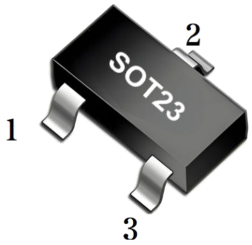
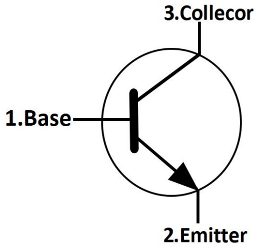
M8050

NPN SILICON TRANSISTOR

FEATURES

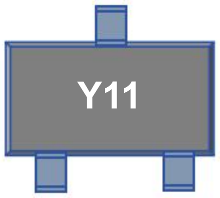
*Power dissipation





MARKING

Type Code: Marking: Y11



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-base voltage	40	V
V_{CEO}	Collector-emitter voltage	25	V
V_{EBO}	Emitter-base voltage	6	V
I_C	Collector current	0.8	A
P_C	Collector Power Dissipation	200	mW
T_j	Junction Temperature	150	°C
Tstg	Storage Temperature	-55~150	°C
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	625	°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.

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

PARAMETER	SYMBOL		TEST CONDITIONS	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$		I_C=100μA,I_E=0	40		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$*		I_C=1mA,I_B=0	25		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$		I_E=100μA,I_C=0	6		V
Collector cutoff current	I_{CBO}		V_{CB}=35V,I_E=0		0.1	μA
Collector cut-off current	I_{CEO}		V_{CE}=20V,I_B=0		0.1	μA
DC Current Gain （CLASSIFICATION OF hFE2）	h_{FE1}		V_{CE}=1V,I_C=5mA	45		
	h_{FE2}	**A**	V_{CE}=1V,I_C=100mA	80	300	
		B		300	400	
	H_{FE3}		V_{CE}=1V,I_C=800mA	40		
Collector-emitter saturation voltage	$V_{CE(sat)}$		I_C=800mA,I_B=80mA		0.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		I_C=800mA,I_B=80mA		1.2	V
Transition frequency	f_T		V_{CE}=6V, I_C= 20mA, f=30MHz	150		MHz

*Note:Pulse test: Pulse Width <300μs, Duty Cycle<2%.

