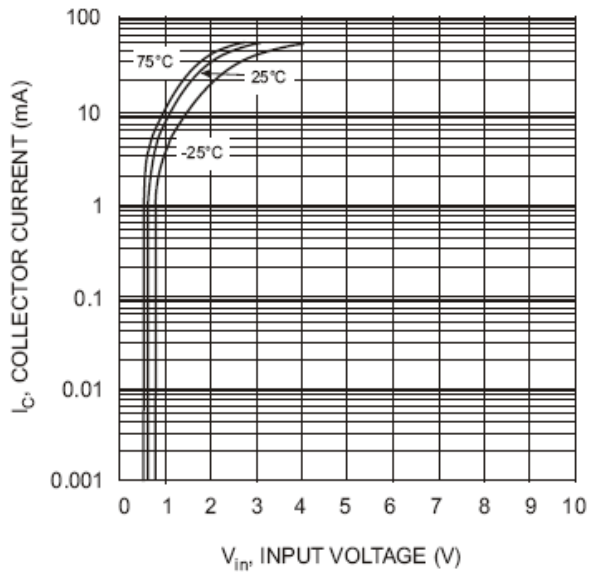


Fig. 5 Collector Current Vs. Input Voltage

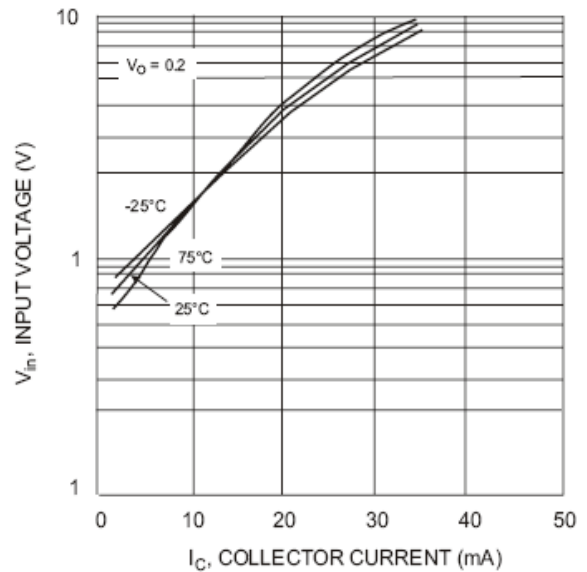


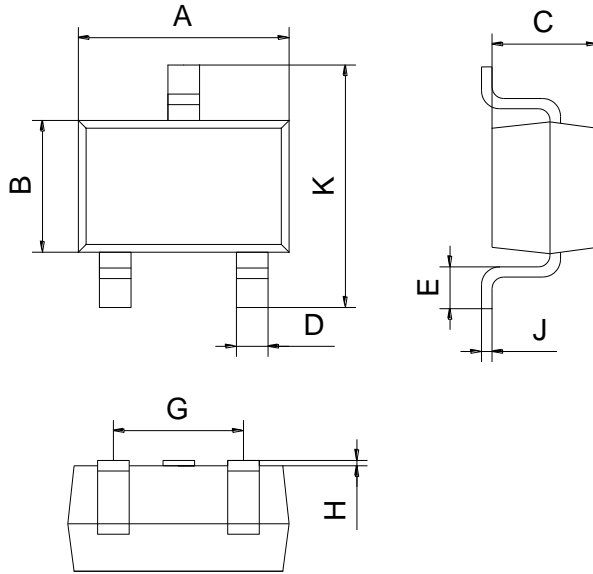
Fig. 6 Input Voltage vs. Collector Current



PACKAGE OUTLINE

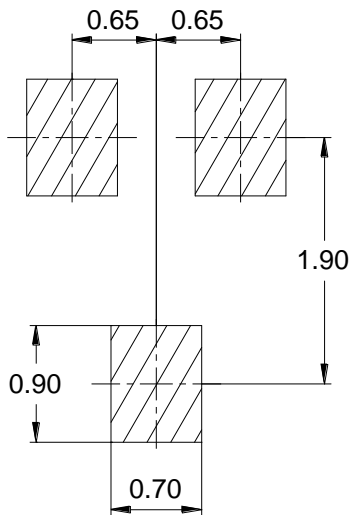
Plastic surface mounted package

SOT-323



SOT-323		
Dim	Min	Max
A	2.00	2.20
B	1.15	1.35
C	0.90	1.10
D	0.15	0.35
E	0.25	0.40
G	1.20	1.40
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit: mm

PACKAGE INFORMATION

Device	Package	Shipping
DTA114TUA/143TUA/144TUA	SOT-323	3000 pcs / Tape & Reel