



13001

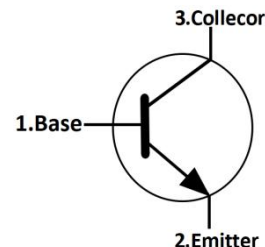
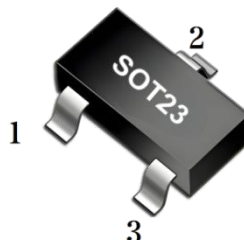
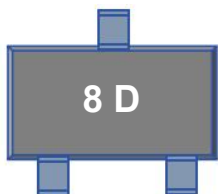
NPN SILICON TRANSISTOR

FEATURES

*The 13001 meet the ROHS and Green Product requirement with full function reliability approved.

MARKING

Type Code: Marking: 8D



ABSOLUTE MAXIMUM RATINGS (Tc=25°C, unless otherwise specified)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CB0}	Collector-base voltage	700	V
V _{CE0}	Collector-emitter voltage	420	V
V _{EB0}	Emitter-base voltage	9	V
I _c	Collector current	200	mA
P _{tot}	Power Dissipation	300	mW
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~150	°C
ROJA	Thermal Resistance From Junction To Ambient (note 1)	417	°C/W

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

1. Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

ELECTRICAL CHARACTERISTICS (Tc=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	700			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	420			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =100μA, I _C =0	9			V
Collector cutoff current	I _{CBO}	V _{CB} =700V, I _E =0			100	μA
Collector cut-off current	I _{CEO}	V _{CE} =420V, I _B =0			100	μA
Emitter-base cut-off current	I _{EBO}	V _{CE} =9V, I _B =0			100	μA
DC Current Gain	h _{FE}	V _{CE} =20V, I _C =10mA	15		25	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =50mA, I _B =10mA			1.05	V
Base-Emitter Saturation Voltage	V _{BE(sat)}	I _C =50mA, I _B =10mA			1.55	V
Transition frequency	f _T	V _{CE} =10V, I _C =50mA, f=1MHz	5			MHz
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHz		6		pF



