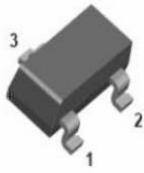
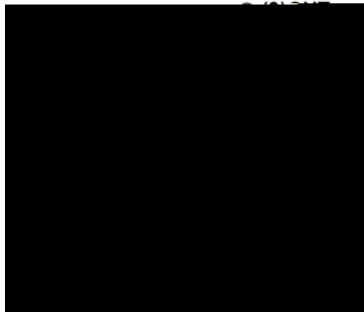


PNP Digital Transistors (Built-in Resistors)



1. IN
2. GND
3. OUT

SOT-23



Features

- Moisture sensitivity level 1
- Halogen free and RoHS compliant
- Surface mount package ideally suited for automatic insertion

Application

- Signal amplification
- Switching circuit

Mechanical data

- **Package** SOT-23
- **Terminals** Tin plated leads, solderable per J-STD-002 and JEDEC-B102

Maximum Ratings ($T_a=25^\circ\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Conditions	
	V_{IN}	V		-1 to 5
Output current	I_O	mA		-1 to 5
Power dissipation	P_D	mW		25
junction temperature	T_J			-55 to +150
Storage temperature	T_{STG}			-55 to +150



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Electrical Characteristics (T_a=25 Unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-emitter cut-off current	I _{CEO}	nA	V _{CE} =-50V, I _B =0			-500
Collector-base cut-off current	I _{CBO}	nA	V _{CB} =-50V, I _E =0			-100
Emitter-base cut-off current	I _{EBO}	uA	V _{EB} =-6V, I _C =0			-2500
Collector-base breakdown voltage	V _{(BR)CBO}	V	I _C =-100μA, I _E =0	-50		
Collector-emitter breakdown voltage	V _{(BR)CEO}	V	I _C =-2mA, I _B =0	-50		
Emitter-base breakdown voltage	V _{(BR)EBO}	V	I _E =-2mA, I _C =0	-6		
Collector-emitter saturation voltage	V _{CE(SAT)}	V	I _C /I _B =-10mA/-5mA			-0.25
DC current gain	h _{FE}		V _{CE} =-10V, I _C =-20mA	30		
Input resistance	R ₁	k		1.5	2.2	2.9
Resistance ratio	R ₂ /R ₁			0.8	1	1.2
Transition frequency	f _T	MHz	V _O =-10V, I _O =-5mA, f=100MHz		250	

Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R _{J-A} ⁽¹⁾	/W	625
Thermal resistance, junction-to-case	R _{J-C} ⁽¹⁾	/W	500

Note:

