

unit : mm

Descriptions

- General small signal application
- Switching application

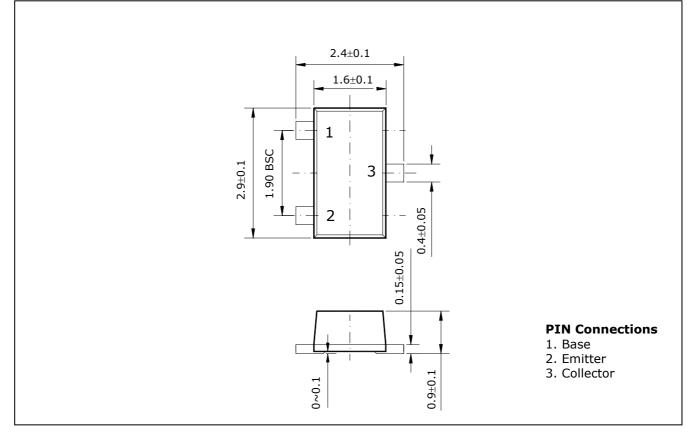
Features

- Low collector saturation voltage
- Collector output capacitance
- Complementary pair with SBT3904F

Ordering Information

Type NO.	Marking	Package Code
SBT3906F	2A	SOT-23F

Outline Dimensions



SBT3906F

Absolute maximum ratings

Absolute maximum ratings					
Characteristic	Symbol	Ratings	Unit		
Collector-Base voltage	V _{CBO}	-40	V		
Collector-Emitter voltage	V _{CEO}	-40	V		
Emitter-base voltage	V _{EBO}	-5	V		
Collector current	I _C	-200	mA		
Collector dissipation	P _C *	350	mW		
Junction temperature	Tj	150	°C		
Storage temperature range	T _{stg}	-55~150	°C		

* : Package mounted on 99.5% alumina 10×8×0.6mm

Electrical Characteristics

Electrical Characteristics Ta=25°C							
Characteristic	Symbol Test Condition		Min.	Тур.	Max.	Unit	
Collector-Base breakdown voltage	BV _{CBO}	I_{C} =-10 μ A, I_{E} =0	-40	-	-	V	
Collector-Emitter breakdown voltage	BV_{CEO}	I_{C} =-1mA, I_{B} =0	-40	-	-	V	
Emitter-Base breakdown voltage	BV_{EBO}	I_{E} =-10 μ A, I_{C} =0	-5	-	-	V	
Collector cut-off current	\mathbf{I}_{CEX}	V_{CE} =-30V, V_{EB} =-3V	-	-	-50	nA	
DC current gain	h _{FE}	V_{CE} =-1V, I _C =-10mA	100	-	300	-	
Collector-Emitter saturation voltage	$V_{CE(sat)}$	I_{C} =-50mA, I_{B} =-5mA	-	-	-0.4	V	
Transition frequency	f⊤	V _{CE} =-20V, I _C =-10mA, f=100MHz	250	-	-	MHz	
Collector output capacitance	C _{ob}	V_{CB} =-5V, I_{E} =0, f=1MHz	-	-	4.5	pF	
Delay time	t_d V_{CC} =-3 V_{dc} , $V_{BE(off)}$ =-0.5 V_{dc} ,		-	-	35	ns	
Rise time	t _r	I_{C} =-10mA _{dc} , I_{B1} =-1mA _{dc}	-	-	35	ns	
Storage time	t _s	V _{CC} =-3V _{dc} ,I _C =-10mA _{dc} ,	-	-	225	ns	
Fall Time	t _f	$I_{B1}=I_{B2}=-1mA_{dc}$	-	-	75	ns	

SBT3906F

Electrical Characteristic Curves

Fig. 1 P_{C-}T_a



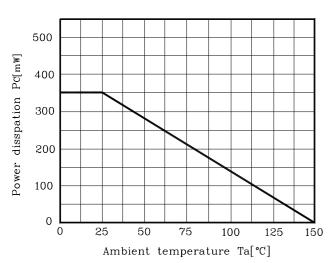
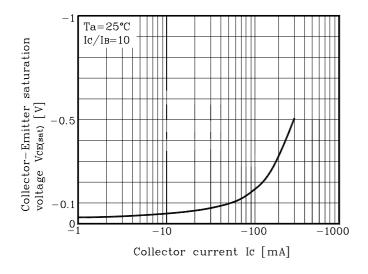
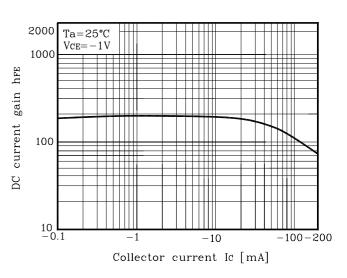


Fig. 3 $V_{CE(sat)}$ -I_C





SBT3906F

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