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■ TYPICAL CHARACTERISTICS

Fig. 1 Output Characteristics Curve

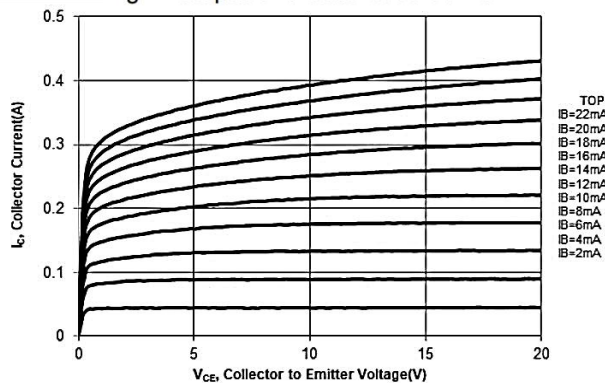


Fig. 2 Output Characteristics Curve

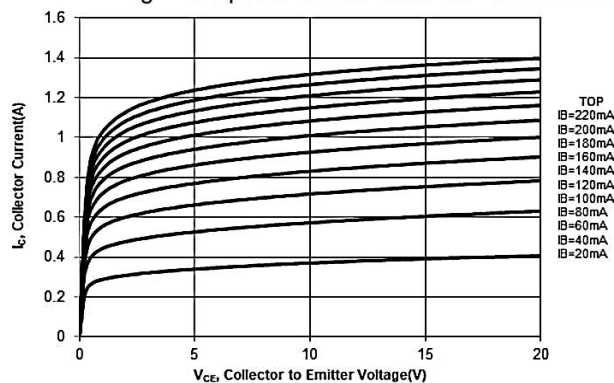


Fig. 3 Collector Current vs. Base to Emitter Voltage

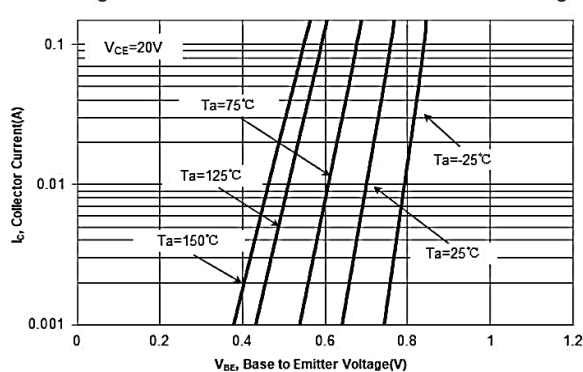


Fig. 4 h_{FE} , DC Current Gain vs. Collector Current

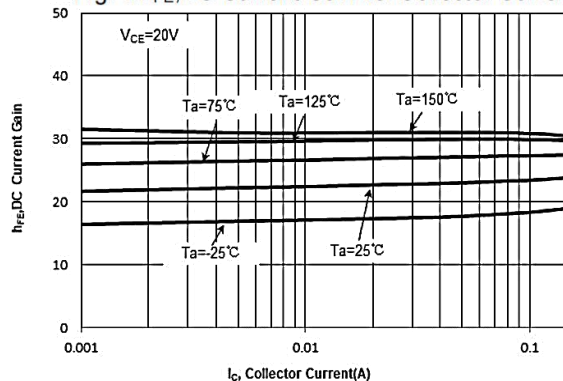


Fig. 5 V_{BESAT} vs. Collector Current

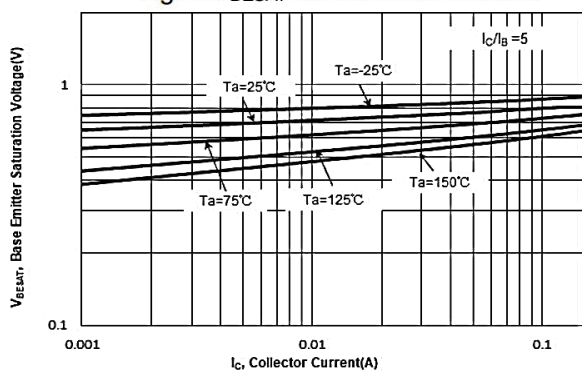


Fig. 6 V_{CESAT} vs. Collector Current

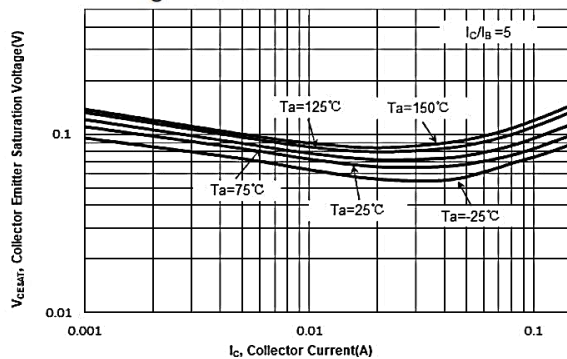


Fig. 7 Output Capacitance

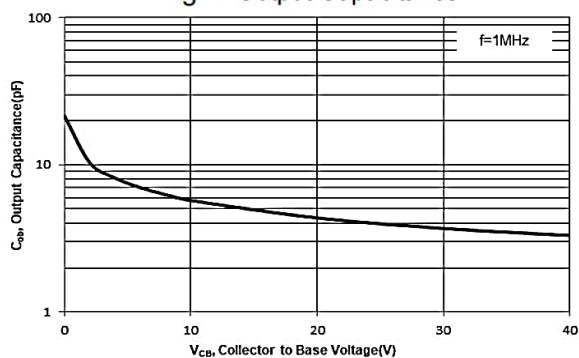
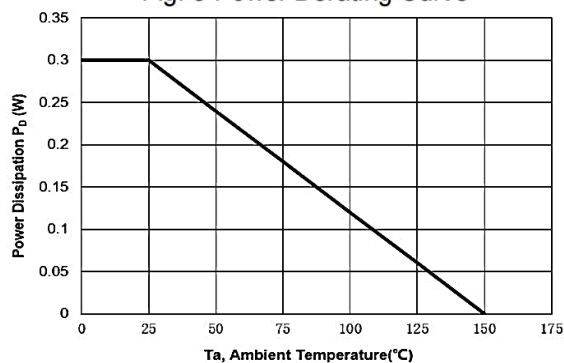


