

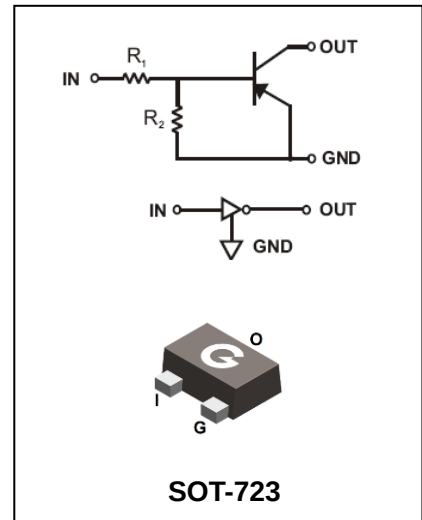
Digital Transistor

TDTA(R₁≠R₂ SERIES)M

FEATURES

- Epitaxial planar die construction
- Complementary NPN types available(TDTC)
- Built-in biasing resistors, R₁≠R₂
- Also available in lead free version
- Halogen free
- Qualified to AEC-Q101 standards for high reliability

HF



APPLICATIONS

- The PNP style digital transistor

ORDERING INFORMATION

Type No.	Marking	Package Code
TDTA113ZM	E11	SOT-723
TDTA114WM	74	SOT-723
TDTA114YM	54	SOT-723
TDTA123JM	E41	SOT-723
TDTA123YM	61	SOT-723
TDTA143XM	33	SOT-723
TDTA143ZM	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 TDTA113ZM TDTA114WM TDTA114YM TDTA123JM TDTA123YM TDTA143XM TDTA143ZM	+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 TDTA113ZM TDTA114WM TDTA114YM TDTA123JM TDTA123YM TDTA143XM TDTA143ZM	-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 TDTA113ZM TDTA114WM TDTA114YM TDTA123JM TDTA123YM TDTA143XM TDTA143ZM	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 TDTA113ZM TDTA114WM