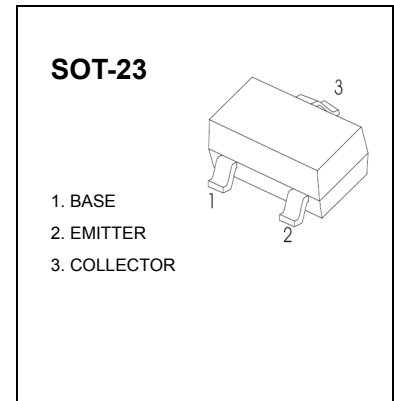


SOT-23 Plastic-Encap sulate Transistors

FEATURES

- Ideally suited for automatic insertion
- For switching and AF amplifier applications



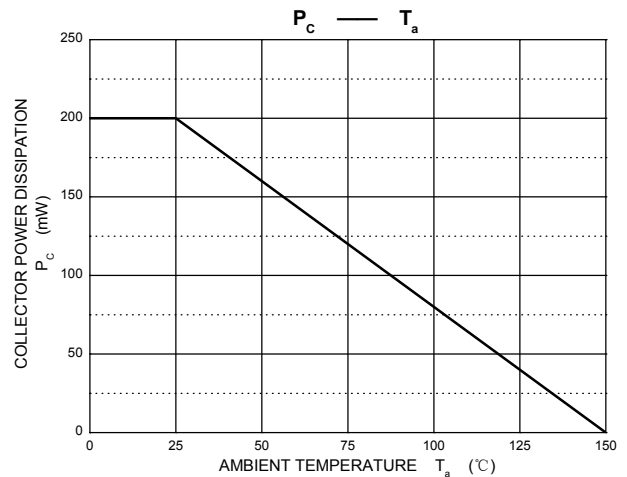
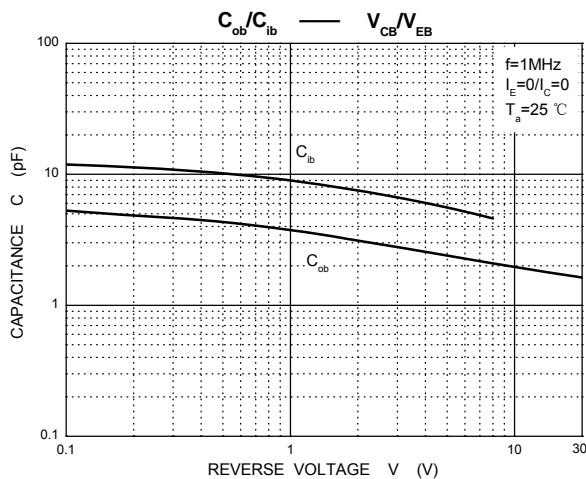
