

Digital Transistor

DTA($R_1 \neq R_2$ SERIES)M

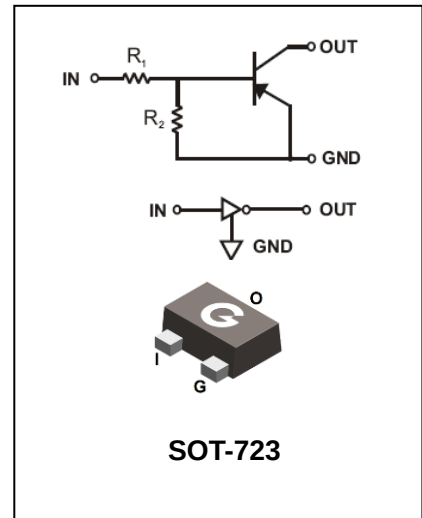
FEATURES

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

HF

APPLICATIONS

- The PNP style digital transistor



ORDERING INFORMATION

Type No.	Marking	Package Code
DTA113ZM	E11	SOT-723
DTA114WM	74	SOT-723
DTA114YM	54	SOT-723
DTA123JM	E41	SOT-723
DTA123YM	61	SOT-723
DTA143XM	33	SOT-723
DTA143ZM	E22	SOT-723

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MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
V _{CC}	Supply Voltage	-50	V
V _{IN}	Input Voltage DTA113ZM DTA114WM DTA114YM DTA123JM DTA123YM DTA143XM DTA143ZM	+5 to -10 +10 to -30 +6 to -40 +5 to -12 +5 to -12 +7 to -20 +5 to -30	V
I _O	Output Current DTA113ZM DTA114WM DTA114YM DTA123JM DTA123YM DTA143XM DTA143ZM	-100 -100 -70 -100 -100 -100 -100	mA
I _C (Max.)	Output current ALL	-100	mA
P _D	Power Dissipation	100	mW
R _{θJA}	Thermal Resistance, Junction to Ambient Air	1250	°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 DTA113ZM DTA114WM DTA114YM DTA123JM DTA123YM DTA143XM DTA143ZM	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 DTA113ZM DTA114WM DTA114YM DTA123JM DTA123YM DTA143XM DTA143ZM	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 =-20mA V _O =-0.3V, I _O =-5mA	-	-	-3.0 -3.0 -1.4 -1.1 -3.0 -2.5 -1.3	V