TDTA114YM TDTA123JM TDTA123YM TDTA143XM TDTA143ZM	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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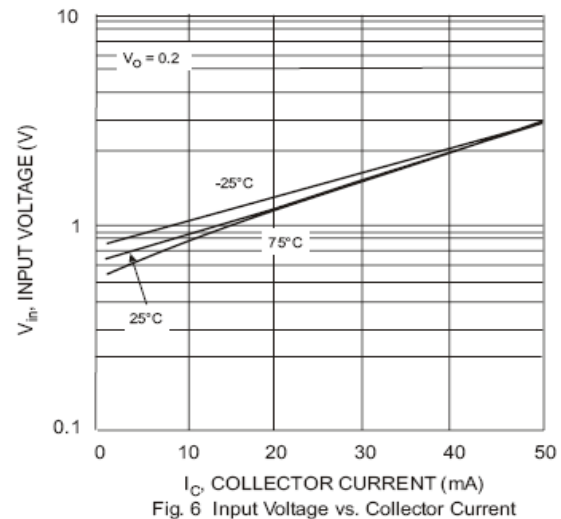
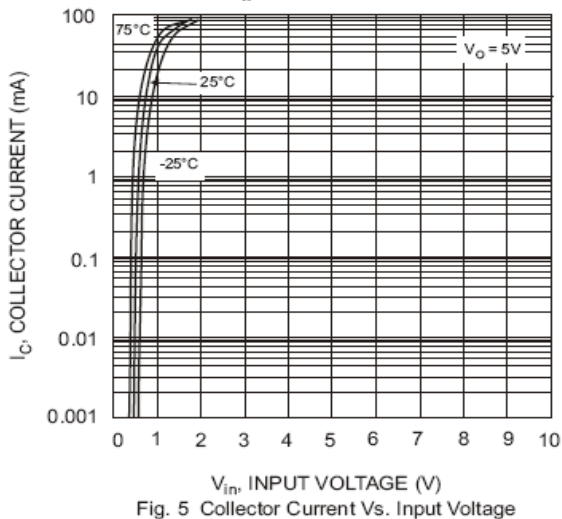
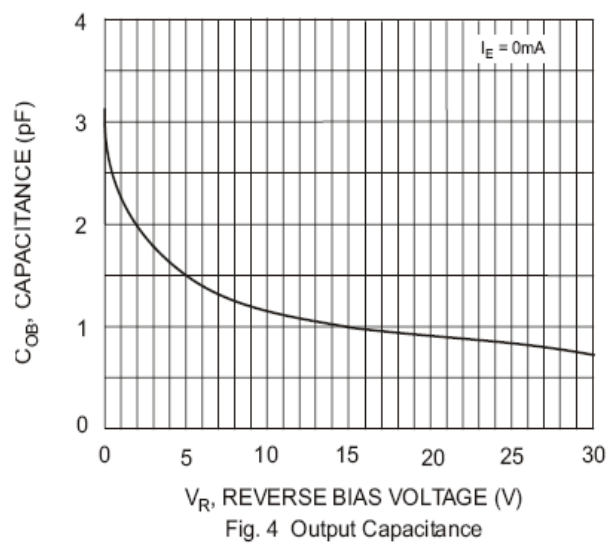
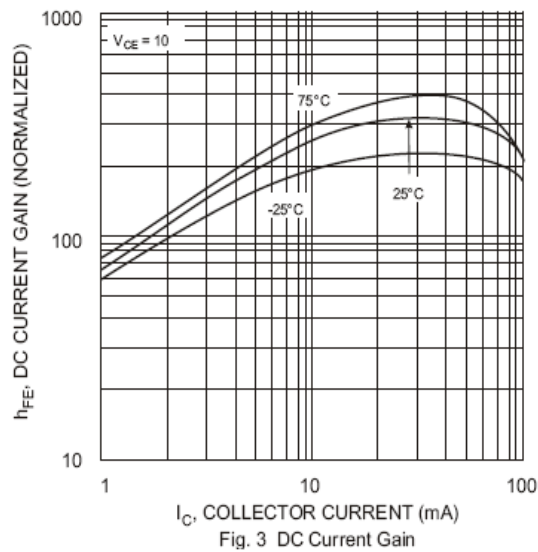
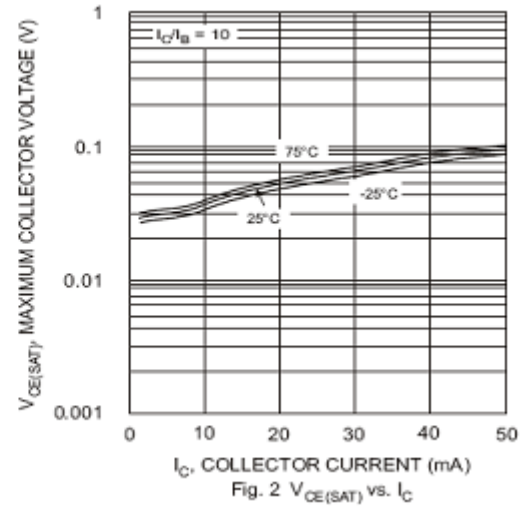
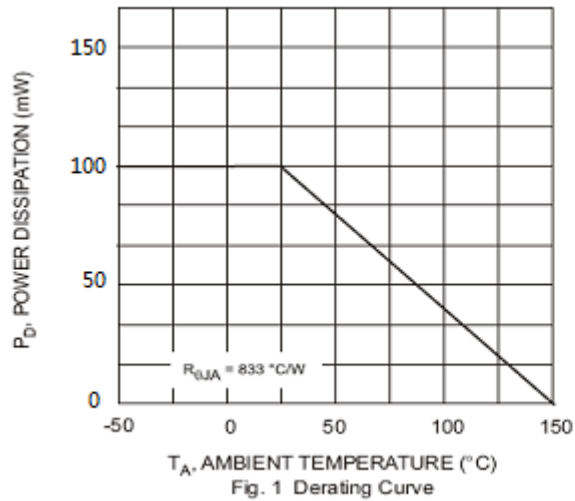
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Output Voltage	TDTA123JM TDTA143ZM TDTA114YM ALL Others	V _{O(on)}	I _O /I _I =-5mA/-0.25mA I _O /I _I =-10mA/-0.5mA	-	-0.1	-0.3	V
Input Current	TDTA113ZM TDTA114WM TDTA114YM TDTA123JM TDTA123YM TDTA143XM TDTA143ZM	I _I	V _I =-5V	-	-	-7.2 -0.88 -0.88 -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	TDTA113ZM TDTA114WM TDTA114YM TDTA123JM TDTA123YM TDTA143XM TDTA143ZM	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	TDTA113ZM TDTA114WM TDTA114YM TDTA123JM TDTA123YM TDTA143XM TDTA143ZM	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