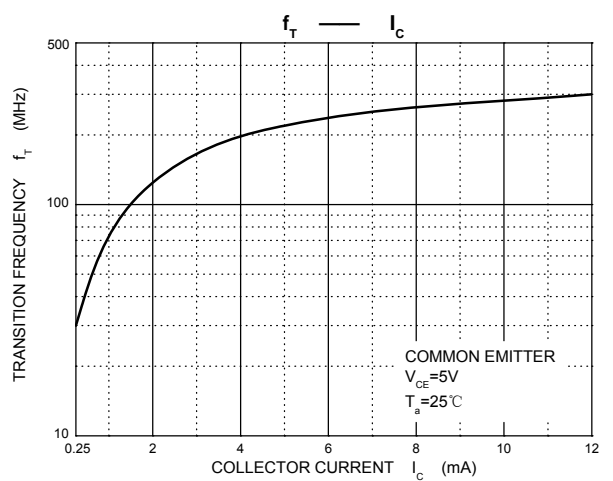
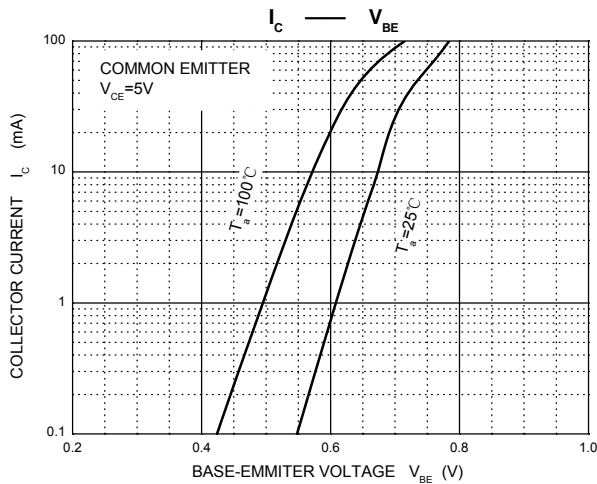
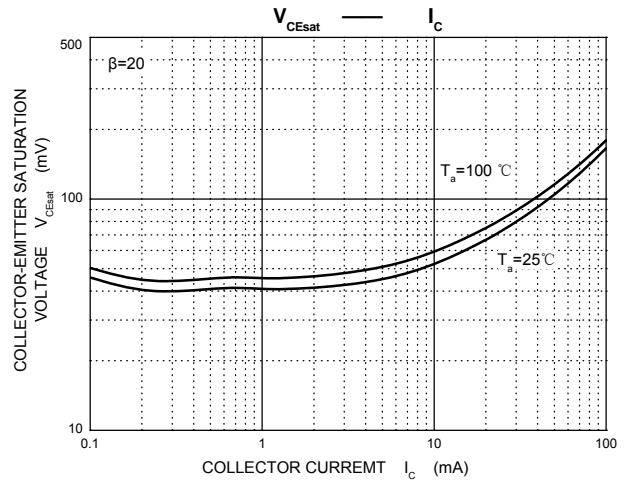
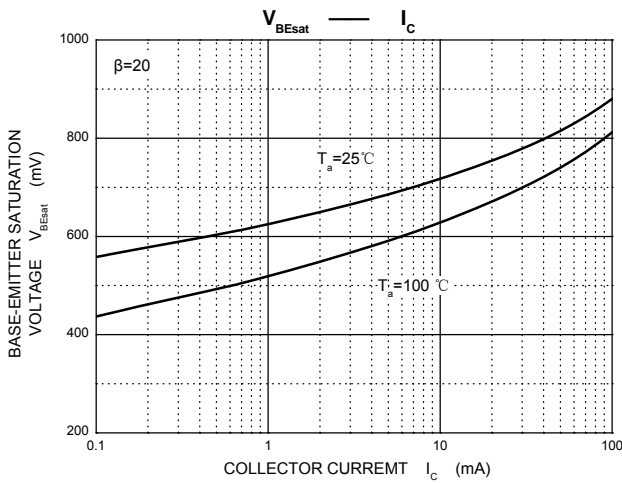
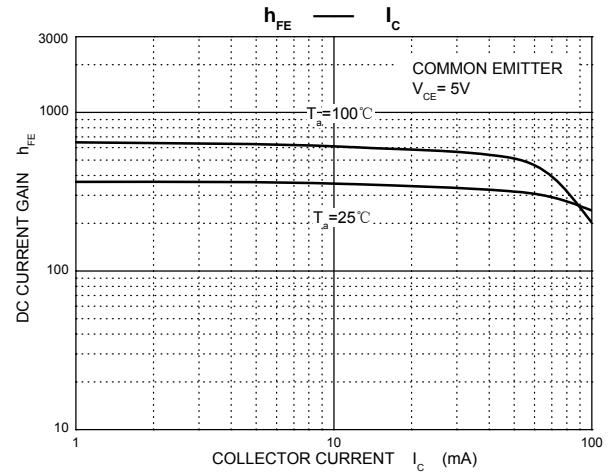
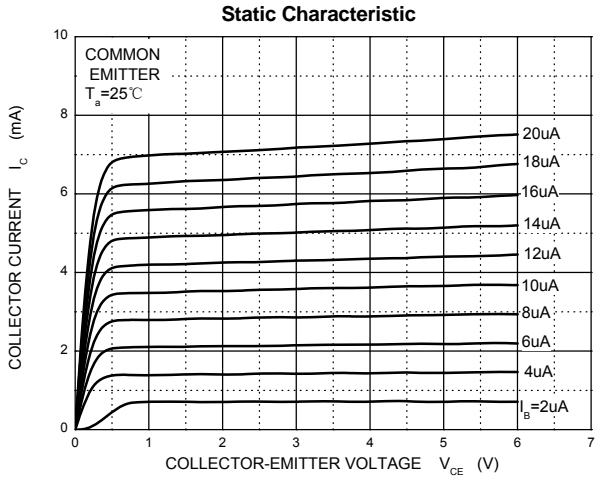
MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

