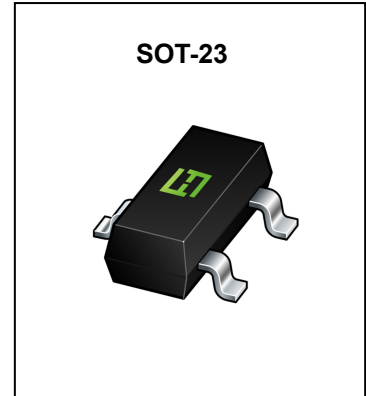


FEATURES

- Ideally suited for automatic insertion
- Epitaxial planar die construction
- Complementary PNP type available(BC807)

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	50	V
V _{CE0}	Collector-Emitter Voltage	45	V
V _{EB0}	Emitter-Base Voltage	5	V
I _C	Collector Current	500	mA
P _C	Collector Power Dissipation	300	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	417	°C/W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

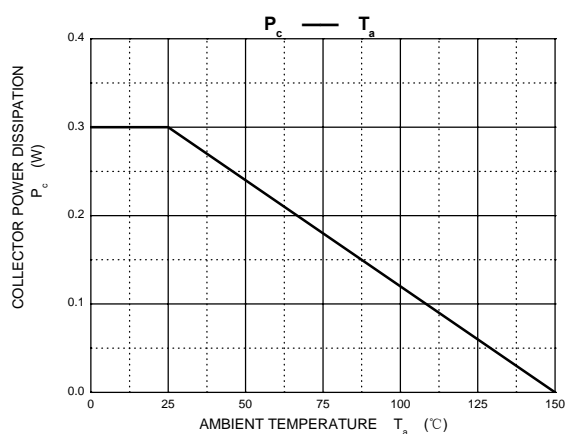
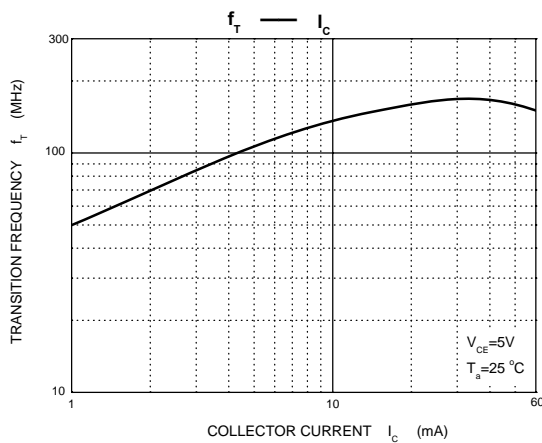
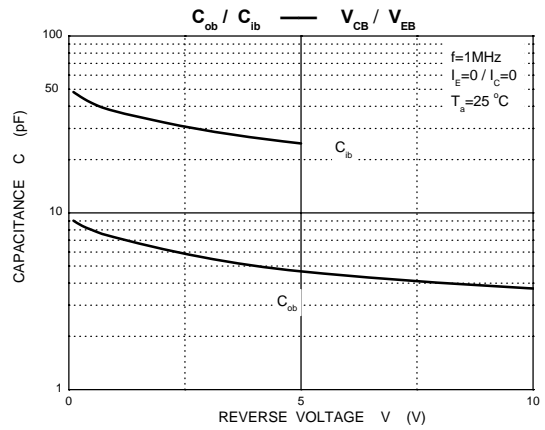
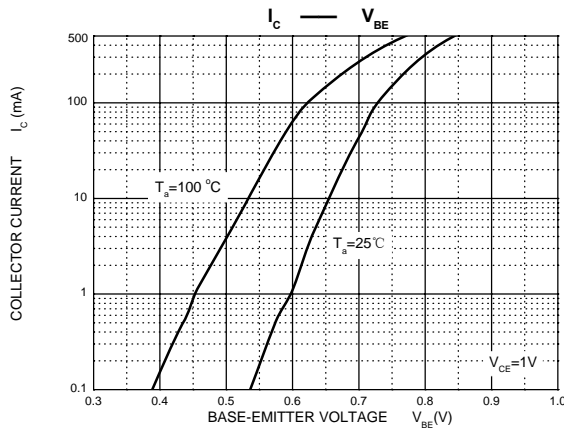
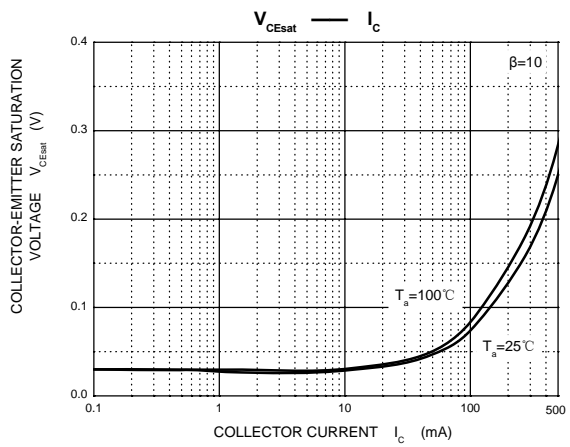
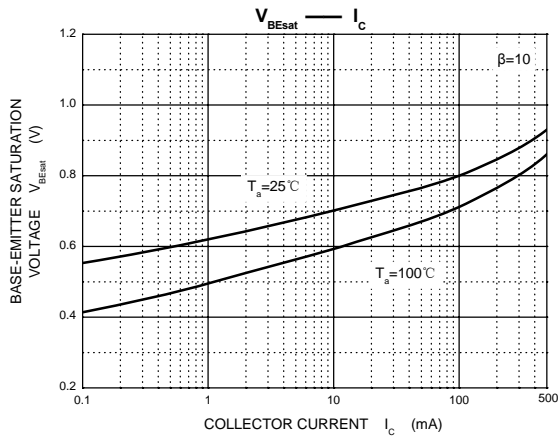
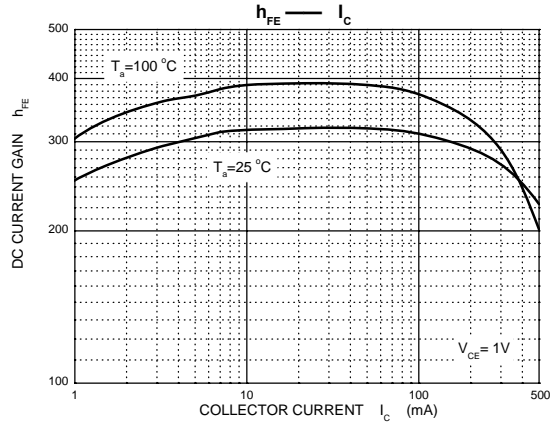
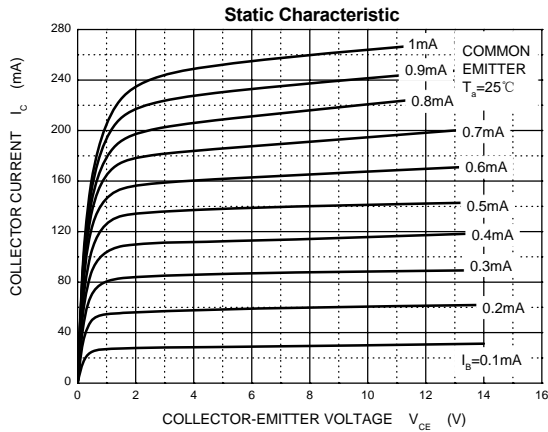


ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

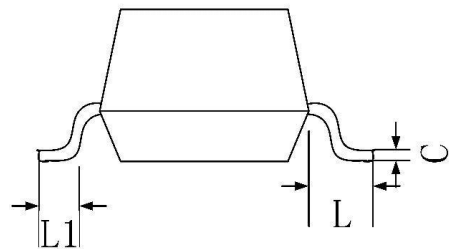
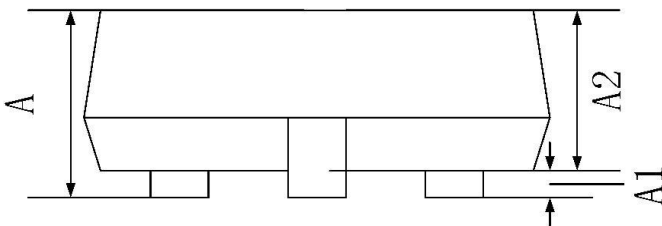
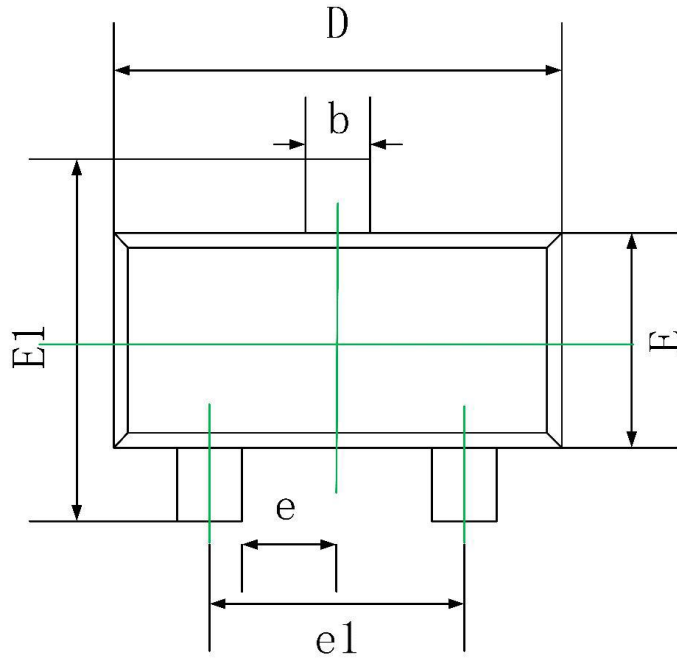
Symbol	Parameter	Test Conditions	A _{in}	Typ	A _{ax}	Unit
V _{CB0}	I _C = 10μA, I _E = 0		50			V
V _{CE0}	I _C = 10mA, I _B = 0		45			V
V _{EB0}	I _E = 1μA, I _C = 0		5			V
I _{CB0}	V _{CB} = 45V, I _E = 0				0.1	μA
I _{EB0}	V _{EB} = 4V, I _C = 0				0.1	μA
h _{FE(1)}	V _{CE} = 1V, I _C = 100mA		100		600	
	V _{CE} = 1V, I _C = 500mA		40			
V _{CE(sat)}	I _C = 500mA, I _B = 50mA				0.7	V
V _{BE(sat)}	I _C = 500mA, I _B = 50mA				1.2	V
V _{BE}	V _{CE} = 1V, I _C = 500mA				1.2	V
C _{ob}	V _{CB} = 10V, f = 1MHz			10		pF
f _T	V _{CE} = 5V, I _C = 10mA, f = 100MHz		100			MHz