- 1 Device mounted on PCB, single-sided copper with standard footprint

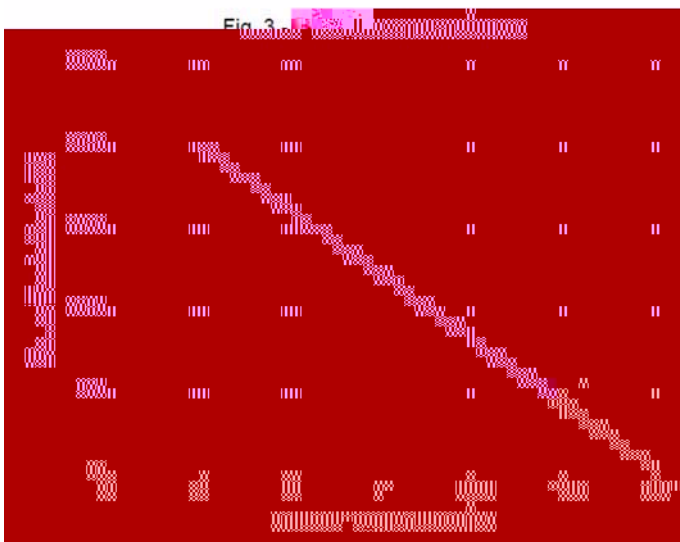
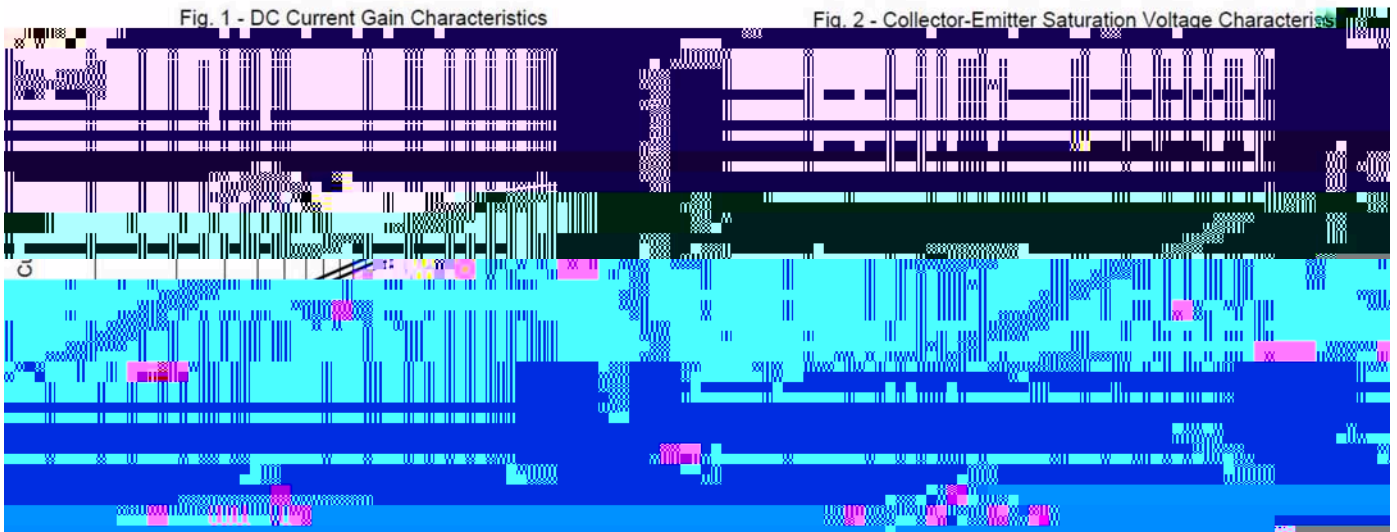
Ordering Information

Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
DTA123ECA	F2	Approximate 0.009	3000	30000	120000	7" reel