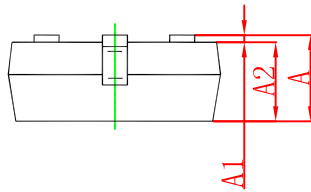
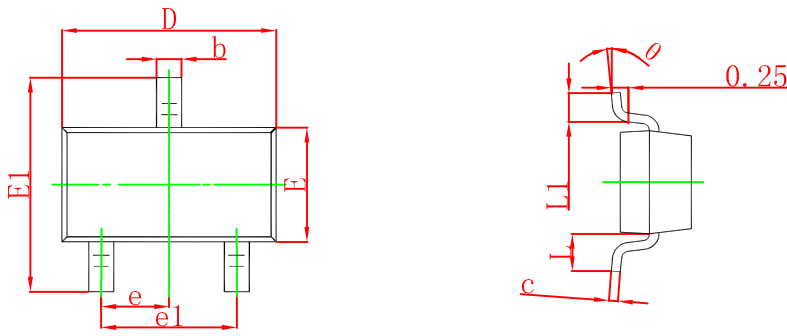
Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	TKBC846	80
		TKBC847	50
		TKBC848	30
V _{CEO}	Collector-Emitter Voltage	TKBC846	65
		TKBC847	45
		TKBC848	30
V _{EBO}	Emitter-Base Voltage	6	V
I _C	Collector Current –Continuous	0.1	A
P _C	Collector Power Dissipation	200	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	625	°C/W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C

DEVICE MARKING

TKBC846A=1A; TKBC846B=1B;
TKBC847A=1E; TKBC847B=1F; TKBC847C=1G;
TKBC848A=1J; TKBC848B=1K; TKBC848C=1L

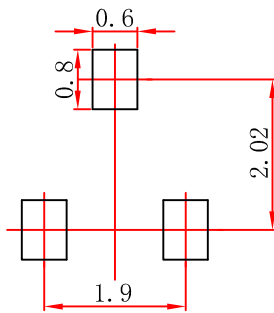
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Collector-base breakdown voltage	TKBC846	$I_C = 10\mu A, I_E = 0$	80			V	
	TKBC847		50				
	TKBC848		30				
Collector-emitter breakdown voltage	TKBC846	$I_C = 10mA, I_B = 0$	65			V	
	TKBC847		45				
	TKBC848		30				
Emitter-base breakdown voltage	V_{EBO}	$I_E = 10\mu A, I_C = 0$	6			V	
Collector cut-off current	TKBC846	I_{CBO}	$V_{CB} = 70V, I_E = 0$		0.1	μA	
	TKBC847		$V_{CB} = 50V, I_E = 0$				
	TKBC848		$V_{CB} = 30V, I_E = 0$				
Emitter cut-off current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			0.1	μA	
DC current gain	TKBC846A, 847A, 848A	h_{FE}	$V_{CE} = 5V, I_C = 2mA$	110		220	
	TKBC846B, 847B, 848B			200		450	
	TKBC847C, TKBC848C			420		800	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100mA, I_B = 5mA$			0.5	V	
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 100mA, I_B = 5mA$			1.1	V	
Transition frequency	f_T	$V_{CE} = 5V, I_C = 10mA$ $f = 100MHz$	100			MHz	
Collector output capacitance	C_{ob}	$V_{CB} = 10V, f = 1MHz$			4.5	pF	





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°

SOT-23 Suggested Pad Layout



- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.