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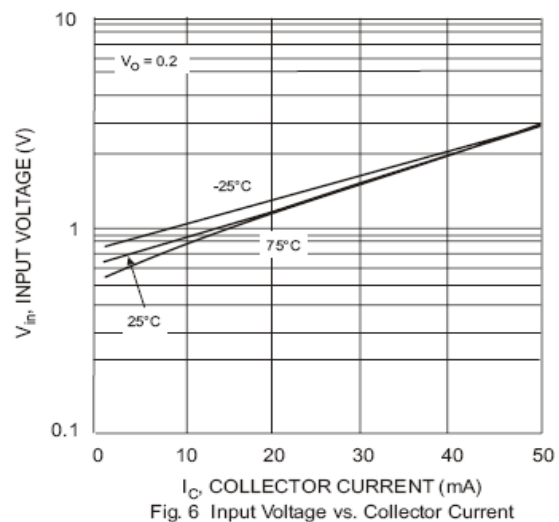
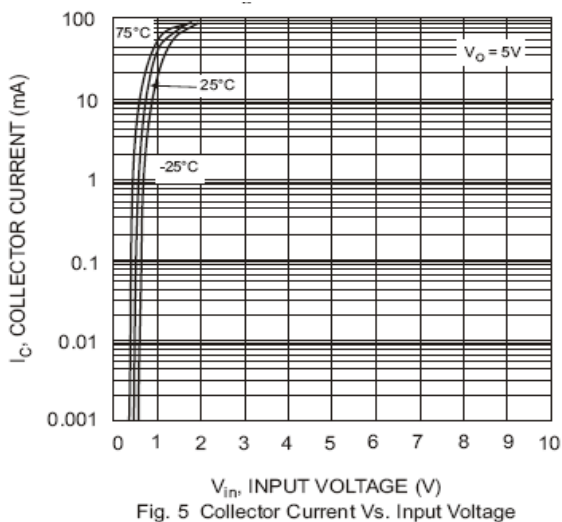
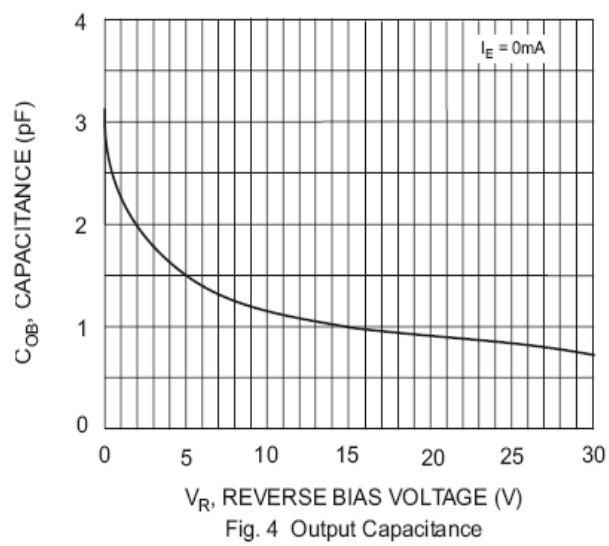
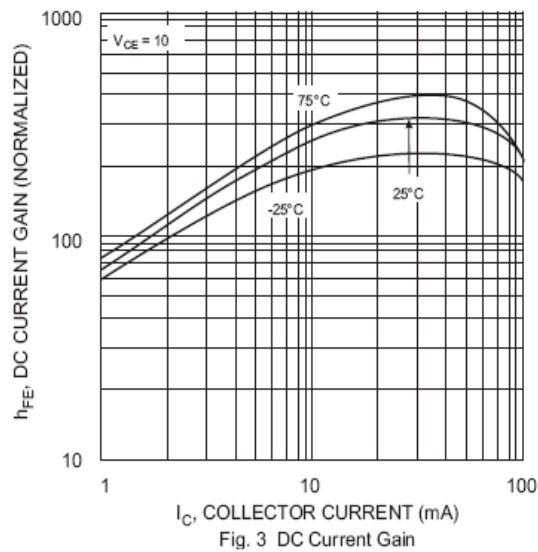
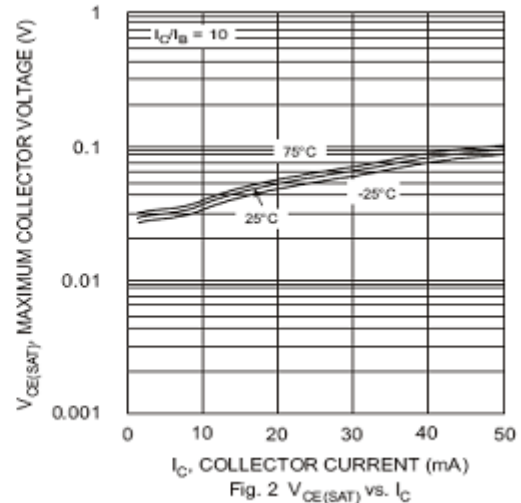
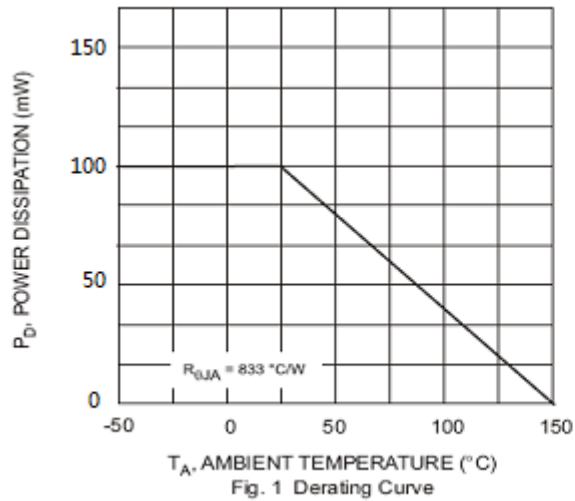
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Output Voltage	DTA123JM DTA143ZM DTA114YM ALL Others	V _{O(on)}	I _O /I _I =-5mA/-0.25mA I _O /I _I =-10mA/-0.5mA	-	-0.1	-0.3	V
Input Current	DTA113ZM DTA114WM DTA114YM DTA123JM DTA123YM DTA143XM DTA143ZM	I _I	V _I =-5V	-	-	-7.2 -0.88 -0.88 -3.6 -3.8 -1.8 -1.8	mA
Output Current		I _{O(off)}	V _{CC} =-50V, V _I =0V	-	-	-0.5	μA
DC Current Gain	DTA113ZM DTA114WM DTA114YM DTA123JM DTA123YM DTA143XM DTA143ZM	G _I	V _O =-5V, I _O =-5mA V _O =-5V, I _O =-10mA V _O =-5V, I _O =-5mA V _O =-5V, I _O =-10mA V _O =-5V, I _O =-10mA V _O =-5V, I _O =-10mA V _O =-5V, I _O =-10mA	33 24 68 80 33 30 80	-	-	
Parameter		Symbol	Test conditions	MIN	TYP	MAX	UNIT
Input Resistor	DTA113ZM DTA114WM DTA114YM DTA123JM DTA123YM DTA143XM DTA143ZM	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

