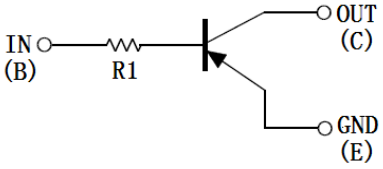
迈拓电子
MAITUO ELECTRONIC

DTA143TM/DTA143TE/DTA143TUA
DTA143TKA /DTA143TCA/DTA143TSA



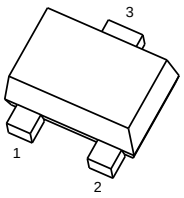
DIGITAL TRANSISTOR (PNP)

FEATURES

- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors(see equivalent circuit)
- The bias resistors consist of thin-film resistors with complete isolation to allow positive biasing of the input.They also have the advantage of almost completely eliminating parasitic effects
- Only the on/off conditions need to be set for operation, making device design easy

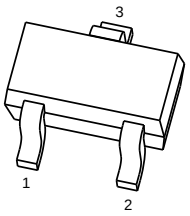
PIN CONNENCTIONS and MARKING

DTA143TM — **SOT-723**



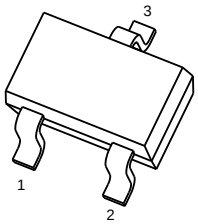
1. IN
2. GND
3. OUT

DTA143TE — **SOT-523**



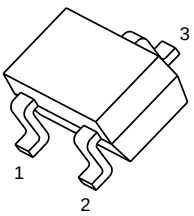
1. IN
2. GND
3. OUT

DTA143TUA — **SOT-323**



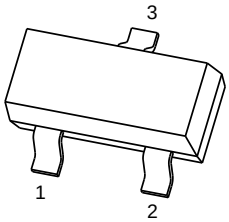
1. IN
2. GND
3. OUT

DTA143TKA — **SOT-23-3L**



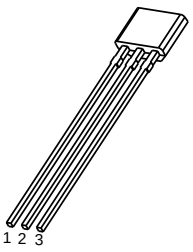
1. IN
2. GND
3. OUT

DTA143TCA — **SOT-23**



1. IN
2. GND
3. OUT

DTA143TSA — **TO-92S**



1. GND
2. OUT
3. IN

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ORDERING INFORMATION

Part Number	MARKING (1)	Package	Packing Method	Pack Quantity
DTA143TM	93	SOT-723	Reel	8000pcs/Reel
DTA143TE	93	SOT-523	Reel	3000pcs/Reel
DTA143TUA	93	SOT-323	Reel	3000pcs/Reel
DTA143TKA	93	SOT-23-3L	Reel	3000pcs/Reel
DTA143TCA	93	SOT-23	Reel	3000pcs/Reel

MAXIMUM RATINGS(Ta=25℃ unless otherwise noted)

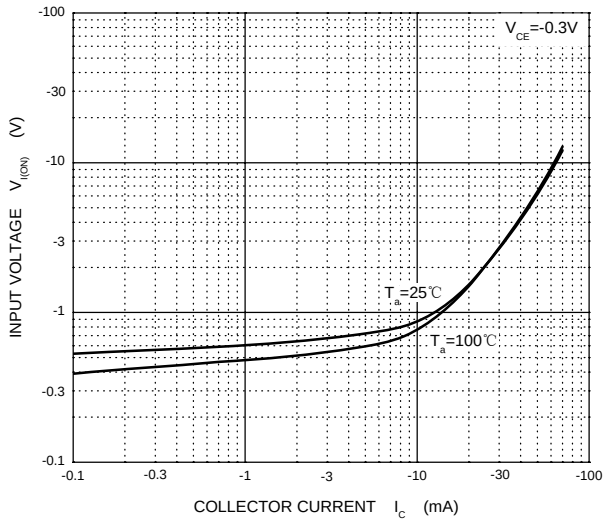
Symbol	Parameter	Limits(DTA143T□)						Unit
		M	E	UA	KA	CA	SA	
V_{CBO}	Collector-Base Voltage	-50						V
V_{CEO}	Collector-Emitter Voltage	-50						V
V_{EBO}	Emitter-Base Voltage	-5						V
I_C	Collector Current	-100						mA
P_D	Power Dissipation	100	150	200	200	200	300	mW
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55～+150						℃

ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)