CLASSIFICATION OF h_{FE(1)}

F _{ub}	67, %!	67, %!&	67, %!(\$
F _{ub} Y	%%\$!& \$	% \$(\$ \$	& \$!*\$ \$ \$
A _U _]b	* 5	* 6	* 7



SOT-23 Package Information



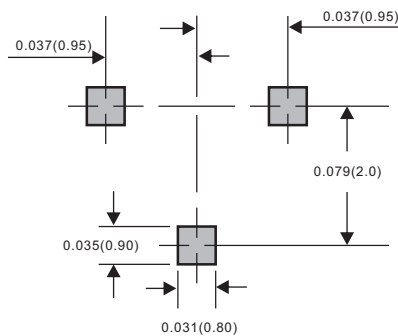
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		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

Pinning information

Pin	Simplified outline	Symbol
PinB Base PinC Collector PinE Emitter		

Suggested solder pad layout

SOT-23



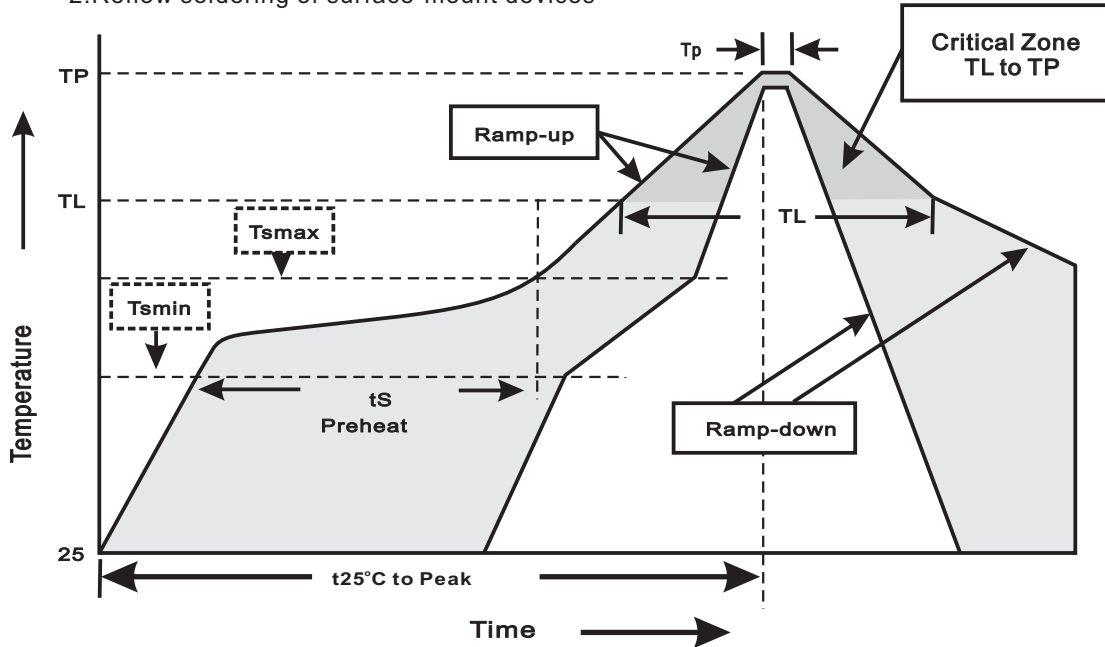
Dimensions in inches and (millimeters)

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOT-23	7"	3,000	4.0	30,000	183*123*183	178	382*257*387	240,000	11.6

Suggested thermal profiles for soldering processes

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(T _L to T _P)	<3°C/sec
Preheat -Temperature Min(T _{smin}) -Temperature Max(T _{smax}) -Time(min to max)(t _s)	150°C 200°C 60~120sec
T _{smax} to T _L -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(T _L) -Time(t _L)	217°C 60~260sec
Peak Temperature(T _P)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(t _P)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes

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