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TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



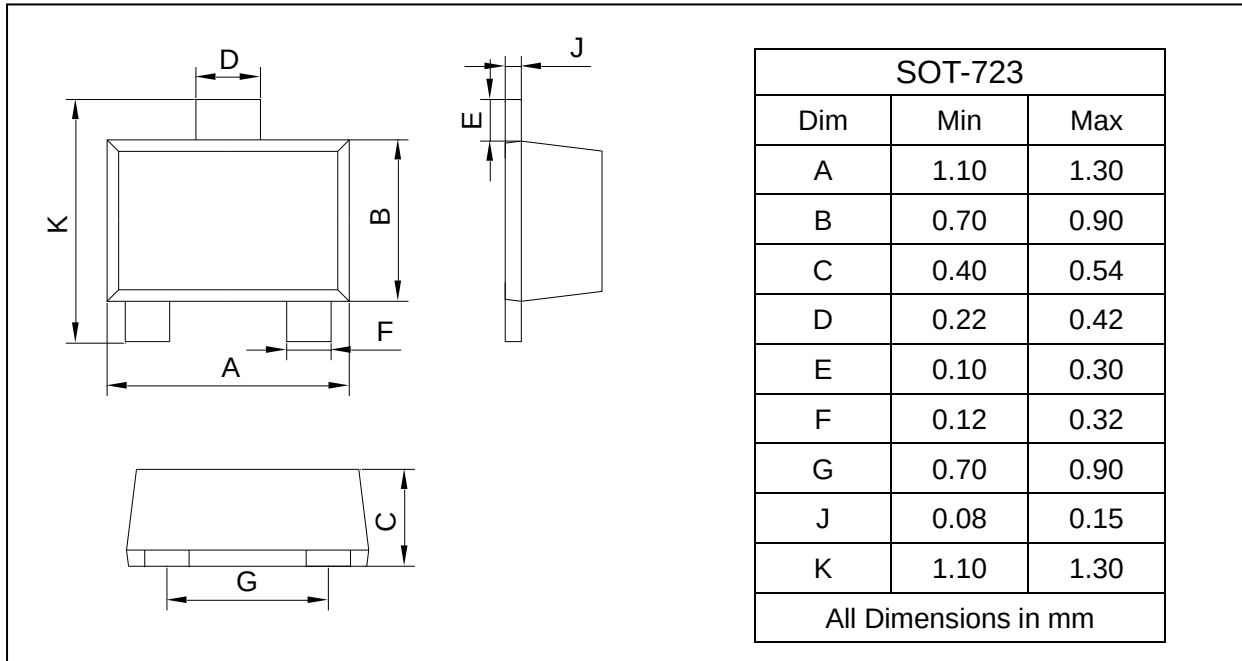
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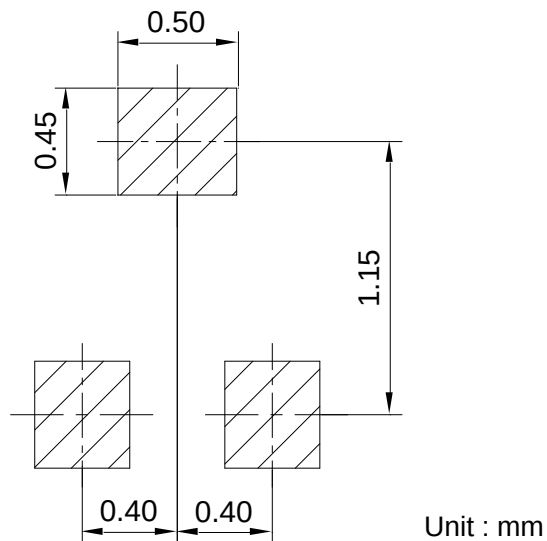
PACKAGE OUTLINE

Plastic surface mounted package

SOT-723



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
DTAXXXM	SOT-723	10000 pcs / Tape & Reel