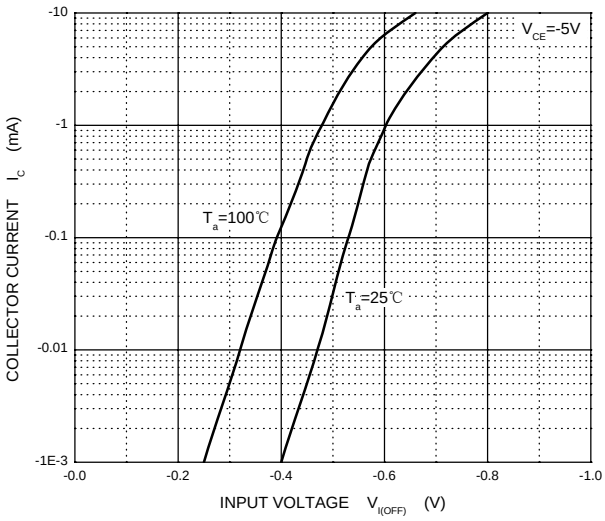
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	Ic=-50μA,I_E=0	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	Ic=-1mA,I_B=0	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-50μA,I_C=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-50V,I_E=0			-0.5	μA
Emitter cut-off current	I_{EBO}	V_{EB}=-4V,I_C=0			-0.5	μA
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-5mA,I_B=-0.25mA			-0.3	V
DC current gain	h_{FE}	V_{CE}=-5V,I_C=-1mA	100		600	
Input resistor	R_1		3.29	4.7	6.11	kΩ
Transition frequency	f_T	V_{CE}=-10V,I_E=5mA, f=100MHz		250		MHz