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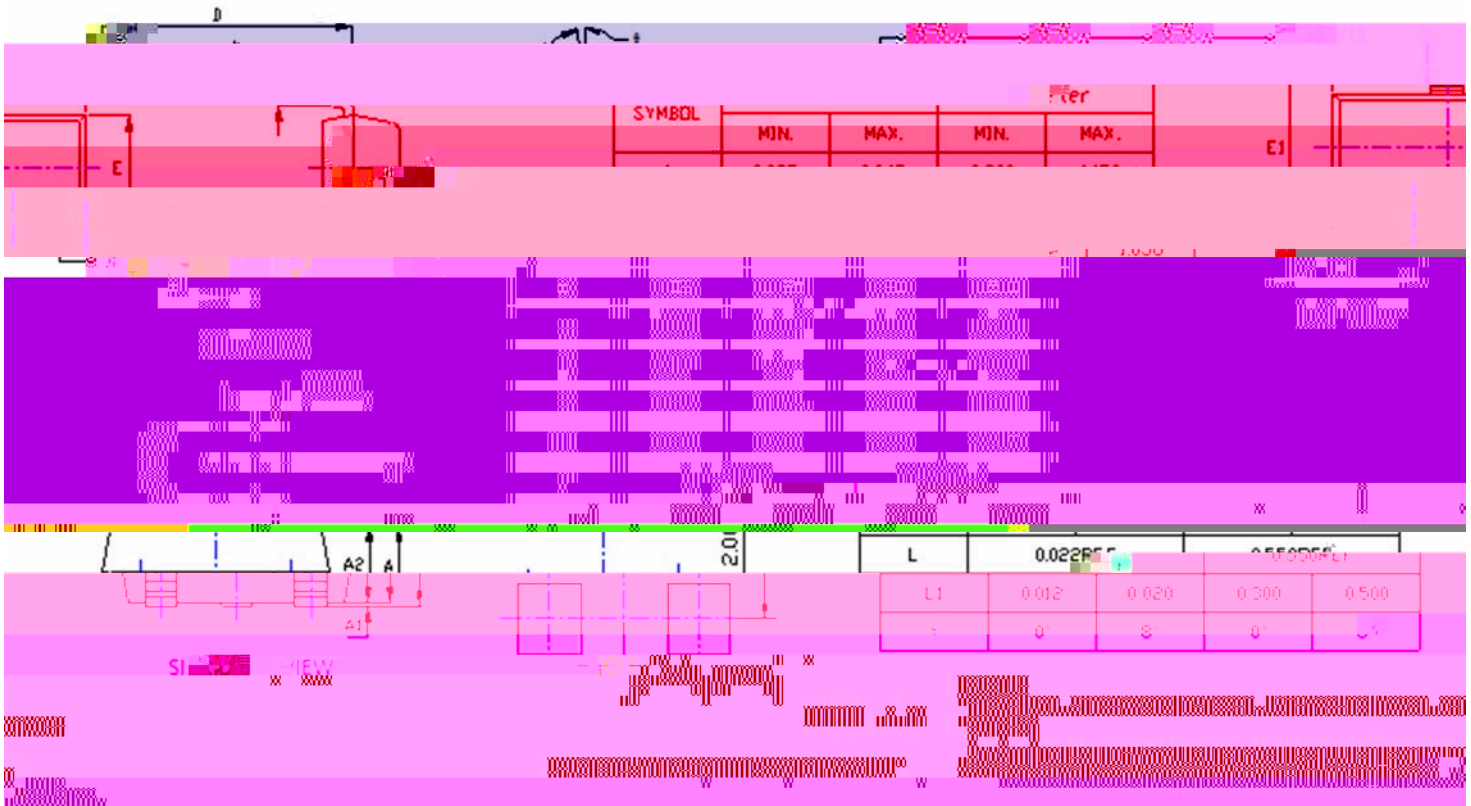
Characteristics





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Outline Dimensions



Note:

1. All dimensions are in millimeters (mm) unless otherwise specified. [所有尺寸均以毫米为单位，除非另有说明]

2. General tolerances: $\pm 0.10\text{mm}$ unless otherwise specified. [通用公差为 $\pm 0.10\text{mm}$ ，除非另有说明]

3. Dimensions and tolerances are per ASME Y14.5M-2018. [尺寸和公差遵循 ASME Y14.5M-2018 标准]

All dimensions do not include mold flash, protrusions and burrs but include the maximum allowable mold mismatch. [所有尺寸均不包括毛刺和浇口残留。毛刺与浇口残留的尺寸最大不得超过 0.15mm]

Dimensions do not include barrel protrusion of max 0.100mm per side. [尺寸不包括单边最大 0.100mm 的引脚凸出部分]

Dimensions do not include mold flash, protrusions and burrs but include the maximum allowable mold mismatch. [尺寸不包括毛刺和浇口残留。毛刺与浇口残留的尺寸最大不得超过 0.15mm]

Dimensions do not include mold flash, protrusions and burrs but include the maximum allowable mold mismatch. [尺寸不包括毛刺和浇口残留。毛刺与浇口残留的尺寸最大不得超过 0.15mm]

Formed leads and line diameter with respect to one another within a maximum of 0.100mm relative to the seating plane. [成型的管脚应为同一平面，共面性最大为 0.1mm]

[★ 标记为关键尺寸]



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Disclaimer

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