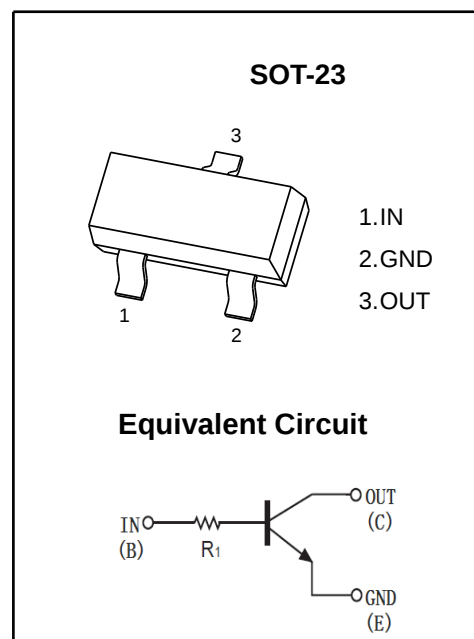


**DIGITAL TRANSISTOR(NPN)****FEATURES**

- Built-in bias resistor enable the configuration of an inverter circuit without connecting external input resistors.
- The bias resistors consist of thin-film resistors with complete isolation to allow negative 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.

APPLICATIONS

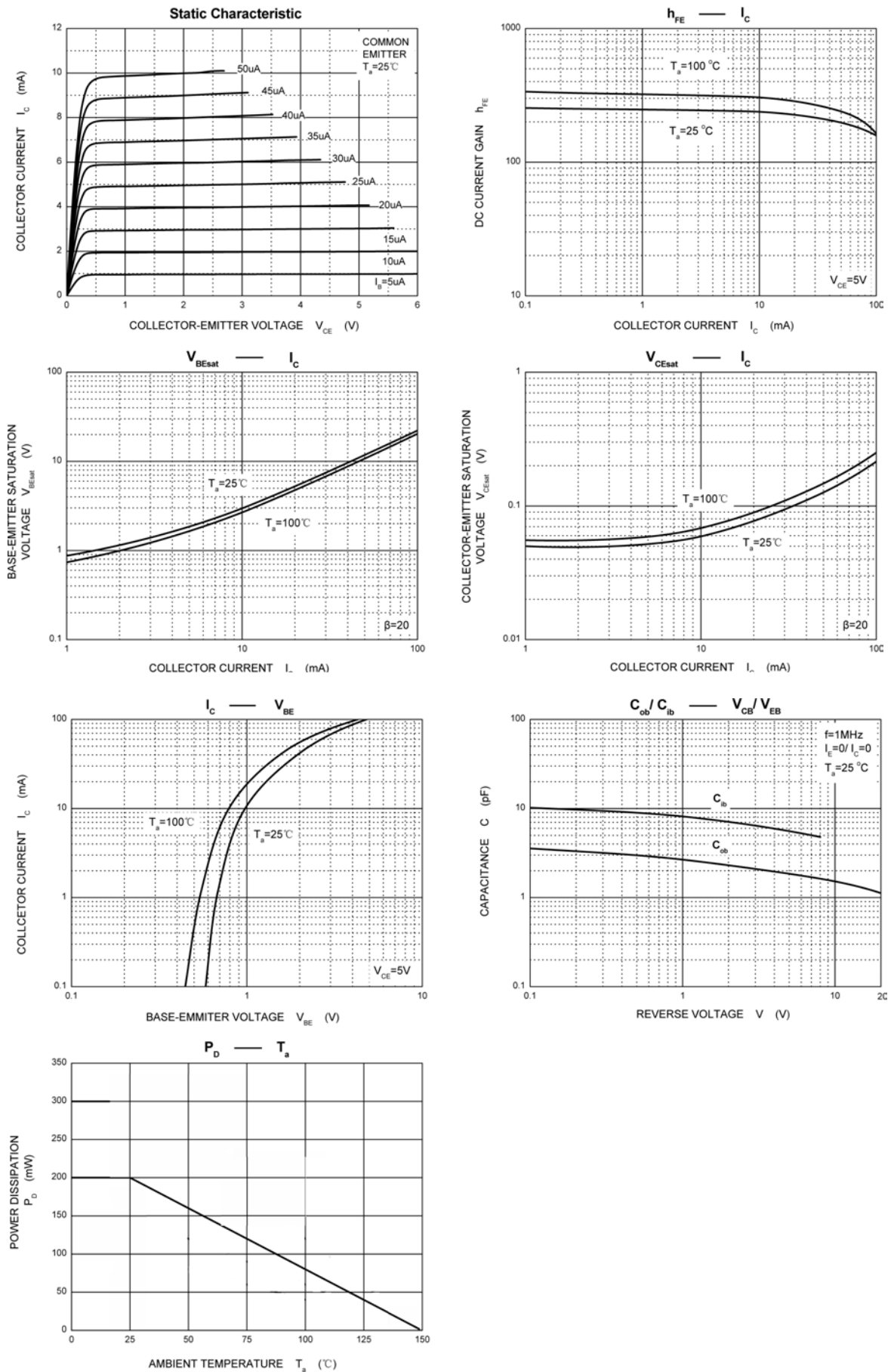
- The NPN style digital transistor.