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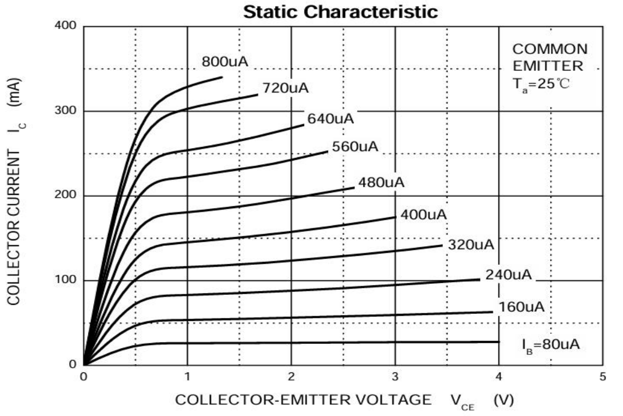
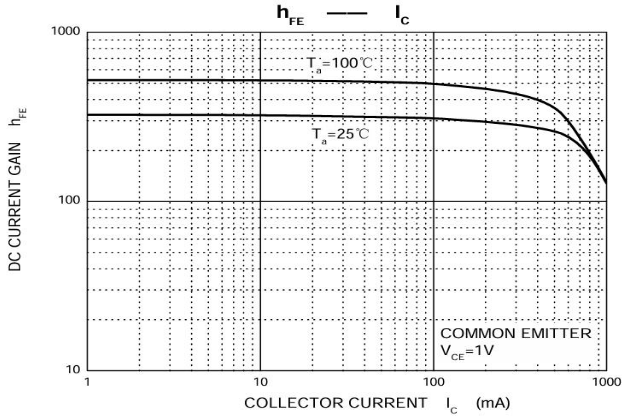
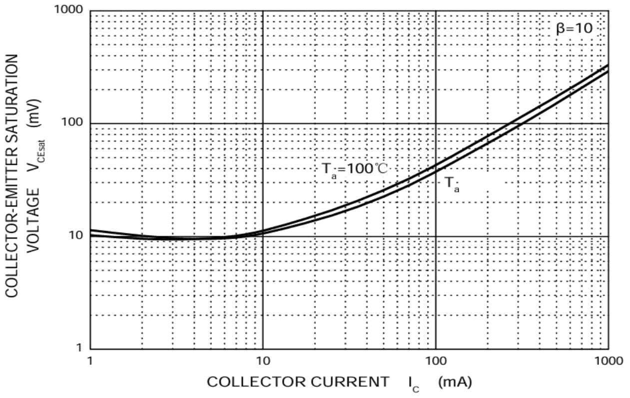
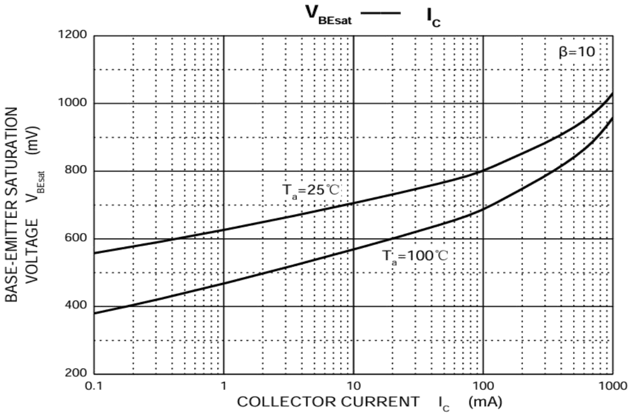
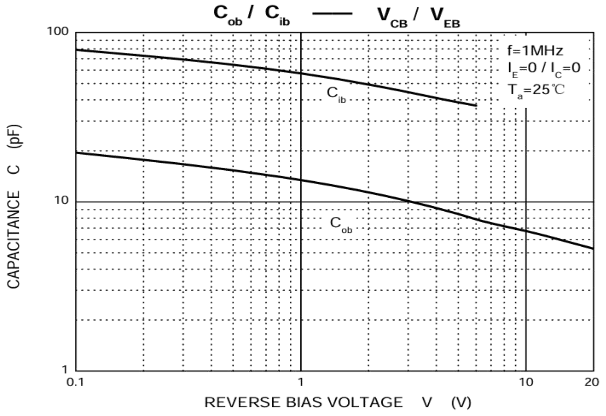
■ TYPICAL CHARACTERISTICS