Typical Characteristics

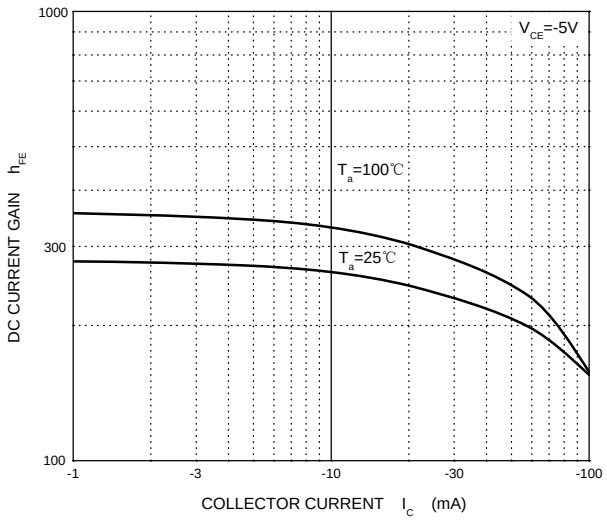
ON Characteristics



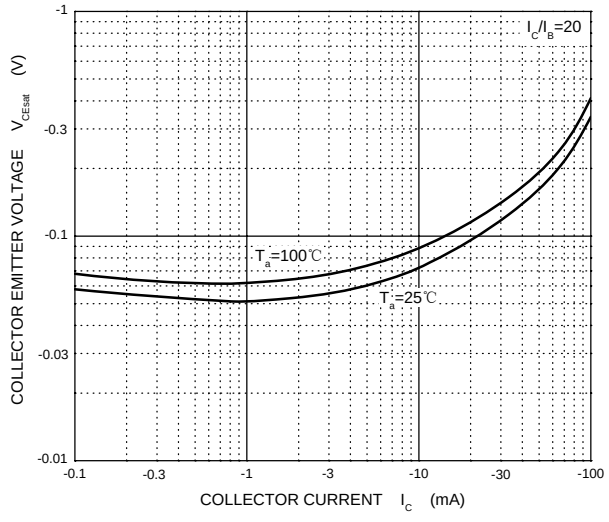
OFF Characteristics



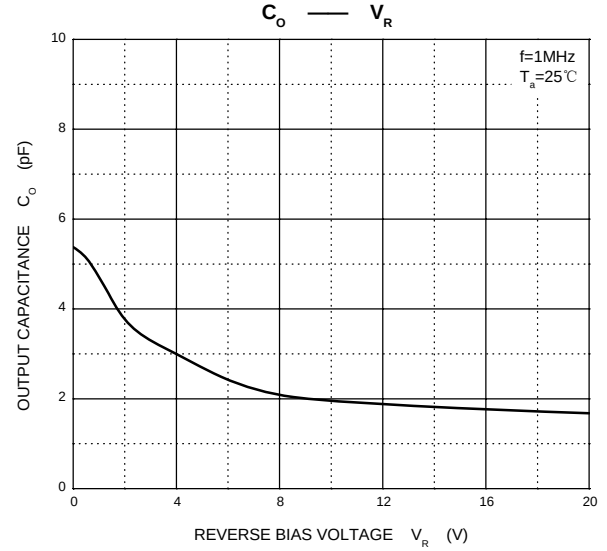
h_{FE} — I_C



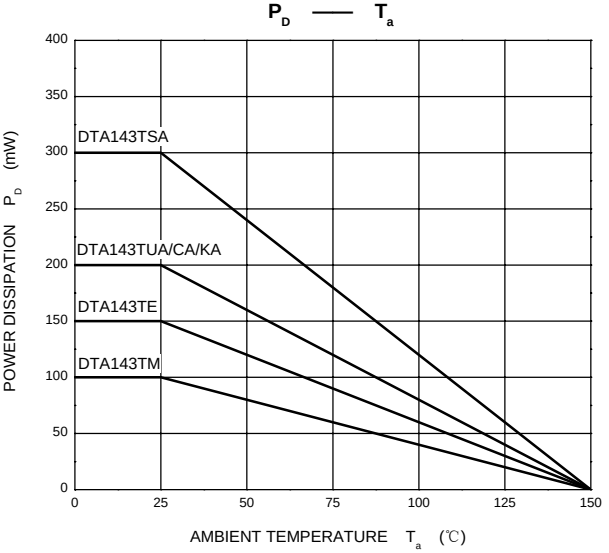
V_{CEsat} — I_C



C_O — V_R



P_D — T_a



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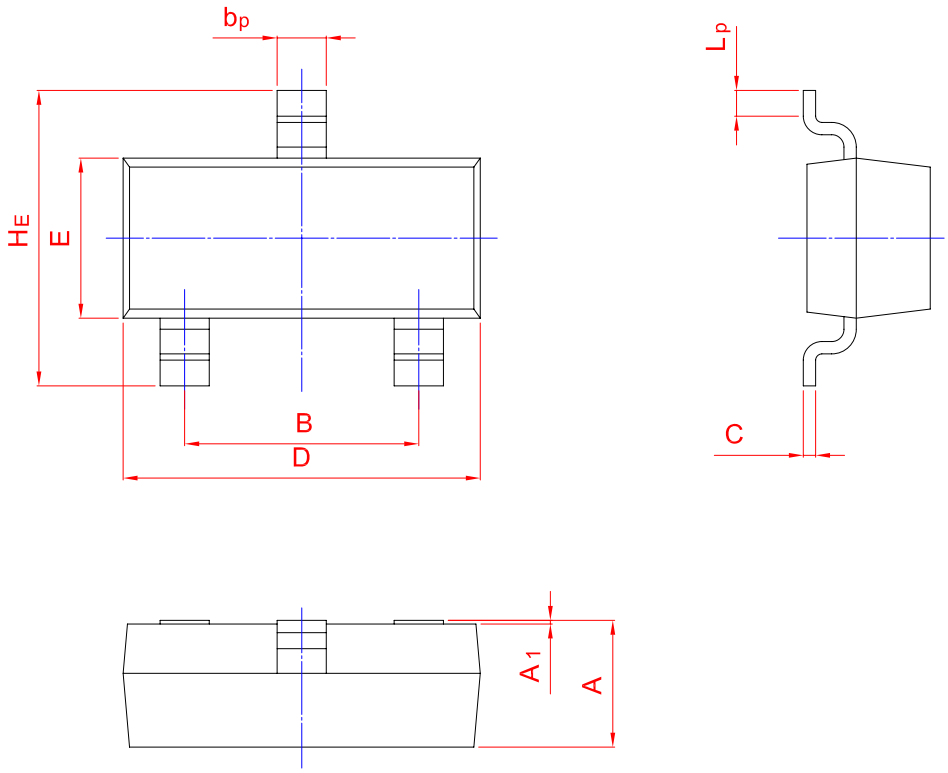
PACKAGE OUTLINE