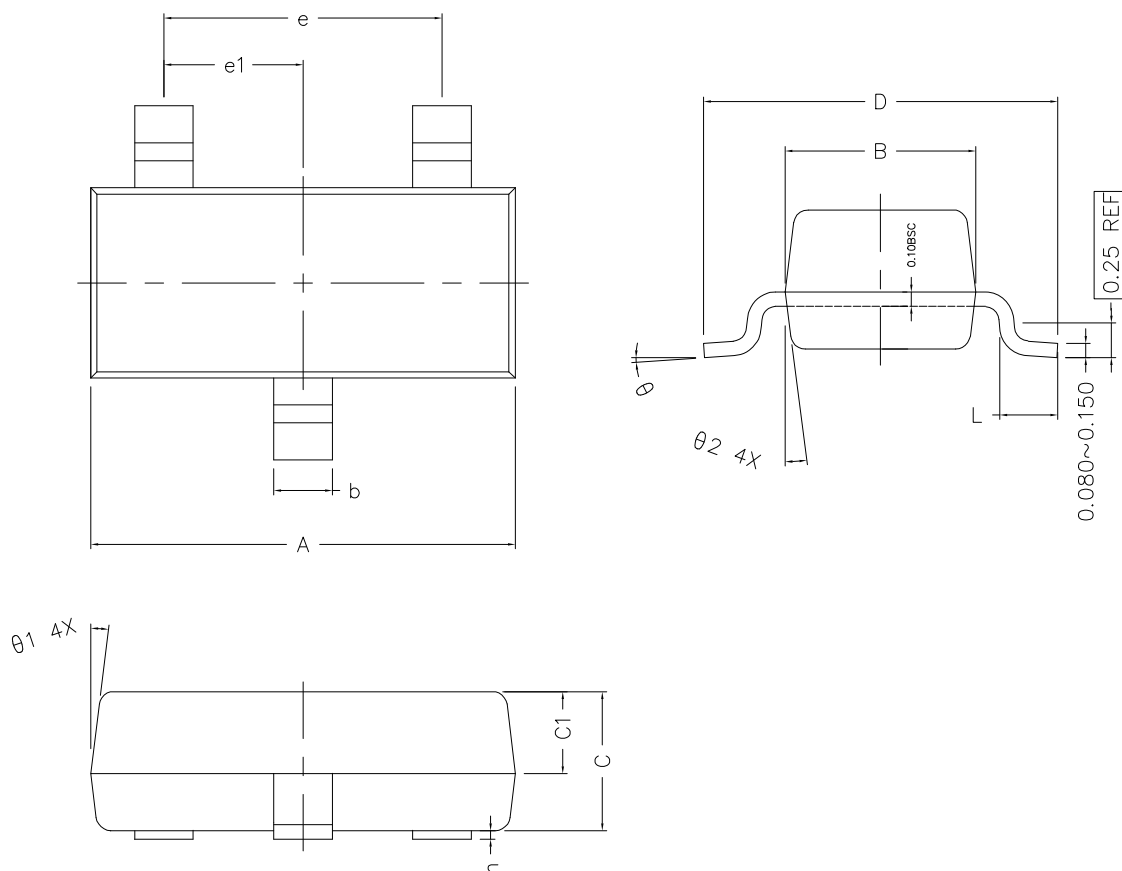
**MAXIMUM RATINGS(Ta=25 °C unless otherwise noted)**

Symbol	Parameter	Limits	Unit
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	200	mW
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55~+150	°C

ELECTRICAL CHARACTERISTICS (Ta=25 °C unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=50V, I_E=0$			0.5	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.5	μA
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=5mA, I_B=0.5mA$			0.3	V
DC current gain	h_{FE}	$V_{CE}=5V, I_C=1mA$	150		600	
Input resistor	R_1		3.29	4.7	6.11	k Ω
Transition frequency	f_T	$V_{CE}=10V, I_E=-5mA, f=100MHz$		250		MHz