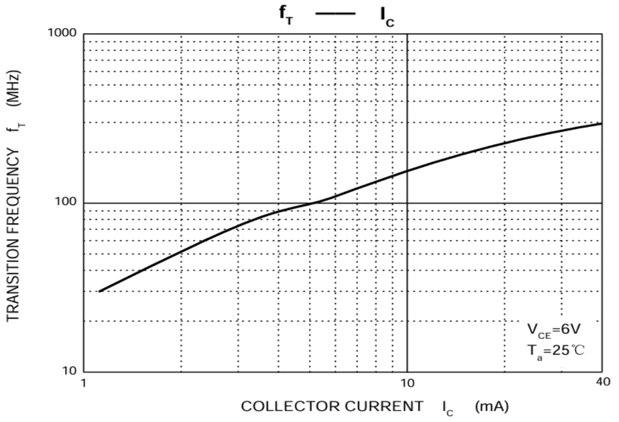


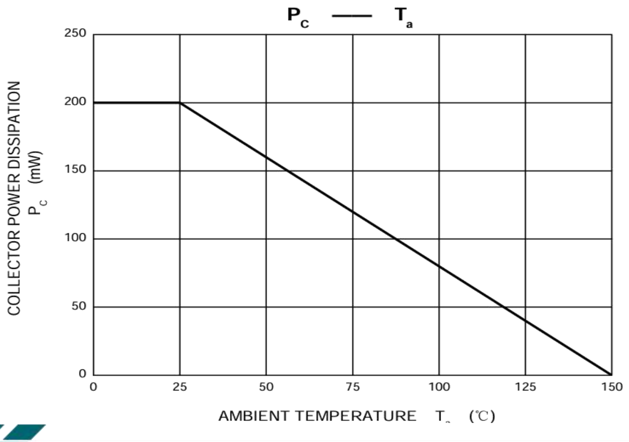




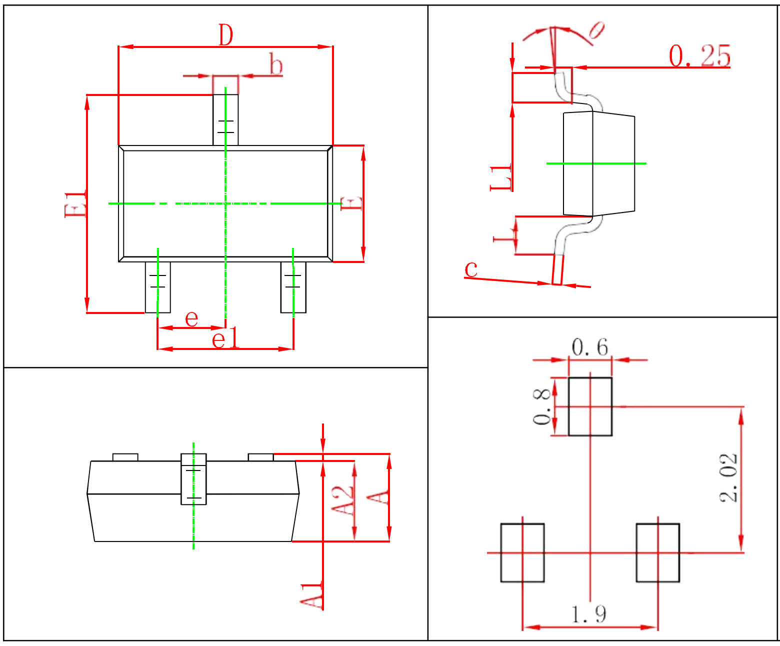








■ SOT23 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

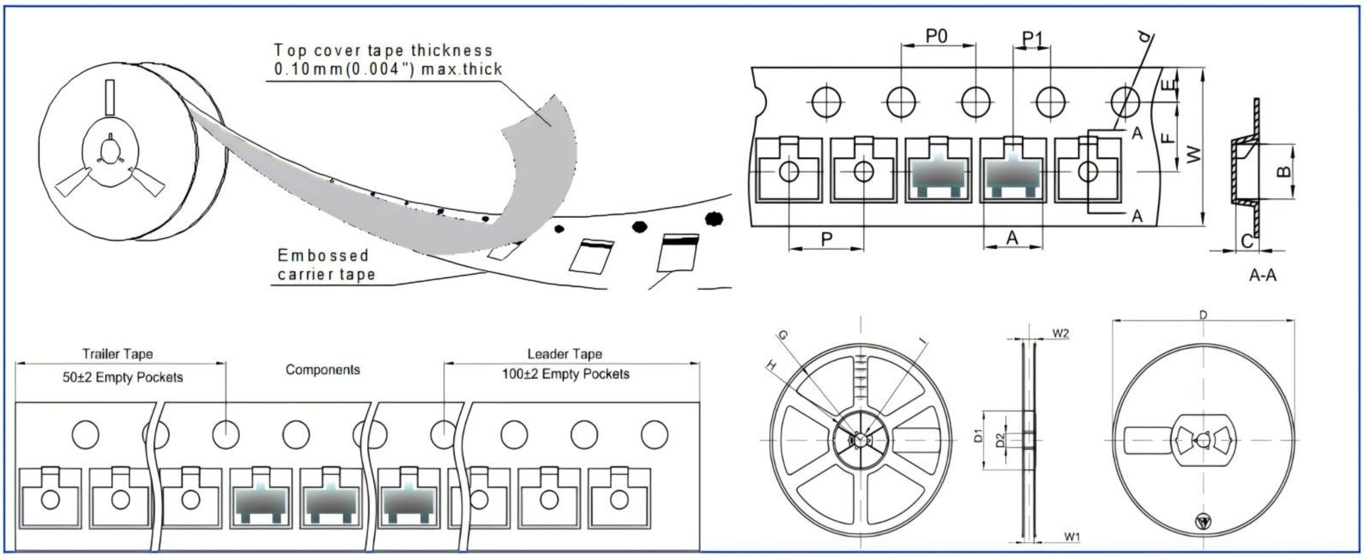
Note:

1.Controlling dimension:in millimeters.

2.General tolerance:±0.05mm.

3.The pad layout is for reference purposes only.

■ 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 Optiom	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	