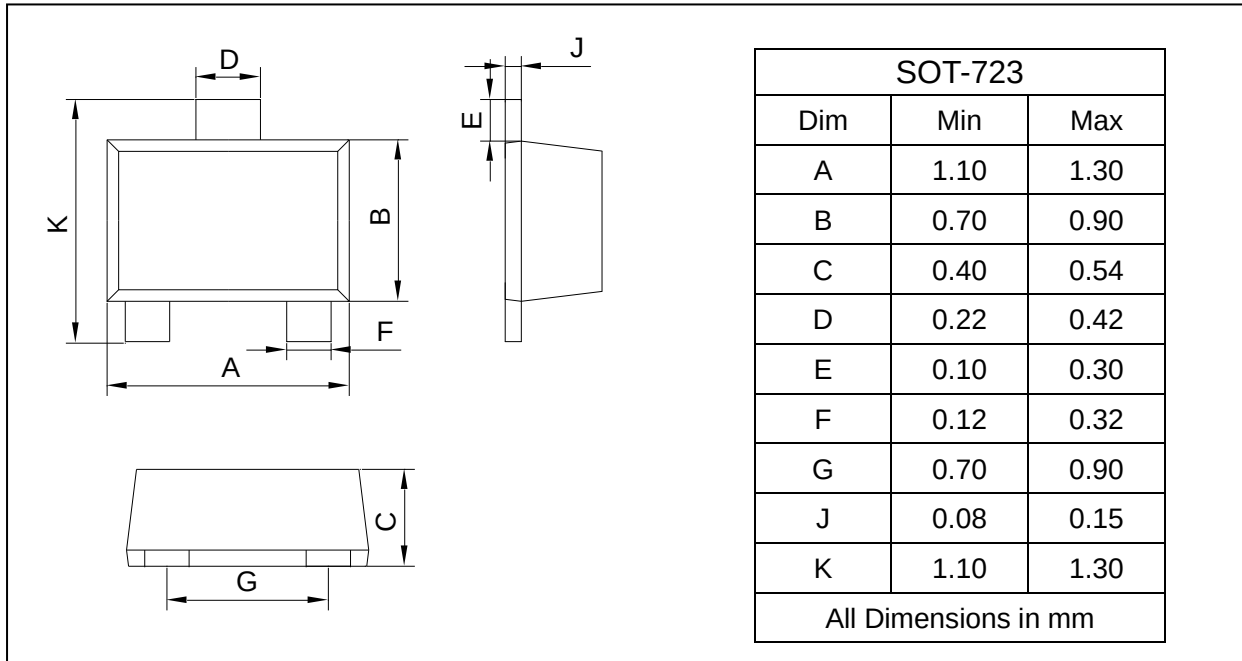
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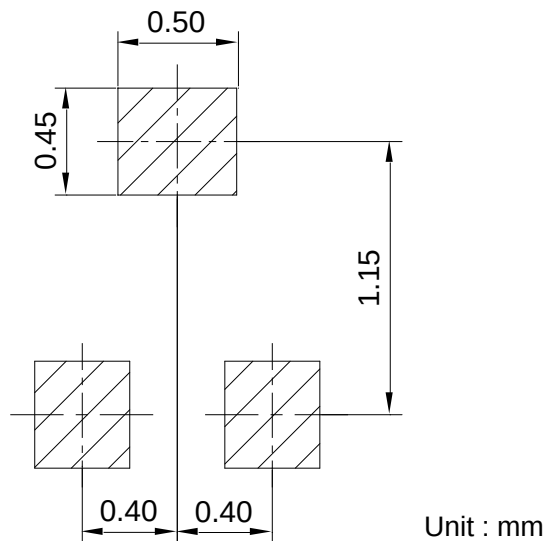
PACKAGE OUTLINE

Plastic surface mounted package

SOT-723



SOLDERING FOOTPRINT



PACKAGE INFORMATION

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