**DIGITAL TRANSISTOR(NPN)****Typical Characteristics**

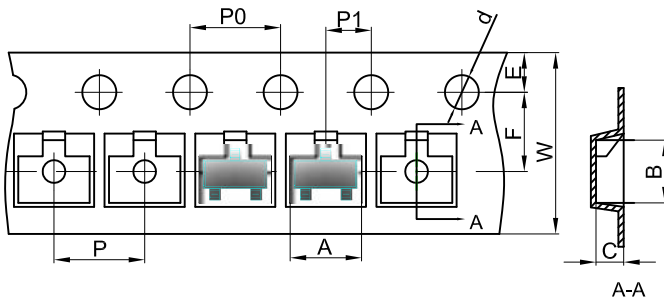
**DIGITAL TRANSISTOR(NPN)****SOT-23 Package Outline Dimensions (Units: mm)**

COMMON DIMENSIONS (UNITS OF MEASURE IS mm)			
	MIN	NORMAL	MAX
A	2.800	2.900	3.000
B	1.200	1.300	1.400
C	0.900	1.000	1.100
C1	0.500	0.550	0.600
D	2.250	2.400	2.550
L	0.300	0.400	0.500
h	0.010	0.050	0.100
b	0.300	0.400	0.500
e	1.90 TYPE		
e1	0.95 TYPE		
θ_1	7° TYPE		
θ_2	7° TYPE		
θ	0° ~ 7°		

DIGITAL TRANSISTOR(NPN)

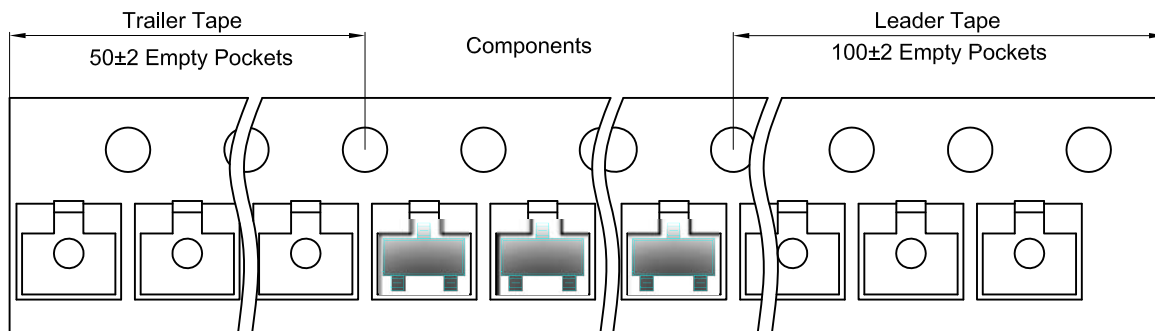
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

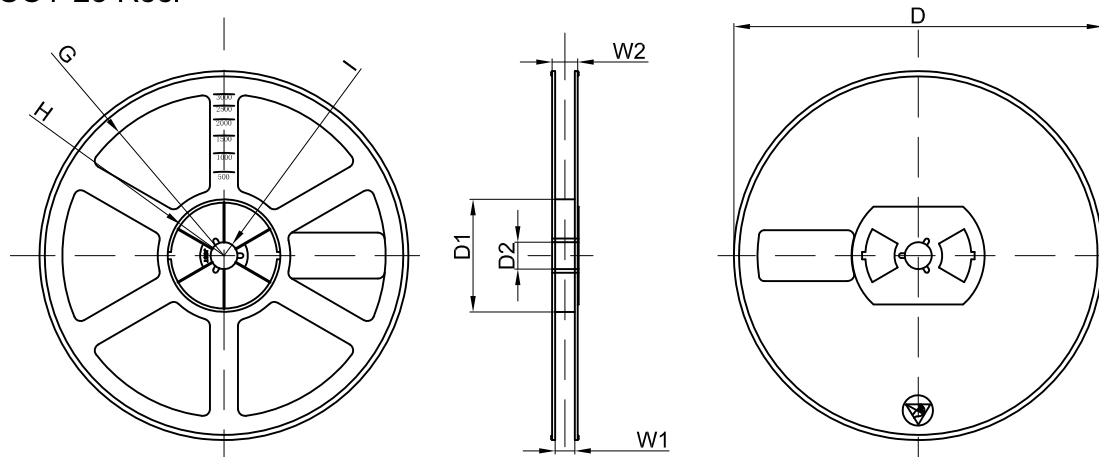


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer



SOT-23 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	192x182x182	180,000 pcs	400x385x385	