Fig. 8 Power Derating Curve

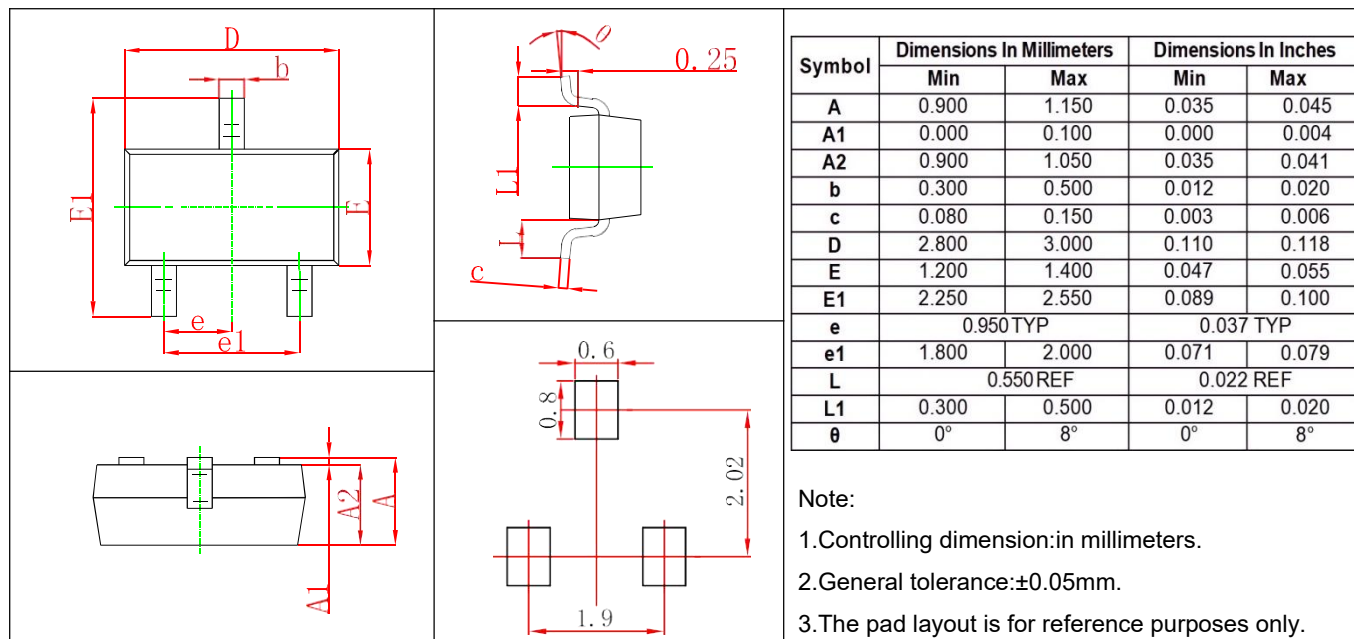




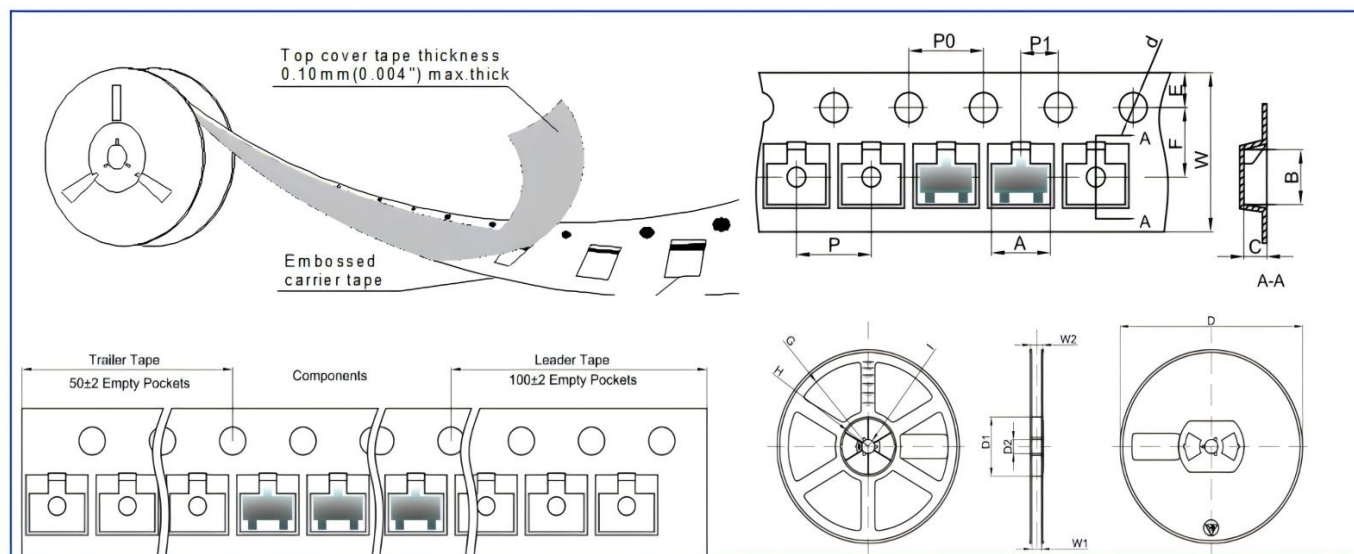
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SOT23 PACKAGE OUTLINE DIMENSIONS



REEL PACKING



Dimensions are in millimeter										
PKG TYPE	A	B	C	d	E	F	Po	P	P1	W
SOT-23	3.15	2.77	1.22	Φ1.50	1.75	3.50	4.00	4.00	2.00	8.00
Reel Option	D	D1	D2	G	H	I	W1	W2	Q.TY PER REEL	
7" Dia	Φ178.0	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30	3000PCS	
13"Dia	φ330.0	/	13.00	/	/	R6.50	9.50	12.30	10000PCS	