Plastic surface mounted package; 3 leads **SOT-23**



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20

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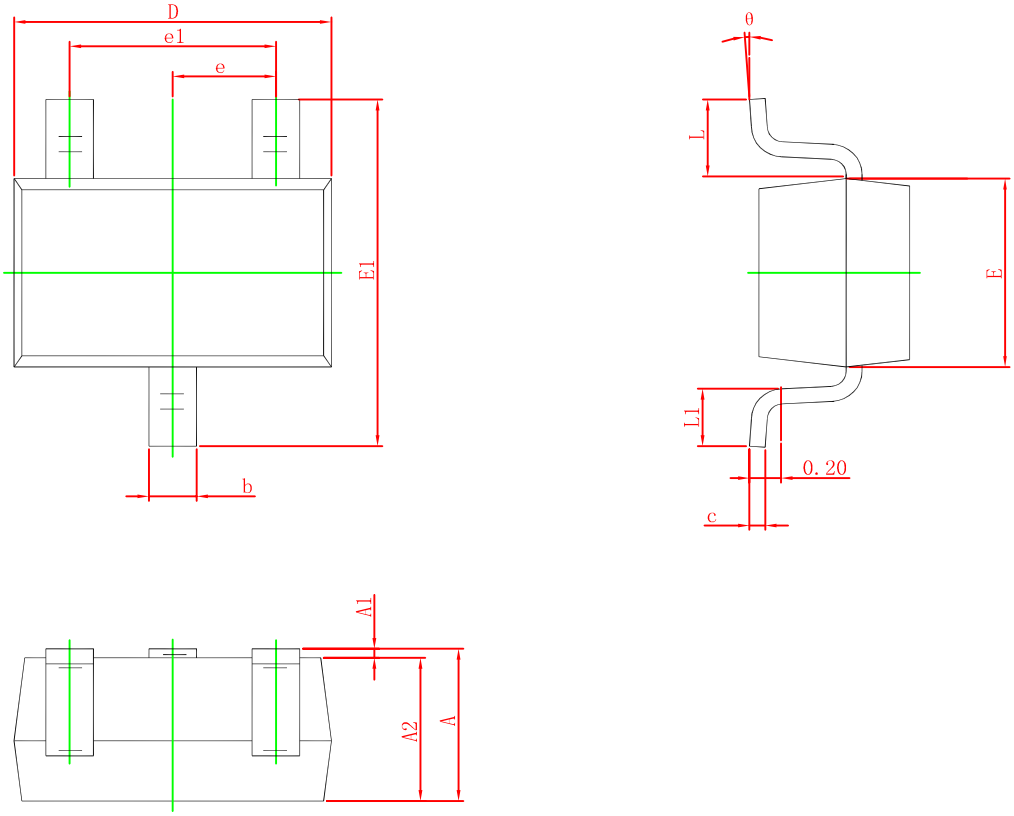
SOT-323 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP.		0.026 TYP.	
e1	1.200	1.400	0.047	0.055
L	0.525 REF.		0.021 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

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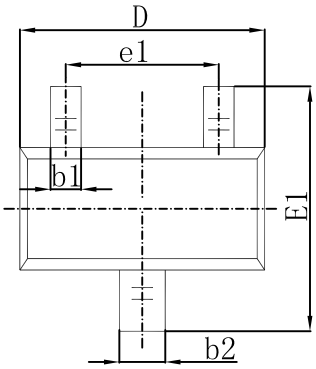
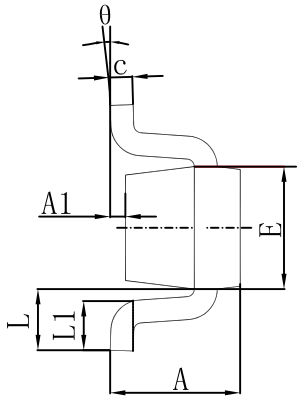
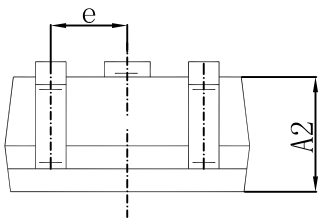
SOT-523 Package Outline Dimensions

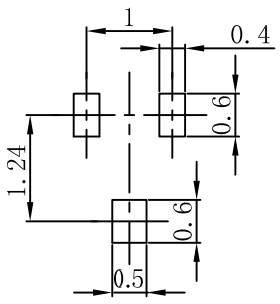






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500 TYP.		0.020 TYP.	
e1	0.900	1.100	0.035	0.043
L	0.400 REF.		0.016 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

SOT-523 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.